WWAMI RURAL HEALTH RESEARCH CENTER

The Quality of Diabetic Care for the Rural Elderly: A Study of Medicare Patients in Washington State

Background

Diabetes is one of the most common, serious and costly chronic diseases in the United States. Recent medical advances have increased our ability to control diabetes, and thus to reduce the serious complications caused by this disease. Unfortunately, most patients do not receive the recommended tests that allow patients and their physicians to design appropriate interventions. Because rural areas have fewer physicians than urban areas, there is considerable concern that adherence to recommended guidelines may be lower in rural areas.

Demographic Characteristics of Patients with Diabetes (n = 30,589)

	RURAL	URBAN
Age (mean)	73.9	74.1
Annual outpatient visits (mean)	12.4	13.0
Annual outpatient diabetic visits (mean)	5.5	5.4
Patients with ≥ 4 major diagnoses (%)	52.9	55.1

Study Approach

We examined the extent to which Medicare patients aged 65 years and older receive three tests that should be administered on an annual basis: glycated hemoglobin (a blood test that indicates whether patients' blood sugar is under control), eye exams (which show whether or not patients are having retinal damage due to their diabetes), and blood cholesterol (high levels of which may accelerate the heart disease that diabetes can cause).

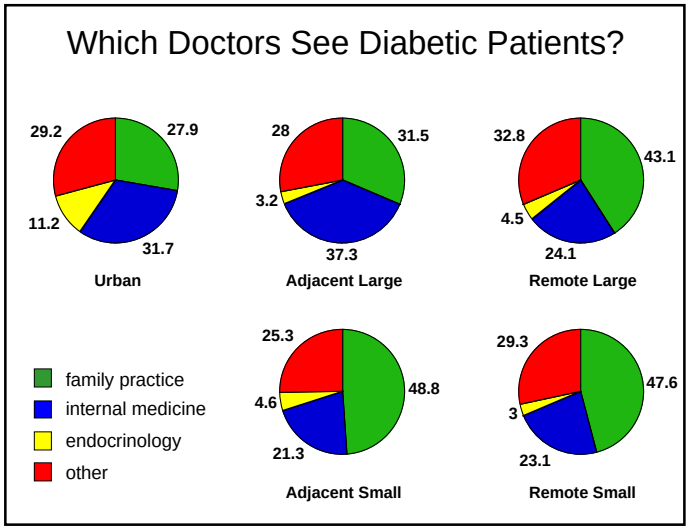
Patients were divided into five groups: those who live in urban areas, those who live in large rural areas either adjacent to or remote from urban areas, and those who live in small rural areas either adjacent to or remote from urban areas. We also controlled for the number of diseases that patients had, their age and gender, whether or not they were on Medicaid, whether they had been hospitalized during the study year, and which doctors they saw during the year.

Results

Of our study group, 8.4 percent had diabetes, defined as having made two or more outpatient visits to a doctor in which diabetes was listed as a diagnosis. These patients had many medical problems and made almost 13 visits a year to a physician. There were relatively few demographic differences between rural and urban diabetic patients.

Most care for diabetics is provided by family physicians and general internists. Rural patients were much more likely to get their diabetic care from family physicians, while urban patients were more likely to get their care from internists. Endocrinologists provided significant amounts of care only in urban areas.

The size of the rural community affects whether patients traveled for their diabetic care. Patients in large rural communities received almost all of their care in their home community. Patients in small rural communities received almost half of their care elsewhere. If people



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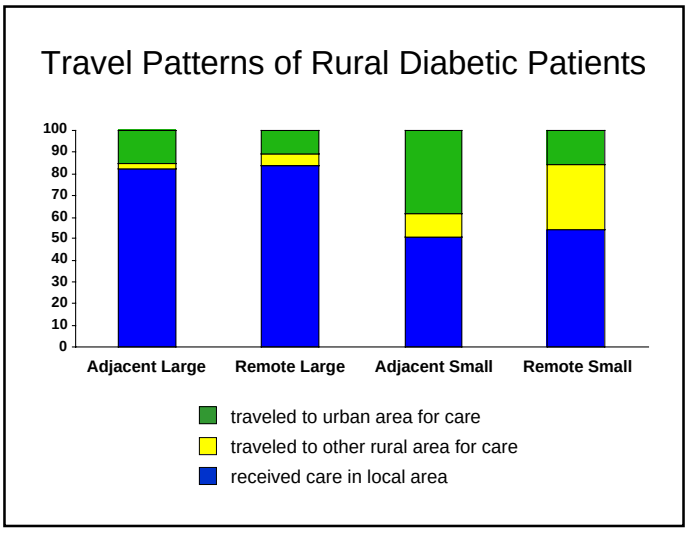
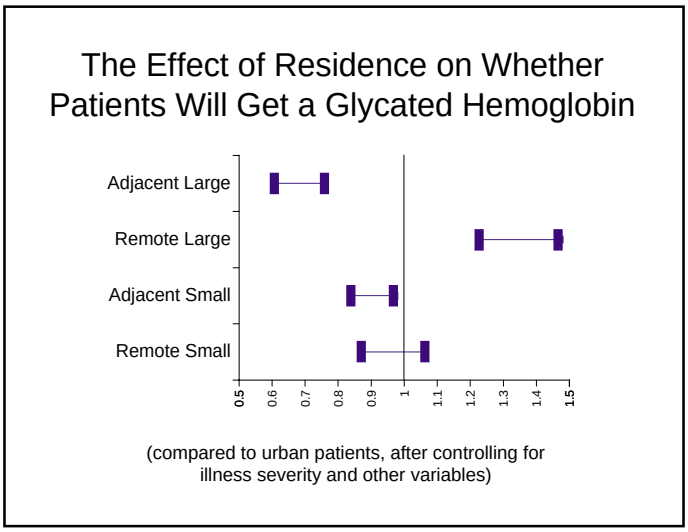
lived near an urban center, they tended to travel to an urban area when they left their local community. If they lived far from an urban center, they were more likely to visit a large rural town.

The quality of the care varied by location, but not in a simple way. After controlling for how sick patients were, patients living in small rural areas were almost as likely to receive a glycated hemoglobin, the most important of the monitoring tests, as people living in urban areas. By



contrast, people living in large remote areas were more likely, and people living in large rural areas adjacent to cities were less likely, to receive this test than their urban counterparts.

Location was not the only factor affecting adherence to these diabetes guidelines. If a patient saw an endocrinologist during the year, they were much more likely to receive a glycated hemoglobin test. Other factors such as gender, age, or poverty had little impact after controlling for illness severity.



What Does This Tell Us About the Quality of Care?

We still have a long way to go to improve the quality of care for chronic illnesses like diabetes. Even though clear guidelines exist for certain routine monitoring tests—and even though Medicare pays for these tests—most patients do not get all the recommended interventions interventions during the course of the year. Where the patients live makes a difference. Large rural towns remote from cities seem to have higher quality of care, which may be a function of the fact that these are vibrant, growing, largely self-sufficient places.

Endocrinologic consultation increased the likelihood that patients would receive the recommended tests, but visits to endocrinologists are rare, even in urban areas. Given that most diabetic care is given by generalists, the challenge is to create a system where patients and their primary care physicians can work together to improve the care of serious chronic conditions. The quality of care is neither intrinsically better nor intrinsically worse in rural areas. The challenge is to improve care for all patients and improve the coordination among generalist and specialist physicians and the patients for whom they care.

Findings from this study are described in WWAMI RHRC Working Paper #59: Rosenblatt RA, Baldwin L-M, Chan L, Fordyce MA, Hirsch RB, Palmer JP, Wright GE, Hart LG, March 2000.

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The WWAMI RHRC is funded by the Health Resources and Services Administration's Office of Rural Health Policy.