

Improvement of the Promoting Active Communities Assessment

Literature Review Results

A literature review guided improvements to the Promoting Active Communities Award (PAC) made in 2006. The literature review was structured around constructs and measures thought to be related to physical activity (indicators) and physical activity outcomes, and included published literature between 1980 and September 2005. Keyword searches were conducted using the online journal indexes MEDLINE and Wilson Select. Categories of indicators and physical activity/health outcome terms were selected from an initial scan of the literature and keyword search terms were assigned to each category. For example, in the policy category, terms included zoning, budget, planning, funds, and construction among others. The sidewalks category included terms such as continuity, maintenance, width, surface, and material. Physical activity outcome terms included bicycling, biking, cycling, exercise, fitness walking, physical activity, physical fitness, recreation, running, and walking. Keyword searches combined each indicator category term with each physical activity outcome term. Once relevant research articles were identified, results were entered into a Microsoft Access database; outcomes were recorded by indicator and outcome category.

The literature review also included an inventory of existing assessment tools and measures used to assess physical environment and policy indicators at the community and neighborhood level thought to be associated with physical activity. Best practices manuals in the areas of multimodal transportation and recreation spaces were also used to identify understudied or inconclusive concepts and/or indicators that experts believe were related to physical activity.

The search of the scientific literature yielded 144 research articles that met criteria. Articles were catalogued in a searchable Access database. Indicators (independent variables) were identified and divided into 15 categories. Physical activity outcome variables were divided into three major categories: transportation activity (walking for transportation and walking or biking for transportation), recreation activity (walking for recreation and general, moderate, vigorous, leisure time, or other physical activity), and weight (BMI, obesity, or overweight status). Many of the research studies included results in more than one category. In order to assess strength of evidence, results were also categorized by type of research study. The 144 studies were primarily cross-sectional, with some case studies and cohort studies. There were few studies with experimental and/or quasi-experimental design.

Examples of indicators that were found to be positively associated with physical activity in the research studies, and sample PAC assessment items, are shown in Table 1.

Table 1: Application of Literature Review Results

Active Transportation	
Indicator categories	Sample PAC assessment items
Examples of indicators from literature review	
<p>Bicycle Amenities</p> <p>Miles of bicycle pathways</p> <p>Knowledge of mapped-out bicycle routes</p> <p><i>References:</i> 1-12</p>	<p>How many miles of on-street bike lanes exist in your community? (Score is weighted by total mileage of arterial streets in the community)</p>
<p>Sidewalks</p> <p>Presence of sidewalks in neighborhood</p> <p><i>References:</i> 1-3, 5, 8, 11-47</p>	<p>Does your community have a plan or program to complete important sidewalk connections that are currently missing?</p>
<p>Streets</p> <p>Access to neighborhood streets for walking or recreation purposes</p> <p><i>References:</i> 1, 14, 15, 23, 34, 47, 48</p>	<p>There is so much traffic along streets nearby our neighborhood that it makes it difficult or unpleasant to walk [5 point scale: Strongly disagree to Strongly agree]</p>
<p>Street Connectivity</p> <p>Grid street design</p> <p><i>References:</i> 2, 3, 29, 31, 32, 38, 49-53</p>	<p>Do your master plan or subdivision regulations require high connectivity by requiring a grid-like street design for new development?</p>

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<p>Traffic Safety Crossing improvements</p> <p><i>References:</i> 1-3, 5, 11-16, 18, 19, 21, 26, 27, 30, 37-44, 47, 53-64</p>	<p>How many crosswalks in your downtown area have well-marked pavement (i.e., with continental or ladder style markings, and stop bars, or similar markings) and are supported by clear signage and lighting?</p>
<p>Trails Access to a trail</p> <p><i>References:</i> 8, 11, 14, 16, 23, 34, 35, 37, 40, 43, 47, 48, 65-70</p>	<p>How many miles of shared-use paths and/or multi-use recreational trails are available in the community? (Score is weighted by community population)</p>
<p>Transit Distance to the nearest bus stop</p> <p><i>References:</i> 3, 5, 12, 17, 32, 33, 38, 52, 57, 62, 66, 71, 72</p>	<p>Does your community's public transportation system serve all areas of your community often enough to make it a realistic option for regular commuting?</p>

Table 1 cont.

Community Design		
Indicator categories	Examples of indicators from literature review	Sample PAC assessment items
Density and Intensity of Development	Residential density Sprawl index	In your highest density residential zone, the maximum number of dwelling units that may be developed as a permitted use is: (Range: 2-4, 5-8, 8-15, 16-24, 25-59, >60) Does your community encourage infill development on vacant or underutilized land by offering incentives or financial assistance to interested developers, non-profits organizations, or landowners?
<i>References: 2, 3, 29, 31-33, 35, 38, 49-53, 73-87</i>		
Design and Aesthetics	Perceived enjoyable scenery Perceived appeal of the environment (street type and trees)	How visually attractive is your downtown? How many streets in your downtown area are lined with trees?
<i>References: 1-3, 5, 11, 12, 14-19, 21, 25-27, 33, 36, 40, 43, 47, 55-57, 59-61, 63, 66, 74, 88-94</i>		
Land Use Mixture	Mixed land use (accessibility of different types of land uses)	Do your zoning regulations allow the development of neighborhood-oriented commercial businesses, such as coffee shops, corner groceries, daycare centers, or laundromats in all residential zones as a permitted or conditional use?
<i>References: 1-3, 5, 12, 15-17, 19, 24, 26, 29-31, 33, 34, 41, 42, 44, 47, 49, 52, 53, 55-57, 60, 61, 66, 72-74, 77, 83, 88-91, 93, 95-99</i>		

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Has your community adopted provisions enabling traditional neighborhood developments (TND)? Provisions could be revisions or a new chapter within your existing zoning ordinance, or adoption of a stand-alone ordinance enabling TND or new urbanist neighborhoods.

Neighborhood Type Traditional neighborhood development

References: 17, 18, 25-27, 36, 38, 46, 55, 80, 96, 100-110

Table 1 cont.

Policy, Programming, Facilities for Physical Activity		
Indicator categories	Examples of indicators from literature review	Sample PAC assessment items
Crime Safety	Perceived safety	In general, are crime rates in your community a deterrent to biking or walking?
	<i>References:</i> 1-3, 5, 8, 11, 12, 14-16, 19-22, 24, 25, 27, 28, 30, 33, 37, 39-44, 46, 47, 53-56, 59, 61-63, 67, 76, 91-94, 111-117	
Information and Programming	Mass media campaign	Within the past 5 years, has a community-wide campaign been launched in your community encouraging residents to be physically active?
	Promotion of stair use	Does this employer or worksite promote physical activity for employees... by encouraging use of stairways in buildings where stairways are present? This means that stairways are easy to find, clean and appealing, and signs promote stair use for exercise.
		<i>References:</i> 6, 47, 78, 118-124
PA Facilities	Perceived access to places for physical activity	How many of the following facilities (list of 19 different types of facilities) are open to the public for exercise and/or recreation within your community? Do not include private gyms or clubs. Answers: # of facilities, # that are free or low cost.
		<i>References:</i> 2, 3, 5, 11, 12, 14, 20-25, 28, 30, 31, 34, 37, 40-42, 44, 47, 48, 53, 54, 57, 59-62, 65, 67, 89, 92, 93, 113, 114, 116, 119, 121, 122, 125-132
PA Facilities - Parks	Access to a park	Is access to public parks in your community is fair and uniform – that is, available

<p>and Open Space</p> <p>and convenient to all neighborhoods in your community, and to residents of all income levels?</p> <p><i>References:</i> 1, 8, 11, 14, 20, 23, 32, 40, 61-63, 66, 67, 91, 93, 115, 130, 133</p>	<p>Does this employer or worksite promote physical activity for employees... by [providing] an on-site exercise room or facility or pays a substantial part of the membership fee to exercise clubs (YMCAs, fitness clubs, etc.)?</p> <p>In the past 5 years, has your community shown a commitment to creating opportunities for physical activity by passing bonds, passing millages, levying taxes or getting grants to finance... sports facilities?</p> <p>Policy</p> <p>Provision of exercise space at worksite or in a nearby community facility</p> <p>Financial investment in sports facilities</p> <p><i>References:</i> 14, 119, 121-123</p>
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