

Wheels For All: Addressing Social Determinants of Health One Bicycle at a Time

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ABSTRACT

Background: Wheels For All provides bicycles to individuals in La Crosse, Wisconsin to address the transportation barrier that often inhibits low-income individuals' ability to access community resources.

Methods: Recipients are referred by social service, health care, or other community agencies based on their need for transportation or exercise. Donated bicycles are matched to a recipient, repaired, and delivered personally by volunteers.

Results: Through collaboration with social service agencies, health care systems, and the community at-large, Wheels For All received referrals from 21 different sources and provided 101 recipients with bicycles from April 2015 to July 2017.

Conclusion: Using a cost-effective, community-engagement model, Wheels For All provides a means of transportation for recipients, resulting in an enhanced ability to access community resources.

BACKGROUND

Bicycles offer riders exercise, opportunities for freedom and discovery, social interaction, and transportation.¹ What began as a way to show wealth and privilege² today is an activity enjoyed by all ages, races, and social classes. Wheels For All, UA (Unincorporated non-profit association) is designed to address health inequity by helping eliminate a transportation barrier to health care and social services,^{3,4} enhance social capital through new relationships with volunteers and other community members, and increase the number of bicyclists on the road.

Recent literature describing the effects of social conditions on clinical outcomes has led to an increase in the prevalence of

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community outreach programs^{5,6} that rely on cultural competence and community engagement to improve community-level health. An important component for these initiatives, which include La Crosse County's neighborhood-based social workers and St. Clare Health Mission's community health workers, is a means of transportation to and from the specific resource or service. Wheels For All aims to ensure qualified recipients are able to access available resources such as food, shelter, and health care.

This brief report describes a novel approach to addressing transportation issues among low-income populations in

La Crosse, Wisconsin by utilizing a network of community partners. This cost-effective model directly benefits bicycle recipients while heightening area organizations' capacity to serve their target population.

METHODS

Wheels For All is a nonprofit social service organization that reaches underserved populations. Through stakeholder engagement and a novel referral process, the organization provides bicycles to individuals with the most urgent transportation needs.

From April 2015 to July 2017, all bicycles distributed to recipients were donated and most were converted to single-speed using new or high-quality used replacement parts. Single-speed bicycles require less maintenance and provide efficient riding on the relatively flat landscape of La Crosse. Bicycles not converted to single speed had fully functioning front and rear derailleurs with minimal wear on crankset and cassette teeth.

In addition to the bicycle, each recipient also received a new U-lock and tutorial on proper bike-locking techniques. Helmets were given to children but not adults due to budget limitations and adults' unwillingness to wear a helmet.

Table 1. Recipient Demographics and Referral Rationale

	Primary Reason for Referral			Homeless Recipients	Total
	Transportation	Exercise	Recreation		
Women	19	3	2	2	24
Men	42	1	-	18	43
Children	-	-	34	-	34

Table 2. Referral Sources for Wheels For All Recipients

Type of Referral Organization/ Agency	Number of Referrals			Total
	2015	2016	2017	
Community member identified need	5	10	10	25
Faith-based organization	2	2	-	4
Healthcare	-	2	2	4
Homeless shelter	3	6	-	9
Social service	5	24	13	42
Soup kitchen	5	6	-	11
School	-	-	6	6

Stakeholder Engagement

Collaborative efforts with free clinic, shelter, and health and human service staff allowed Wheels For All to connect with individuals who otherwise might not know about the service. Staff met with community stakeholders to explain the referral process, and each community organization agreed the service is needed. No request for funding or support was made during the engagement process.

Recipient Selection

Shelter staff, social workers, and other social service and health care employees selected recipients for a variety of reasons including a need for transportation to and from work or appointments, a needed change in health behaviors, and recreational activities with friends and family members. (Table 1)

Once a recipient was identified, the referral organization called or e-mailed Wheels For All and an initial meeting was scheduled between the recipient and Wheels For All staff at a time and place chosen by the recipient.

The initial meeting typically was facilitated by the referral organization and was used solely for introductions and to assess the size of bicycle needed. An intake form was completed to obtain general information (name, phone number, referral source, use for bike) and to document each referral. During a second meeting, the bicycle and U-lock were provided to the recipient, along with general education on bicycle maintenance, such as proper tire pressure. In addition, the bicycle was evaluated for proper fit and the recipient’s ability to safely ride a bike was assessed. All individuals identified by referral organizations received bicycles.

RESULTS

Since its inception in 2015, Wheels For All has provided 101 bicycles to area men, women, and children (Table 1). A diverse group of referral agencies (Table 2) ensures the allocation of Wheels For All’s services is compliant with its goal to address transportation barriers in an equitable manner. During the study period, the organization received referrals from 21 different sources ranging from local churches to area homeless shelters.

The total time from initial referral to provision of a bicycle was 3 to 10 days, depending on the recipient’s availability. Relationships with local bike shops and correspondence through Wheels For All’s social media platform ensured a steady stream of bicycle donations, and the supply of bicycles consistently met demand.

DISCUSSION

Organizational Growth and Quality Improvement

Due to the influx of referrals and subsequent program growth, quality improvement and efficiency have been prioritized into 3 broad categories: communication, recipient outreach, and organizational growth.

Communication between Wheels For All and bicycle recipients has been enhanced. Each recipient is given contact information in order to communicate meeting times and general information, and also as a resource in the event a service need arises. The contact person at each referral organization also has contact information in case a recipient does not have access to a phone.

Since the majority of recipients are experiencing housing, financial, health, or employment insecurities at the time of the giveaway, substantial effort is made to reach individuals at locations most convenient to them. In addition, Wheels For All volunteers have provided countless repairs including tube/tire replacement, chain tensioning, brake adjustment, bottom bracket service, and derailleur adjustment to bicycles at locations throughout the city.

Increasing the number referral agencies through targeted engagement or word-of mouth continues to provide additional referrals and, in turn, more recipients. In addition, greater visibility in the community has led to an increase in service requests for non-Wheels For All bicycles. To date, no individual has been turned away for either bicycle or service requests.

Addressing the Transportation Barrier

Social determinants of health are the conditions in which people are born, grow, and work that are shaped by factors such as employment transportation, socioeconomic status, and educa-

Table 3. Cost Analysis of Bike-share and Bicycle Giveaway Methods

Method	Cost Per Bicycle
Purchase new	\$149.99 ¹
Refurbish used	\$91.06 ^a
Bike-share program	\$946.50 ^{12,b}

^aIncludes cost of bicycle (donated), chain, freewheel, U-lock, and chain tensioner.

^bFor initial year of bike-share program.

tion.⁷ With over 50% of La Crosse’s residents having an ALICE score below basic survival income level, as defined by the United Way,⁸ a substantial subset of the population struggles to access fundamental resources for themselves and their families. In addition to the evident clinical benefits of bicycling,^{9,10} Wheels For All was founded to allow recipients to address social determinants of health by eliminating the transportation barrier to community resources.

Community Participation

From its inception, Wheels For All has worked to align community engagement. The program utilizes its relationships with social service agencies, health care systems, area soup kitchens and shelters, faith-based organizations, and community members to ensure that the highest-priority individuals—those experiencing the greatest transportation barriers—receive bicycles. Partnerships with local bike shops and bicycle-related nonprofits offer knowledge, support, and sustainability for this model.

Prior to founding Wheels For All, research was done to determine the most cost-effective method for bicycle giveaways. As we learned, relying on bicycle donations and purchasing replacement parts is a less expensive alternative than buying a new single-speed bicycle or starting a bike-share program (Table 3). In addition to cost-effectiveness, our model was chosen because of its capacity to help form meaningful relationships with donors, recipients, and community organizations.

Limitations and Challenges

Since its inception, Wheels For All has faced some challenges, including bicycle theft—a glaring issue in the community. Even though recipients receive a U-lock, numerous bicycles have been reported stolen. Additional security measures, such as in-depth education on proper locking techniques and registering all bicycles with the La Crosse Police Department, will be considered for future recipients.

Additionally, while one of the intents for the program was to help recipients access resources by getting to appointments for health or social services, we have not analyzed these data sufficiently to determine whether these goals were met. Future research should determine the impact having a bicycle plays in accessing community resources, getting exercise, and decreasing social isolation.

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