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Injuries and Safe Communities Accreditation: Is there a link?

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ABSTRACT

Safe Communities (SC) is a global movement that brings together community stakeholders to collaboratively address injury concerns. SC accreditation is a formal process through which communities are recognized for strengthening local injury prevention capacity. Six million Americans live in 25 SC sites, but no research has been done to understand the model's potential impact on this population. This study explored the temporal relationship between SC accreditation and injury trends in three SC sites from the state of Illinois—Arlington Heights, Itasca, and New Lenox. Hospitalization data, including patient demographics, exposure information, injury outcomes, and economic variables, were obtained from a statewide hospital discharge database for a 12-year period (1999–2011). Joinpoint regression models were fitted to identify any periods of significant change, examine the direction of the injury trend, and to estimate monthly percent changes in injury counts and rates. Poisson random-intercept regression measured the average total change since the official SC accreditation for the three communities combined and compared them to three matched control sites. In joinpoint regression, one of the SC sites showed a 10-year increase in hospitalization cases and rates followed by a two-year decline, and the trend reversal occurred while the community was pursuing the SC accreditation. Injury hospitalizations decreased after accreditation compared to the pre-accreditation period when SC sites were compared to their control counterparts using Poisson modeling. Our findings suggest that the SC model may be a promising approach to reduce injuries. Further research is warranted to replicate these findings in other communities.

1. Introduction

Safe Communities (SC) is a well-known grassroots initiative that promotes coalition building and encourages community participation in injury prevention. Originated under the auspice of the World Health Organization Collaborating Centre on Community Safety Promotion, the SC movement has transcended geopolitical boundaries and found support around the globe as evidenced by the fact that over 300 sites representing 29 countries have been formally accredited since 1989. Nonetheless, research on the SC model has produced mixed results in regards to its impact on injury outcomes. A Cochrane Review summarizing published evidence from Austria, Australia, New Zealand, Norway, and Sweden, concluded that despite some promising findings, "...there remains insufficient evidence from which to draw definitive conclusions" about its effectiveness (Spinks et al., 2009).

SC accreditation is a process through which communities are formally recognized by designated SC Certifying Centers for having met a set of qualification criteria. According to the international accreditation requirements, a Safe Community needs to demonstrate: 1) a history of collaboration among stakeholders with a vested interest in community safety; 2) injury prevention programs aimed at a broad scope of populations and settings; 3) programs that address the needs of vulnerable groups; 4) injury surveillance activities; 5) program evaluation activities; and 6) active engagement with other SCs and networks (Spinks et al., 2009). Clearly, to meet these criteria, a community would need to show that investments in safety improvement are not simply an assortment of isolated programs, but rather strategic collaborations leading to positive injury outcomes through integration of priorities, resources, expertise, perspectives, and funding streams. One critical feature of the SC model is that it forces communities to apply the same philosophy of collaboration, cooperation, and data-driven performance improvement to both dimensions of injury—intentional and unintentional.

Looking at the typical accreditation experience of SCs, three broad phases of activity can be identified—pre-application, appli-

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cation, and accreditation. During the pre-application phase, a community works to build a coalition by identifying and bringing together organizations and individuals committed to injury prevention. The coalition's goals, policies, structure, membership, and budget are established to support future programs. The coalition starts to engage its members and other partners in planning, developing, and delivering programs to achieve stated objectives. The pre-application phase is when communities first become aware of and decide to pursue SC status. This phase, which may last between several months and several years, ends when the coalition—with support from the top local governing body—submits a letter of intent to seek SC accreditation. The application phase may take up to a year to complete. During this phase, the coalition goes through a self-examination to describe its policies, programs, resources, and achievements in order to complete a SC application. If the application is accepted, trained observers assigned by a SC Certifying Center conduct an on-site assessment of the community to collect additional information and verify the validity of the application. Granting of the SC accreditation marks the beginning of the accreditation phase, in which the coalition is expected to maintain or expand its scope of activities and also become actively involved in the SC movement through peer exchanges, capacity building, mentorship, and shared learning.

In addition to being a process, SC accreditation can also be viewed as a status. Although accredited SCs have a certain cachet of respectability, which their neighbors may lack, SC accreditation does not declare populations or environments "safe" per se. Rather, the goal is to ascertain whether communities can demonstrate evidence of a concerted and sustainable local effort to ensure that the safety of all individuals and families is a priority. At the heart of this multifaceted work is a group of local stakeholders with a vested interest in promoting community safety, who do so by relying on individual commitment, common goals, and shared, albeit often limited, resources.

Motor-vehicle crashes, falls, suicide, drowning, violence, and other factors contribute to the overall impact of intentional and unintentional injury on communities. In the United States, unintentional injuries and suicide are among the top-ten causes of mortality. Unintentional injuries are also the leading cause of death among people 1 through 44 years old (CDC, 2015). One would be hard pressed to find a U.S. community unaffected by the burden of injuries. In response to this public health epidemic, partnership-based interventions have been developed with a focus on specific population segments, behaviors, or injury types. Through targeted interventions, the Safe Kids/Healthy Neighborhoods Injury Prevention Program in Harlem, New York was instrumental in reducing pediatric injuries due to motor-vehicle crashes, falls, assault, and firearms (Davidson et al., 1994). As a result of its success, the program became a blueprint for a national-level multifaceted approach to injury prevention incorporating elements of injury surveillance, collaboration, education, intervention development, and evaluation (Pressley et al., 2005). Communities That Care (CTC) is another example of how a long-term comprehensive community strategy based on stakeholder engagement can be applied nationally to reduce delinquent behavior, substance use, and violence among adolescents (Fagan and Hawkins, 2013). The national expansion of Harlem's Safe Kids/Healthy Neighborhoods program and CTC serves as an illustration of research-driven prevention in which "community trials use articulated theory, careful measurement, and designs with comparison or control communities that provide evidence for the potential of community-level interventions" (Wandersman and Florin, 2003). On the other hand, Safe Communities, an example of community-owned and community-driven prevention, has been growing in popularity while there is very little research evidence available to the communities that the model works as expected.

Istre et al. (2011) found that a targeted intervention implemented under the SC umbrella in Dallas, Texas was instrumental in raising child passenger restraint use. However, questions have been raised about whether the intervention's success was a function of its effective implementation or the fact that it was implemented by a coalition of SC partners (Johnston, 2011). The study did not assess whether the intervention in question had a community-wide impact on child occupant injuries. The Community Coalition Action Theory maintains that the impact of partnership building on long-term health and safety outcomes goes far beyond what isolated interventions can accomplish alone. This impact can be seen in the way community partners work together to augment community programs, policies, and services and, furthermore, enhance community capacity through new opportunities for leadership, strategic planning, multi-sectoral collaboration, skill building, and resource mobilization (Butterfoss and Kegler, 2009). The Theory is particularly relevant to a discussion of SC coalitions because of their interest in addressing community safety in a comprehensive manner, rather than focusing on a specific population segment or one etiological factor. While it might be informative to isolate the individual pathways of influence, the collective contribution of these factors to creating a climate for positive change in community safety also deserves attention.

The SC movement in the United States is a relatively recent phenomenon. About 6.5 million Americans live in 25 SC sites, most of which have been accredited only in the last 6 years. Of the 25 sites, 11 are municipalities (65.8% of the total SC population), 9 counties (31.1% of population), 4 universities (1.8% of population), and 1 territory (i.e., several counties; 1.3% of population). The median population size of SCs is 82,000 with Dallas County, Texas being the largest (pop. 2,480,331) and Village of Itasca, Illinois being the smallest with 8811 residents (United States Census Bureau, 2015).

This study looks at the injury experience of three municipalities located in the state of Illinois that independently sought and eventually succeeded in obtaining SC accreditation around the late 2000s. The Village of Arlington Heights received SC accreditation in December 2010 in recognition of comprehensive, community-wide safety improvement efforts that had been collectively performed by members of its coalition. At the time of accreditation, the coalition was meeting bimonthly, and its members were local elected officials, municipal emergency services (lead agency), public health, three local school districts, aging services network providers, public transit, business community, and others. The coalition was supported by several community-wide committees tasked with addressing more specific issues such as bicycle safety, safety of physical environment, youth welfare, fire prevention, and school safety. Going through the accreditation process inspired the coalition to add an emphasis on injury surveillance, safe aging, and suicide prevention.

Itasca's SC accreditation was affirmed in April 2009. Members of the Itasca SC Coalition were from the mayor's office, police (lead agency), fire protection, park district, recreation facilities, school district, public library, nursing care facilities, civic organizations, family and youth services, and faith-based organizations. The scope of the coalition's activities encompassed several areas—road safety, crime prevention, community emergency preparedness and communication, interpersonal violence, child passenger restraint use, prescription drug disposal, pedestrian safety, prevention of drowning, school safety, and substance abuse.

The Village of New Lenox decided to pursue SC accreditation in November 2008 and was official accredited in April 2010. The New Lenox SC Coalition meets monthly and includes 31 representatives from law enforcement (lead agency), fire protection, municipal government, schools, public transportation agencies, health care, social services, emergency management, public health, wellness, faith-based organizations, civic organizations, and local