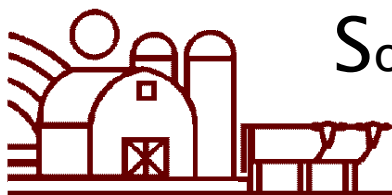


**Hospitalization for Ambulatory Care Sensitive
Conditions:
Asthma, Diabetes, and Congestive Heart Failure in
South Carolina**



South Carolina

Rural Health Research Center



UNIVERSITY OF
SOUTH CAROLINA

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Management

**Hospitalization for Ambulatory Care Sensitive Conditions:
Congestive Heart Failure, Diabetes and Asthma in South Carolina**

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Executive Summary

Introduction

Hospitalization rates for ambulatory care sensitive conditions, diseases for which primary care in the preceding six months could have reduced or eliminated the need for hospitalization, are a commonly used indicator of disparities in access to care. Previous research in South Carolina found that rural African American adults aged 50-64 years had higher population-based hospitalization rates than rural white adults. For all hospitalizations, the African American to white ratio in this age group was 1.17. For diabetes, the ratio was 5.82, and for congestive heart failure, 2.70. Earlier work also found disparities in emergency department use in this population. For example, the African American to white ratio among persons 50-64 years for emergency department visits for asthma was 3.13.

To continue the exploration of health service disparities, the present study examined hospitalization for diabetes, congestive heart failure and asthma among residents of South Carolina who were insured by Medicaid or by a large private insurance plan. Because these two populations are so different, each was analyzed separately. For both groups, the analysis was limited to persons in the 50-64 year age group who had no mental impairment that might prevent them from caring for themselves and who were continuously insured. Patient records for the period 1997 – 1999 were examined. Hospitalization was examined two ways. The rate of hospitalizations per year among rural and minority residents was compared to a baseline, urban whites. Rural was defined as residence in a county that outside a metropolitan statistical area. Second, multivariate analysis was conducted to control for demographic factors, comorbidities, and community resources.

Key findings

Hospitalization

Hospitalization rates were *not* consistently higher for rural or minority populations than for urban white populations.

Among persons with asthma:

- In a privately insured population, rural non-whites had rates of hospitalization three times than the baseline population, urban whites (adjusted rate ratio 3.20). However, after controlling for age, sex, and visit pattern, differences were not significant.
- In the Medicaid population, urban African Americans had higher rates of hospitalization than urban whites (adjusted rate ratio, 1.58). Again, differences were not significant after controlling for age, sex and visit pattern.

Among persons with diabetes:

- In a privately insured population, rural whites had higher hospitalization rates than urban whites (adjusted rate ratio, 1.46). This relationship persisted even after controlling for age, sex, visit pattern, and co-morbid asthma (Relative Risk, 1.78, CI 1.34 - 2.34). Nonwhite beneficiaries, whether rural or urban, did not differ from urban whites.

- In the Medicaid population, African Americans in both rural areas and urban areas had *lower* rates of hospitalization than urban whites (adjusted rate ratios, 0.64 and 0.68, respectively). The reduced risk among rural and urban African Americans persisted after controlling for age, sex, comorbid asthma, and visit patterns (Relative Risk: rural African Americans 0.75, CI 0.61 – 0.91; urban African Americans, 0.73, CI .060 – 0.90).

Among persons with congestive heart failure:

- In both a privately insured population and among persons insured by Medicaid, there were no differences by race or residence in either rates of hospitalization per person year or in relative risk for hospitalization, after controlling for age, sex, visit pattern and co-morbid diagnoses.

Other Services

Use of services differed between privately insured patients, who were principally white, and Medicaid patients, who were principally non-white.

- Medicaid patients had nearly twice the rate of hospitalizations per patient year as privately insured patients with the same diagnoses.
- Emergency department visit rates per patient year were at least twice as high among Medicaid patients as those among privately insured patients with the same diagnoses.
- Rates of office-based visits were lower among Medicaid patients than among privately insured patients for two of the three conditions examined.
- Medicaid recipients within each diagnosis were less likely to receive most of their care from an office-based practitioner, rather than an ED.

Community resources

We found no effect of community resources, measured as physicians per population, presence of an ED in the county, and presence of a federally qualified CHC in the county, on hospitalization rates for the diseases and patients studied.

Limitations to the Study

The analysis reported here is restricted to two population groups and three diagnoses within a single Southern state. Additional limitations include a restrictive definition of co-morbidity, which was confined to co-occurrence of the three disorders studied, limitation of visit information to visits for the conditions studied rather than all visits, and lack of pharmacy data.

Conclusions

Reducing health disparities

Earlier intervention with weight and exercise counseling, lipid management, and hypertension control could reduce the prevalence of diabetes and congestive heart failure among African Americans as well as whites. The ability of low-income rural minority adults to access preventive services, however, is limited by high rates of uninsurance in this population. In the current financial situation, providing health insurance or other access to care to young working

age adults will be difficult. States are cutting back Medicaid, the principal vehicle for expanding access. Expanding employer-based coverage will also be difficult.

In a context of fiscal constraint, expanding the number of practitioners who provide free or low cost services, particularly outreach and preventive screening, becomes the most viable alternative for reaching low income and minority population. Targeted expansion of federally qualified community health center sites and increasing focus on prevention as part of their mission is one way of providing access to low income persons.

Implications for disparities research

- Disparities research must begin to correct for prevalence to better direct policy. Population-based analyses point to the presence of disparities, but detailed patient-level analyses are needed to identify remediable sources of disparities. As noted, the remedy for high hospitalization rates for diabetes among African Americans may lie in providing preventive services while persons are in their 20's and 30's, rather than better disease care when they are in their 50's.

- Research into possible treatment differentials across insurers is needed. In theory, all patients should be treated according to clinical guidelines for number of visits, types of medication, and so on. Are differences in hospitalization, physician visits and ED visits between Medicaid and privately insured patients a function of differing clinical severity, or of inadequate care within one specific insurance plan? To what extent are patient behaviors, such as poor medication compliance, a factor in differing utilization patterns? What patient education approaches could be effective at preparing Medicaid patients for effective disease self-management. If discrepancies are independent of patient behaviors or clinical severity, what changes are needed in the Medicaid system? Research must address these questions and suggest policy remedies where appropriate.

- Disparities research has to step back from the clinical arena into the circumstances that dictate type of coverage. Racial disparities in education and employment may be driving disparities in health more strongly than any actions within the health care system. Efforts to enhance education systems and expand employment opportunities in rural areas will have long-term dividends in terms of improved community health.