

Running the Numbers

*A Periodic Feature to Inform North Carolina Health Care Professionals
About Current Topics in Health Statistics*

Proximity to National Committee for Quality Assurance Diabetes Recognition Programs Among North Carolinians With Diabetes

Diabetes is a chronic condition affecting approximately 636,000 North Carolinians [1]. With effective management, diabetes can be better controlled and lead to a reduced incidence of poor health outcomes, lower health care costs, and a higher quality of life. [2]. Regular access to a clinician who, with proper training, is delivering care for chronic conditions on the basis of new, innovative models may be limited, however, depending on the circumstances of the patient and the community. The National Committee for Quality Assurance (NCQA) offers a Diabetes Recognition Program (DRP), which recognizes practices achieving certain standards in diabetes care. This article reviews the number of North Carolina residents who live within 20 miles of an NCQA DRP practice.

At the time of writing, there were 739 NCQA DRP practices in North Carolina. The name and address of each practice were accessed from the NCQA Web site [3] and then linked with zip code-level data. Because no reliable small-area estimates of diabetes prevalence appear to have been published, a model of self-reported diabetes prevalence was estimated using data from the 2008 Behavioral Risk Factor Surveillance System survey in North Carolina [1]. Prevalence was modeled on the basis of age, sex, race/ethnicity, income, education level, and residential setting (ie, metropolitan or nonmetropolitan area); all of the factors except residential setting predicted diabetes prevalence. Claritas Pop-Facts 2009 (Nielsen) was used to predict, at the zip code level, the number of individuals with diabetes. These data were compared with the number of NCQA DRP practices in each North Carolina zip code to determine the proximity of diabetic North Carolinians to an NCQA DRP practice. Research previously published in this section of the NCMJ used similar methods to generate small-area estimates of prevalence [4].

Of the 630,000 North Carolinians estimated to have received a diagnosis of diabetes, roughly 192,000 (30%) do not live within 20 miles of an NCQA DRP practice (Table 1, Figure 1). Another 37,000 North Carolinians with diabetes (6%) live within 20 miles of only 1 practice. Vast differences exist across the state, however, and disparities are evident when the population is disaggregated by zip code. Residence in a zip code in a nonmetropolitan setting rather than a metropolitan setting (57% vs 16%), in one with a high rather than low percentage of African American residents (39% vs 20%), in one with a low rather than high average income (42% vs 13%), and in one with a high rather than low percentage of elderly residents (40% vs 17%) were each associated with a greater likelihood of having no NCQA DRP practices within 20 miles ($P < .001$ for each comparison) (Table 1).

The proximity measure used here is a crude indicator of access to practices that provide high-quality diabetes care. Although there are certainly innovative, high-quality practices that are not recognized by the NCQA, the gap in access revealed in this report suggests that there may be gaps in access to high-

FIGURE 1.
National Committee for Quality Assurance Diabetes Recognition
Program Practices Within 20 Miles of North Carolina Zip Codes, 2011

This figure is available in its entirety in the
online edition of the NCMJ.

Note. Data are from [3]. The map was created at the North Carolina Rural Health Research and Policy Analysis Center, Cecil G. Sheps Center for Health Services Research, University of North Carolina-Chapel Hill.

TABLE 1.
National Committee for Quality Assurance Diabetes Recognition Program Practices Within 20 Miles of Diabetic Residents' Zip Codes, by Zip Code Characteristic

Characteristic	0 practices	1 practice	>1 practice	Total
Overall	192,000 (30)	37,000 (6)	408,000 (64)	636,000 (100)
Residential setting				
Nonmetropolitan	125,000 (57)	5,000 (2)	89,000 (41)	218,000 (100)
Metropolitan	67,000 (16)	32,000 (8)	320,000 (76)	418,000 (100)
Percentage of African Americans				
Low	58,000 (20)	27,000 (9)	205,000 (71)	290,000 (100)
High	134,000 (39)	10,000 (3)	203,000 (59)	347,000 (100)
Income level				
Middle or high	36,000 (13)	18,000 (7)	215,000 (80)	269,000 (100)
Low	156,000 (42)	19,000 (5)	193,000 (53)	368,000 (100)
Percentage of elderly individuals				
Low	46,000 (17)	12,000 (4)	216,000 (79)	274,000 (100)
High	146,000 (40)	24,000 (7)	192,000 (53)	362,000 (100)

Note. Values are no. (%) of diabetic North Carolinians and are rounded to the nearest 1,000. Values were calculated by the author on the basis of data from [1, 3].

quality diabetes care across North Carolina. Furthermore, the gap may understate access, as it considers only the proximity of the practice and does not account for the size of the practice or other factors such as transportation opportunities. For example, practices located outside of metropolitan areas are likely to be smaller and, thus, able to manage a smaller patient panel.

Policy efforts are underway to encourage the deployment of health care practices that are delivering high-quality, innovative, new models of care with the promise of reducing costs and improving outcomes and quality of life. It is important for such policies to consider the distribution of these practices, as well as their total number, to ensure that the promise of innovative solutions can be realized by all populations. NCMJ

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