The Effects of Transit Corridor Developments on the Healthcare Access of Medically Fragile Vulnerable Populations

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ABSTRACT

Transportation has been identified as a major barrier to healthcare access, particularly, within vulnerable population groups. The level of healthcare access that most population segments have in traditional transit systems may be increased with new initiatives that involve complex and large investments in transit oriented developments (TOD) projects. However, the increasing attractiveness of neighborhoods affected by TOD initiatives may result in the gentrification of vulnerable population segments. These vulnerable segments are likely to be relocated into less attractive neighborhoods characterized by inadequate transit systems. This relocation increases the probabilities of reducing healthcare access for these underserved groups leading to an increase in health disparities. The present discussion calls for research to explore relevant factors that affect these dynamics. A framework that enables the identification of individual factors that affect gentrification processes under TOD initiatives as well as quantifying the effects from these processes is suggested in this paper. A system dynamics framework that allows the understanding of the dynamics associated with this system is suggested in this paper. Critical areas for empirical research are highlighted. These are prerequisites for the effective deployment of initiatives that ensure the mitigation of possible negative impacts on vulnerable populations.

Keywords: Gentrification, Healthy Behaviors, Simulation, Transit Oriented Developments (TOD), Vulnerable Populations

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1. INTRODUCTION

Transportation has been cited one of the most critical barrier to access to healthcare (Institute of Medicine, 1993). A large number of studies indicate the negative impacts of transportation barrier towards access to healthcare, predominantly, for vulnerable population. Rittner and Kirk (1995) report that a majority of low income old people in poor health condition depended on public transit as their only means of accessing healthcare services. Okoro et al. (2005) report ‘lack of transportation’ and a possible dependence on public transportation as one of critical barriers to healthcare, especially for women, in a study of overcoming the barriers to preventive care among older population. Similar results are reported by Fitzpatrick et al. (2004). Flores et al. (1998) found that transportation problem was cited by 21% of the parents as the reason for lack of access to healthcare when studying the barriers to healthcare access among Latino children. Ahmed et al. (2001) report comparable results from studying barriers for non-elderly, poor Americans segments in urban settings. In a study conducted in a community health center settings, Shook (2005) reports that 32% of the patients reported a transportation barrier within the last year, with most problems related to transit. Consistently, this author finds that this barrier affects the vulnerable populations more severely than the rest. From the discussion above it is evident that transportation remains to be a major barrier to healthcare and that transit is a possibly inefficient but the only (and hence important) means of accessing healthcare especially for the most vulnerable populations.

1.1. Background

The idea of promoting livability through development centered on transit corridors has generated a significant attention from the public opinion in recent times. The concept of livability is centered around the degree of equivalence between the needs of individuals and the provisions within the society/environment to satisfy those needs (Veenhoven & Ouweneel, 1995). Livability is concerned with the need of an individual to live in a socially amenable environment that promotes individual as well as collective well-being (Newman & Kenworthy, 1999). Public transportation plays a unique and important role in promoting livability. Transportation hubs (stations) become points at which people meet and interact with each other; stations become centers of commerce and social events and recreation while providing better mobility to people by connecting neighborhoods (Transportation Research Board, 1997). Most important elements of TOD include higher density and mixed land use, and ease of access to high quality public transportation in which car rides are replaced by walking and biking and creating a sense of identity within the community (Cervero, Ferrell, & Murphy, 2002). During the past decade a large number of major urban centers in the US are planning or implementing some class of mass transit system using TOD as a base (Belzer & Butler, 2002). This idea is gaining momentum among local and state governments as well as federal transportation agencies.

A critical consideration that emerges from the discussion above is the effect of transit oriented initiatives on an already weak level of access to healthcare that elderly and medically fragile vulnerable populations have. Particularly, the rising cost of housing in areas that have easy access to public transportation under TOD initiatives are likely to make those housing options unaffordable to these vulnerable segments. The gentrification of low-income neighborhoods due to TOD may cause a reduced access to public transportation for vulnerable populations. This further impedes their access to healthcare. A summary of recent papers that discuss several dimensions of gentrification is presented in Table 1. Table 2 exhibits recent gentrification studies that explore diverse issues for particular locations.

Gentrification effects due to TOD initiative have already been explored in the literature. Kahn (2007) presents results from an extensive study spanning 14 cities that have implemented TOD initiatives. The author utilizes home price
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