

Ambulatory Care Sensitive Condition Rates in New Mexico, 2012-2014

Ambulatory Care Sensitive Conditions (ACSC) are conditions for which good outpatient care can potentially prevent the need for a hospitalization or an emergency department visit, or for which early intervention can prevent complications of more severe disease.¹ Acute ACSC include dehydration, urinary tract infections, and bacterial pneumonia. Chronic ACSC include asthma in young adults, angina, chronic obstructive pulmonary disease (COPD), diabetes, heart failure, and hypertension. Both acute and chronic ACSC are conditions that can be addressed, monitored, and treated by a primary care physician.

ACSC rates have been used as an indicator of access to healthcare. Previous research has shown that vulnerable groups, including African Americans, Hispanic persons, uninsured patients, residents of low-income zip codes, and residents of medically underserved counties, have higher hospitalization rates for ACSC.² The mean cost of a hospital stay in 2012 was estimated at \$8,500,³ compared to just an average of \$160 for a new uninsured patient appointment.⁴ ACSC can be managed by the patient with good care from their primary care physician, but lack of access to a primary care physician or other barriers can drive patients to seek care at a hospital.

Methods

Two datasets were used for this analysis, the New Mexico Hospital Inpatient and Discharge Dataset (HIDD) and Emergency Department (ED) dataset. Both of these datasets are statewide datasets that collect either hospitalizations or emergency department visits from non-federal hospitals in New Mexico. For the inpatient hospitalization analysis, Indian Health Services (IHS) data was included. Variables used in this analysis included diagnosis code fields, procedure code fields, patient residential zip code (to determine health region), and age at the time of admission. Three years of data were included in the analysis (2012-

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2014). All rates were age adjusted and calculated per 100,000 population.

Diagnostic definitions for ACSC were defined using the Agency for Healthcare Research and Quality's prevention quality indicators technical specifications (version 5.0, released March 2015). Prevention quality indicators 91 and 92 were used to define acute and chronic ACSC. Information regarding exclusion and inclusion criteria for the prevention quality measures can be found at http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx.

Results

The Southeast region had the highest inpatient hospitalization rates for both chronic and acute ACSC in 2014. A similar pattern was observed in emergency department visits - the Southeast region had the highest rates of admission for all chronic ACSC, bacterial pneumonia, and dehydration. The Northwest region had the highest rates for urinary tract infections and for overall acute conditions (Table 1). In New Mexico, the two conditions with the highest hospitalization rates were bacterial pneumonia at 148.1 per 100,000 population and heart failure at a rate of 121.4 per 100,000 population. Among emergency department visits (Table 2), urinary tract infections had the highest rate at 334.0 per 100,000 population followed by bacterial pneumonia at a rate of 293.9.

Hospitalization rates for acute ACSC over time showed an overall increase in 2014 compared to 2013 in all regions except the Northeast region (Figure 1). Hospitalization rates for chronic ACSC decreased in the Northeast and Southeast regions from 2012 to 2014, but even with the decrease, the Southeast region

had the overall highest hospitalization rates for chronic ACSC.

ED visit rates for acute ACSC increased from 2013 to 2014 in four of the five health regions (Figure 2). ED visit rates in the Metro region have seen a decrease from 2013 to 2014, and in general this region had the lowest rates of ACSC (Figure 2). The Metro region had the lowest ED visit rates for chronic ACSC, but saw a slight increase in rates from 2013 to 2014. The Northeast region was the only region with a decrease in ED visit rates for chronic ACSC from 2013 to 2014.

Discussion

High rates of ACSC can be an indication of a lack of access to primary care services. The annual New Mexico Health Care Workforce Committee annual report for 2015 confirms that New Mexico is facing a shortage of primary care physicians. Some areas of the state are facing larger challenges than other counties due to population distributions within the county and other barriers to access such as geography. Potentially due to the shortage of primary care physicians, residents in the Southeast and Southwest regions are going to EDs for immediate health services. The Metro region, which does not have a shortage of primary care physicians, had the lowest rate of ED visits for ACSC.

Recommendations

From 2012 to 2014, the rates of ACSC have remained high, and in some cases have increased over the 3-year time period. The average cost of a hospitalization is close to \$8,500 and the average cost of a primary care physician appointment is \$160. Not only is it very expensive for patients with ACSC to be seen in a hospi-

tal, but since these are conditions that can be monitored and treated by primary care physicians, by going to the hospital these patients are taking time away from other patients who may have more severe diagnoses that need immediate medical treatment. Hospitalizations and ED visits for ACSC take up valuable hospital resources that may be better allocated for other conditions.

ACSC can be managed by patient adherence to a health regimen, patient education, and primary care physician monitoring of patient care. The healthcare system needs to be vigilant in identifying patients with non-life threatening conditions, like ACSC, and providing them with resources, like patient education and preventive care services, that will keep them out of the emergency room. By providing these resources and guidance, the number of ED visits for ACSC will decrease.

Limitations

Limitations of this analysis include the lack of New Mexico resident hospitalizations from out of state hospitals and federal hospitals including the Veteran Affairs (VA), military hospitals, and IHS hospital data for ED visits. The ACSC hospitalization analysis reported in 2014 used hospitalization data from 2012 (<http://nmhealth.org/data/view/newsletter/336/>). This current analysis is different as new definitions for prevention quality indicators were provided by the Agency for Healthcare Research and Quality in March 2015. The new definitions included more exclusions than previous versions. A third limitation of the data is some IHS facilities only reported a primary diagnosis and no secondary diagnoses.

Table 1. ACSC Hospitalization Rates by Health Region per 100,000 Population, New Mexico, 2014

	NM	NW	NE	Metro	SW	SE
Asthma	10.4	2.8	9.5	9.5	11.2	19.9
COPD	14.3	3.8	11.3	12.3	17.1	29.0
Diabetes	96.8	58.0	52.3	91.2	131.2	153.3
Hypertension	16.6	5.5	6.4	16.5	19.7	32.0
Heart Failure	121.4	39.8	64.6	133.5	127.1	198.9
Angina	3.6	1.8	1.3	2.8	5.6	6.8
Chronic Overall	252.5	108.9	136.0	256.2	300.8	420.0
Bacterial Pneumonia	148.1	126.2	117.6	129.3	175.0	222.6
Dehydration	54.3	14.3	26.1	50.9	78.8	90.9
Urinary Tract Infection	83.5	15.2	62.0	76.9	113.3	136.8
Acute Overall	285.9	155.7	205.6	257.1	367.1	450.4

Figure 2. ACSC ED Visit Rates by Health Region, New Mexico, 2012-2014

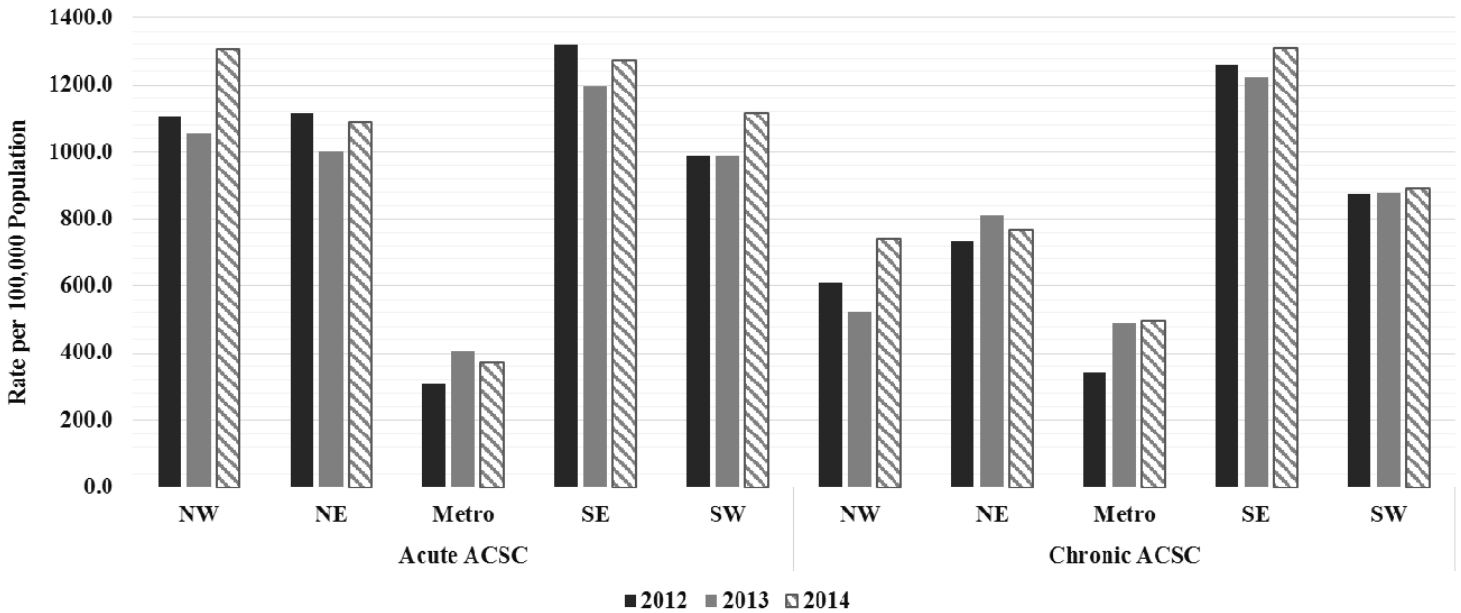


Table 2. ACSC ED Visit Rates by Health Region per 100,000 Population, New Mexico, 2014

	NM	NW	NE	Metro	SW	SE
Asthma	104.5	105.1	127.8	65.2	107.4	208.0
COPD	210.8	226.2	294.2	84.2	262.6	474.9
Diabetes	141.4	154.7	151.7	94.1	179.8	231.6
Hypertension	235.3	157.9	179.4	218.3	261.9	376.8
Heart Failure	118.5	182.5	116.5	85.2	130.5	161.3
Angina	32.1	18.4	24.6	15.0	58.1	66.0
Chronic Overall	738.1	739.6	766.5	496.8	892.9	1310.6
Bacterial Pneumonia	293.9	366.1	330.5	210.9	355.5	378.9
Dehydration	201.0	242.0	204.6	134.4	267.5	288.2
Urinary Tract Infection	333.96	698.1	552.2	27.3	495.1	605.6
Acute Overall	828.8	1306.2	1087.3	372.6	1118.1	1272.7

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Figure 1. ACSC Hospitalization Rates by Health Region, New Mexico, 2012-2014

