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Prevalence of Complete Streets policies in U.S. municipalities

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ABSTRACT

Communities can adopt Complete Streets policies to support physical activity through the routine design and operation of streets and communities that are safe for all people, regardless of age, ability, or mode of transport. Our aim was two-fold: (1) to estimate the prevalence of Complete Streets policies in the United States overall and by select municipality characteristics using data from the National Survey of Community-Based Policy and Environmental Supports for Healthy Eating and Active Living (CBS HEAL) and (2) examine the agreement between information about local policies reported in CBS HEAL with those found in the National Complete Streets Coalition's database. Data from a representative sample of incorporated U.S. municipalities with a population of at least 1000 people (n = 2029) were analyzed using survey weights to create national estimates. In 2014, 25.2% of municipalities had a Complete Streets policy reported by a local official. Prevalence of local policies decreased with decreasing population size and was lower among those with a lower median education level and those in the South, with and without adjustment for other municipality characteristics. Agreement between local Complete Streets policies reported in CBS HEAL and the coalition's database was moderate with 72.5% agreement (kappa = 0.21); however, agreement was lower for municipalities with smaller populations, those located in rural areas, and those with a lower median education level. About 16.8% of local officials reported they did not know if their municipality had such a policy. There is room for improvement in the awareness and adoption of Complete Streets policies in the United States, especially among smaller municipalities and those with lower median education levels. Helping communities address issues related to the awareness, adoption, and implementation of Complete Streets policies can be an important step toward creating more walkable communities.

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1. Introduction

Being physically active is one of the most important steps that people of all ages and abilities can take to improve their health (Physical Activity Guidelines Advisory Committee, 2008; U.S. Department of Health and Human Services, 2008). However, only one-half of US adults meet the current aerobic physical activity guideline (U.S. Department of Health and Human Services, 2008) and certain populations, such as adults who are non-Hispanic Black or Hispanic or who have lower

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levels of income or education, are less likely than their respective counterparts to meet the guideline (U.S. Department of Health and Human Services, 2016). Although individuals make the choice to be physically active, the decision can be made easier when communities adopt design policies that support physical activity (Community Preventive Services Task Force, 2015; Heath et al., 2006).

Complete Streets policies (Laplante and McCann, 2008; McCann and Rynne, 2010; Smart Growth America, 2015b) support the routine design and operation of streets and communities that are safe for all people, regardless of age, ability, or mode of transport. Because each street is unique and exists within a specific community context, Complete Streets is an approach, not a single design (Smart Growth America, 2015a). Streets designed with this approach may include sidewalks, bike lanes, special bus lanes, comfortable and accessible transit stops, frequent crossing opportunities, median islands, accessible pedestrian signals, and curb extensions (Smart Growth America, 2015a). By applying this approach, communities can promote active forms of transportation which can then result in increases in physical activity among residents.

Several case studies have documented the benefits of Complete Streets policies on physical activity (Schlossberg et al., 2015). For example, after a "road diet" (where a roadway is modified to reduce the amount of space devoted to automobiles and allow more space for bike lanes and pedestrians) of a minor arterial roadway in Seattle, Washington, the volume of cyclists increased by 35% from 2007 to 2010 (Schlossberg et al., 2015). Another case study reported that introducing bike lanes to a busy street in Long Beach, California, nearly doubled the rate of cycling (Schlossberg et al., 2015). In addition to promoting physical activity, Complete Streets policies can make streets better and safer for drivers, transit users, pedestrians, and bicyclists (Laplante and McCann, 2008; McCann and Rynne, 2010; National Complete Streets Coalition, 2015; Smart Growth America, 2015a). They have also been associated with economic benefits for communities, such as higher property values and increased retail activity (National Complete Streets Coalition, 2015).

To evaluate the adoption of Complete Streets policies, decision makers, researchers, and practitioners at local, state, and national levels need easy access to data about where policies have been adopted, the characteristics of communities that have adopted these policies, and where policies are lacking or needed. Understanding the sociodemographic characteristics of communities that have adopted Complete Streets policies will help identify types of communities that may benefit from greater education, resources, or support to adopt Complete Streets policies, while also identifying communities that have adopted Complete Streets policies and may now benefit from strategies for implementation.

To date, no study has examined the prevalence of adopting Complete Streets policies among a representative sample of U.S. municipalities. In 2014, the Centers for Disease Control and Prevention (CDC) used the National Survey of Community-Based Policy and Environmental Supports for Healthy Eating and Active Living (CBS HEAL) to query officials in a national sample of local municipalities about the presence of policies to support healthy eating and active living, including Complete Streets policies. These data provide information about the national prevalence of policies overall and by characteristics of the municipalities.

Using survey data to estimate the prevalence of policies can be challenging. Because the data are collected from a person, they are subject to information bias and possibly influenced by the respondent's awareness and understanding of Complete Streets policies. For some policy data, such as for Complete Streets policies, there are groups that also collect information about policy adoption. The National Complete Streets Coalition currently collects information about Complete Streets policies adopted by states, metropolitan planning organizations (MPOs), counties, and places (e.g., city, town, village) by monitoring the Internet and collecting information from partners (Smart Growth America, 2015b). This collection of policies can be used to examine the accuracy of self-reported data from a local official, such as what was done in CBS HEAL.

The purpose of this study is twofold. First, we estimate the prevalence of Complete Streets policies overall and by select municipality characteristics. Second, we compare the reporting of Complete Streets policies in CBS HEAL with the presence of these local policies in the National Complete Streets Coalition database overall and by select characteristics.

2. Methods

2.1. Data

2.1.1. National Survey of Community-Based Policy and Environmental Supports for Healthy Eating and Active Living (CBS HEAL)

CBS HEAL was conducted from May through September 2014 by CDC's Division of Nutrition, Physical Activity, and Obesity. The original sample of potential respondents (4484 municipalities from all 50 U.S. states) was selected from the 2007 Census of Governments (COG) files, which list municipalities and townships by state (U.S. Census Bureau, 2015c). In states with geographic overlap between municipal and town or township levels of government, the eligible sample pool was modified and townships were excluded. Municipalities with population size less than 1000 were excluded because during a pilot study conducted in two states, small communities were less likely to have policies and practices that support healthy eating and active living. Sampling was stratified by region and by the 30th percentile of urbanized area to total area in a municipality and sorted by population size with a fixed sampling interval to create a nationally representative sample of municipalities. Participating municipalities were assigned sample weights to account for unequal probabilities of selection and varying rates of nonresponse.

The primary respondent for the survey was the city or town manager, city or town planner, or a person with similar responsibilities. Respondents were encouraged to ask municipal officials in other departments, such as tax, procurement,