

Effectiveness of health management program



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Abstract

The purpose of this study is to determine if the SoonerCare health management program and its associated practice management program, in a rural family practice setting, is an effective program to decrease hospital admission, improve patient care, and is a financially viable system.

Data was obtained through chart review of two clinics in Durant, Oklahoma. Durant is a town of just over 15, 000 as of the 2010 census. Both clinics are considered rural family medicine clinics. Out of the 170 patients enrolled in the health management program 115 patients were included in the study. The Data showed that over a period of seven months there was a significant reduction of patients going to the hospital for admission. A reduction of 50% was demonstrated with a significant p-value of 0. 025896. There was no significant reduction in the office visit rates seen over the same time period. Emergency room visits did decrease by seven percent over this time period, but this was not found to be statistically significant. This reduction correlates to a savings of \$551 per patient per year enrolled in the program.

The study concurs with the Pacific Health Policy Group that shows a significant cost savings to the state due to the SoonerCare health management program and with practice facilitation. With the decrease in hospital admissions and subsequently the cost savings to the state of Oklahoma this program is an efficient means to provide good health care to the SoonerCare population.

Background

The cost of health care to the nation, private and public, in 2013 was 2.8 trillion dollars (1). This constituted 18% of the GDP (1). The average cost of health care was 9.5% of GDP for industrialized countries (1). This puts the average cost per capita in the United States at \$8,508 in 2013 (1). This is two and a half times the world average of \$3,322 per capita in the industrialized world (1). Add to this the projected growth of health care to increase by 5.8% each year until 2022 (2). Total health care costs, in the United States, are expected to grow to 19.9% of the GDP by 2022(1). This could be tolerable if the outcomes correlated with cost but they don't. The United States is currently ranked twenty sixth out of thirty four in the world for life expectancy, twelfth out of thirty two in heart attack fatalities, and twenty seventh out of twenty eight for unmanaged asthma(3).

With the continued increase in health care costs and diminishing return on health care dollars the state of Oklahoma has instituted a health management program and included in this program is a practice management program. The practice management program consists of an in office nurse that is a personal health coach for patients qualified for the program. My concern for this program is whether the benefit of the program outweighs the administrative costs. The purpose of this study is to determine that in a rural family practice patient population does the use of a health coach improve the care of my patients and by extension decrease hospital admissions. My hypothesis is that the use of an in office health coach allows for better care, decreased hospital visits, and at the same time saves money for the state.

Methods

A 14 month chart review was performed over the 7 months after the installation of a health coach in both the Gastorf Family Clinic and Durant Family Medicine Clinic. The same time a year ago, in the involved clinics, the charts were also reviewed to take out seasonal bias. Charts were reviewed in office and at the local hospital for office visits, hospital admissions, and emergency department visits. No data were obtained regarding the reasons for the office visits, emergency room visits, or for the admitting diagnosis.

Data and Results

The total enrollment of patients in both the Gastorf Family Clinic and the Durant Family Medicine Clinic was 170 patients. Total of 55 patients were eliminated from the study. Of the 55 patients, 31 patients were eliminated from the study due to not being established with Durant Family Medicine Clinic prior to August 2012 or no longer a patient of the involved clinics after the start of the study. Another 22 patient were eliminated from the study due to not being established with Gastorf Family Clinic prior to August 2012 or no longer being a patient after the start of the study. 2 patients enrolled in the health management system did not have any records in either of the clinics. Total patients used for the study was 115 patients.

The average age of patients was 42. 8. The distribution of patients in the study was 30. 4% male and 69. 6 % female. The Durant Family Medicine Clinic had 44 patients or 38. 3% of the participants in the study. Gastorf Family Clinic had 71 patients or 61. 7% of the participants in the study.

The study evaluated inpatient and outpatient data from August 2012 through February 2013 and August 2013 through February 2014. These dates were determined due to the start of the practice management program was in August 2013. The August 2012 to February 2013 dates were used for comparison, in an attempt to negate seasonal admission changes. Data was obtained from a chart review at both involved clinics. Upon discovery of those patients who qualified, with continued care through the study time period, a hospital chart analysis was performed. Data was obtained from the local regional medical center in regards to emergency room visits, hospital admits, and total hospital days.

	Office Emergency Visits	Emergency Visits	Hospital Admits
Pre-study	605	81	14
Study	617	75	7
p-value	0.371	0.317	0.026

Analysis of the data showed a 50% reduction in the number of individuals who were admitted to the hospital at least once in the same time period over 7 months. A one-tail paired t-test was performed and demonstrated a significant result with a p-value of $p = 0.026$. The International Federation of Health Plans 2013 Comparative Price report shows that the average cost per <https://assignbuster.com/effectiveness-of-health-management-program/>

hospital day in the United States is \$4, 293 (4). Based on evaluation of emergency room visits and hospital costs per day, this program saved about \$63, 387 over a seven month period for a total of 115 patients enrolled in the study. That is a savings of \$551 over a years' time per patient. Study did not show any significance with regards to a decrease in office visits and emergency room visits. There was an absolute difference of 6 emergency department visits or decrease of 7. 4%.

Discussion

What are the cost savings if we extrapolated the results to the entire SoonerCare population? The current enrollment of Oklahoma SoonerCare as of the end of December 2013 was 555, 436 (5). The annual budget of the Oklahoma Health Care Authority is over 5. 3 billion dollars with 4. 7 billion going towards Medicaid payments (6). If you use the results of the study with the total SoonerCare enrollment the savings would be \$306 million dollars. The value of \$306 million is overstated due to may issue. The extrapolation this number is unfair and inaccurate. The program as stated is for those patients with chronic conditions that are at risk, or potentially at high risk. This is but a minority portion of the SoonerCare population, which I will discuss below. The other issue is the population size of the study. This study included less than 0. 03% of the total SoonerCare population. To extrapolate any data from that small sample size is fraught with inaccuracies. That being said, this study did show a significant decrease in hospital stays for the population involved in the study.

Why is there so much focus on reducing cost associated with patients with chronic conditions? A 2010 report by the Agency for Health care Research <https://assignbuster.com/effectiveness-of-health-management-program/>

and Quality found that the top 1 percent of patients ranked based on health care expenses amassed 21.4 percent of the total health care cost (7). The annual cost for these patients was estimated to be \$87,570 per year per person (7). They also found that the top 50% of health associated spenders correlated to 97.2% of all health care dollars (7). Further analysis of this study also showed that those patients with four or more chronic conditions are responsible for 29.7% of health care expenditures (7).

Who is enrolled in the SoonerCare health management program? Those members with, or at risk for developing chronic disease and are high risk for adverse outcomes and increase likelihood of a health care crisis. By addressing those with multiple chronic medical conditions you are addressing the most concentrated cost centers and will get the best return on investment of health care expenditures. This has been shown through analysis of the SoonerCare health management program. Currently there is over five thousand patients enrolled in the program (8).

What is the cost of the program in relations to the cost savings? Study done by the Pacific Health Policy Group has shown that the SoonerCare health management program had an aggregated savings of \$214 million for the 2013 fiscal year (9). The Practice facilitation component was shown to decrease the cost per patient from \$678 down to \$634 including the administrative costs of the program (9). In the same study it was found that the total cost of the program and administrative costs was \$32 million (9).

When taken from the overall medical savings it showed a return on investment of 562% (9). The SoonerCare health management program saved \$5.62 for every dollar spent on the program.

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So what about patient care? The Study from the Pacific Health Policy Group did show of the 21 clinical performance measures 16 showed increased compliance with standards and of those 11 were statistically significant (9). This study showed the most significant improvements in the area of chronic obstructive pulmonary disease, congestive heart failure, diabetes and hypertension (9). So do clinical performance measures correlate with patient outcome improvement? First health care professionals need information on performance to develop quality care that is also efficient (10). This is where the diagnostic specific measures fit in. The new PQRS standards for Medicare for 2014 there are 287 separate diagnostic measures over 25 groups. The scope of this research was not to address the specific patient care outcomes, but in a retrospective review of each of the clinic's clinical performance measures before and after the institution of this program did show increase compliance with clinical performance measures being studied in the clinics.

So what is the practice management program? It involves a health coach, which is a RN, to assist primary care practices in building a high quality care delivery processes through evaluation and coaching patients with chronic medical conditions, to oversee data capture to identify gaps in care delivery, implement and teach quality improvement methods to close gaps and improve the practice's ability to effectively manage its patients population through data analysis and process design. Through the SoonerCare health management program patient receive the following services in table 1 (11). Through the practice facilitation portion of the program the patients receive the following services in table 2 (12).

Conclusions

There were many limitations to this study. As mentioned above, this study was a very small population compared to the affected group. The study only reviewed seven months before and seven months after the start of the program. As with any study group local effect must be accounted for. A larger study with multiple clinics in different locations throughout the state would give a more reliable result. An example of this study was performed by the Pacific Health Policy Group, which showed similar results to this study.

In conclusion, in the practices involved in the study, it was shown that there was a significant decrease in hospital visits with the use of an in office health coach and the SoonerCare health management program. A significant financial benefit for the state with the SoonerCare health management program was also seen with a cost savings of \$551 per patient per year. This study did not address specific diagnostic measures, but with decreased hospital admissions an assumption can be made in regards to improved patient care. Also in retrospective review of clinical outcome measures did show improvement in both clinics after the institution of the SoonerCare health management program.