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Quality of diabetes care for adults with physical disabilities in Kansas

Amanda Reichard, Ph.D.[a,*], Hayley Stolzle, M.P.H.[a], Ana Carolina Sella, Ph.D.[a], and Theresa I. Shireman, Ph.D.[b]

[a]*Research and Training Center on Independent Living, University of Kansas, Lawrence, KS 66044, USA*

[b]*Department of Preventive Medicine and Public Health, University of Kansas School of Medicine, Kansas City, KS 66160, USA*

Abstract

Background: Similar to health disparities found among racial and ethnic minority groups, individuals with physical disabilities experience a greater risk for diabetes than those without disabilities.

Objective: The purpose of this works was to assess Kansas Medicaid data to determine the quality of diabetic care and the level to which individuals with physical disabilities' prevention and diabetes management needs are being met.

Methods: We selected a continuously eligible cohort of adults (ages 18 and older) with physical disabilities who had diabetes and received medical benefits through Kansas Medicaid. We examined their quality of care measures (screening for HbA1c/glucose, cholesterol, and eye exams; and, primary care visits) in the succeeding year. Using unconditional logistic regression, we assessed the measures for quality of care as they related to demographic variables and comorbid hypertension.

Results: Thirty-nine percent of the 9,532 adults with physical disabilities had diabetes. They had the following testing rates: HbA1c, 82.7%; cholesterol, 51.5%; and eye examinations, 86.8%. Females, those with dual eligibility, and those with comorbid hypertension had higher rates for all types of screenings and primary care visits. Those living in MUAs had a higher screening rate for cholesterol.

Conclusions: Adults with physical disabilities supported by Kansas Medicaid received diabetes quality indicator screenings have better diabetes quality of care rates for 3 out of 4 measures than nationally published figures for Medicaid. These findings point to a strong quality of care programs in Kansas for this population; however an imperative next step is to determine how effectively this population is managing their blood sugar levels day-to-day.

Keywords: Physical disabilities; Diabetes care; Medicaid; Quality of care

The Centers for Disease Control and Prevention estimate that 8.3% of the US population is affected by diabetes, and this number increases each year. Diabetes has many associated complications, including heart disease, stroke, hypertension, blindness, kidney disease, nervous system disease, and death. However, comprehensive diabetes care, including screening of Hb_{A1c} and serum lipids, and annual eye examinations, can effectively minimize the associated sequelae [1].

Some work has been conducted to examine how special populations such as women, children, Hispanics/Latinos, and Native Americans are differentially impacted by diabetes and receipt of the related quality of care measures just noted [2,3]. One group that has received little attention in this regard is people with physical disabilities, as evidenced by the scarcity of relevant studies in the literature. Lack of attention to this segment of the population is especially concerning given that they experience a high risk of developing chronic diseases such as diabetes due to multiple barriers to health promotion and disease management practices. These diabetes and quality of care barriers include lack of transportation, medical facility inaccessibility, inadequate disability training for medical staff, inaccessible fitness facilities, unavailability and inaccessibility of health information, and underinsurance or lack of health insurance coverage [2-7]. (Even people who have insurance are more likely to forgo seeing a doctor because of cost barriers [8].)

Nationally, Medicaid provides critical health insurance coverage for many individuals with physical disabilities [7]. However, Medicaid compliance with recommended health screening levels is lower than Medicare and other insurance providers [1]. For example, prior research has shown that individuals enrolled in Medicaid managed care programs receive fewer diabetes quality of care screenings than individuals who have private health insurance [9], though managed care Medicaid enrollees receive more

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* Corresponding author: 1000 Sunnyside Ave, Suite 4089.

E-mail address: reichard@ku.edu (A. Reichard).

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quality of care screenings than the individuals enrolled in Medicaid's fee-for-service programs [10]. Specifically, for 5 of 6 comprehensive diabetes measures—Hb_{A1c} screening, Hb_{A1c} level control, cholesterol screening, cholesterol level control, and nephropathy screening—people enrolled in managed care scored higher by at least 23% than individuals receiving Medicaid fee-for-service diabetes care [10].

Because individuals with physical disabilities face barriers to preventive and quality care and often experience risk factors for diabetes, it is important to improve health surveillance programs that can ultimately help establish quality prevention and diabetes care methods for individuals with disabilities [11]. It has also been recommended that disease management programs include routine screening of individuals with physical disabilities and increase glucose testing of individuals already diagnosed with diabetes or prediabetes [12]. To determine the extent to which these recommendations are adequately implemented in our state, we assessed Kansas Medicaid data to determine the quality of diabetic care and the level to which individuals with physical disabilities' prevention and diabetes management needs are being met.

Methods

We conducted a retrospective cohort analysis for quality of care measures among adults (ages 18 and older) with physical disabilities and diabetes who received medical benefits through Kansas Medicaid. The Kansas Medicaid program provides insurance coverage for inpatient, outpatient, pharmacy, long term care and hospice coverage to adults with disabilities who qualify for Supplemental Security Income (SSI), have high medical needs, qualify for Medicare, or have a severe disability and are awaiting permanent federal disability status. Each of these programs has its own income qualifications. To establish the cohort, we first requested a listing of all people supported by the Home and Community Based Services Physical Disability (HCBS PD) waiver. By definition, this includes, "individuals age 16 to 65 years of age who meet the criteria for nursing facility placement due to their physical disability, who are determined disabled by social security standards, and who are Medicaid eligible" [13, p. 1]. From this sampling frame, we identified persons with diabetes-related claims during a 12-month period (July 2007-June 2008) and tracked their quality of care in the subsequent 12-month period (July 2008-June 2009). All study subjects were continuously eligible for the entire 24 months.

We identified persons with diabetes by searching Medicaid inpatient and outpatient services claims paid between July 2007 and June 2008 for diabetes diagnosis codes (ICD-9 codes 250.xx; 357.xx; 362.xx; 366.xx). We also searched for major classes of diabetes medications in the Medicaid paid prescription drug claims (alpha-glucosidase inhibitors, amylinomimetics, biguanides, incretin mimetics, insulins, meglitinides, sulfonylureas, thiazolidinediones, and diabetic supplies and diagnostics). A person with 2 or more outpatient codes or any inpatient or prescription based code was identified as a person with diabetes.

Quality of diabetes monitoring

We modeled the main outcomes of interest on the HEDIS 2010 measures for quality of care for diabetes: evidence of lipid testing, eye examinations, glucose testing including HbA1c, and primary care visits during the 12-month monitoring period [4]. We used Current Procedural Terminology (CPT) codes to identify targeted services (Table 1). Evidence for any of these types of services was classified dichotomously according to whether at least one occurrence was noted during the 12-month period.

Demographics and comorbid hypertension

We derived basic demographic characteristics from Medicaid eligibility files: age, sex, race, MUA/non-MUA,

Table 1
Procedure codes used to identify diabetes quality care indicators from outpatient claims

Hb_{A1c}/Glucose	Cholesterol	Eye examination			PCP visits
80048	0026 T	2022F	67210	92240	99050-99051
80050	80061	5010F	67218	92250	99053
80053	82465	67028	67220	92260	99056
82947-82948	83718-83719	67030	67221	99203	99060
82950-82952	83721	67031	67227	99204	99201-99205
82962	83700	67036	67228	99205	99211-99215
83036	83701	67038-67040	92002	99213	99241-99245
83037	83704	67101	92004	99214	99271-99275
	83715	67105	92012	99215	99354-99355
	83716	67107	92014	99242	99381-99387
	84478	67108	92018	99243	99391-99397
		67110	92019	99244	99429
		67112	92225	99245	99441-99443
		67121	92226	G8325	D9430
		67141	92230	G8329	D9440
		67145	92235	G8333	
		67208		G8397	