Frontiers in Public Health Services and Systems Research

Volume 2 | Number 3 Article 5

March 2013

Community Asset Identification in Support of a Place-Based, Early Childhood Obesity Prevention and School Readiness Initiative

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Recommended Citation

Carman C, Raveche Garnett B, Wendel J, Hyde J, Rall Chomitz V. Community Asset Identification in Support of a Place-Based, Early Childhood Obesity Prevention and School Readiness Initiative. Front Public Health Serv Syst Res 2013; 2(3).
DOI: 10.13023/FPHSSR.0203.05

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Abstract

Despite extensive community efforts that have resulted in obesity decreases in Cambridge, MA over the last decade, obesity among Black youth remains disproportionately high. Likewise, racial/ethnic academic achievement disparities persist and are evident at early ages.

Prior research and emerging national policy recommendations confirm the need for place-based, early childhood interventions to address persistent racial/ethnic disparities in obesity and school readiness. A community-based participatory research initiative is developing an intervention targeted to pre-kindergarten children and their families in a diverse Cambridge neighborhood. The intervention will partner with a Cambridge Public Schools (CPS) program designed to support school readiness through extended pre-school, health care, and community-based services. To identify community partners and plan our efforts to promote healthy eating and active living (HEAL) and support school readiness, we conducted a community asset assessment.

Through mixed-methods, we (1) identified 239 potential HEAL assets in Area 4; (2) mapped assets to analyze the distribution and proximity of assets to neighborhood children (age 0-5); and (3) interviewed community leaders to provide context. Our findings informed our understanding of the community and helped prioritize the public housing authority, a childcare “clearinghouse”, and a coalition of faith-based organizations as high-impact intervention partners and settings.

INTRODUCTION

Despite extensive community efforts that have resulted in obesity decreases in Cambridge, MA over the last decade, obesity among Black* youth remains disproportionately high (1). Likewise, racial/ethnic academic achievement disparities persist and are evident at early ages.

Our prior research and the Institute of Medicine's national policy recommendations confirm that place-based, early childhood interventions may successfully address persistent racial/ethnic disparities in obesity (2) and school readiness. A community-based participatory research initiative is planning an intervention targeting pre-kindergarten children and their families in Area 4, a diverse Cambridge neighborhood. The intervention plans to partner with a Cambridge Public Schools (CPS) "wrap around" program designed to support school readiness through extended pre-school, health care, and community-based services. The city, school district and community are highly engaged in healthy eating and active living (HEAL) promotion and rich in resources. We conducted a community asset assessment to build on community engagement and identify neighborhood-based partners, integrate the intervention with existing activities and resources, and plan our efforts to promote HEAL and support school readiness.

Through mixed-methods, we 1) identified 239 potential HEAL assets in Area 4; 2) mapped the distribution and proximity of assets to neighborhood children (age 0-5); and 3) interviewed community leaders. Our findings informed our understanding of the community and identified the public housing authority, a childcare "clearinghouse", and a coalition of faith-based organizations as priority intervention partners and settings.

ADDITIONAL BACKGROUND

Impetus for study: In Cambridge, MA, as nationally, obesity among Black youth is disproportionately high compared with other racial/ethnic groups. After nearly a decade of community-based health promotion and universal school-based interventions in Cambridge, obesity among kindergarten-8th grade children declined significantly but racial/ethnic disparities persisted (23.5% Black vs 10.5% White students) (1). Our prior research, as well as emerging national policy recommendations, confirms the need for early childhood, family-oriented, place-based interventions in addressing persistent racial/ethnic obesity disparities.

Racial/ethnic academic achievement disparities also persist and are apparent at school entry. To address this achievement gap an Area 4 elementary/middle school in a racially and economically diverse neighborhood in Cambridge will initiate a wrap around program, the Full Circle, to improve kindergarten readiness among children in the school's catchment area. The evidence that healthy weight and fitness are associated with school success has stimulated a partnership to explore how neighborhood-based health-promoting programs and policies can supplement the Full Circle curriculum. To identify high-impact community partners and plan our efforts to promote HEAL and support school readiness, we conducted a community asset assessment.

*Discussions with community members and researchers culminated in the choice of "Black" as the most inclusive term for Area 4 residents of African-American, Caribbean, and African descent, regardless of the country of origin or immigration status in the U.S.

Setting: Cambridge is a city of approximately 105,000 residents adjacent to Boston. Area 4 is a diverse, relatively low-income neighborhood of 7,000 residents and one-third of a square mile (3). Thirty percent of Area 4 residents are Black/African American, 16% Hispanic, 46% White and 24% other. Thirty-two percent of residents are foreign-born and one-fifth of all housing units are public housing.

METHODS

Our methods relied on McKnight-Kretzmann's asset-oriented community assessment framework, which focuses on existing resources, assets and strengths within the community of interest, rather than its deficiencies and needs (4)[†].

We used the following approach:

1) **Defining our community**: With input from our CPS partners, we expanded Area 4's municipal designation to include the school's primary catchment area.
2) **Identifying assets and resources**: Through field observation, web-based research, and informal conversations with community stakeholders, we collected names and addresses of neighborhood assets and created an asset database (5).
3) **Prioritizing and organizing assets**: Based on the social-ecological framework we developed a theoretical model representing seven systems that families may use to support childrearing: 1) housing; 2) food and grocery; 3) health care; 4) built environment and active living; 5) community support/community fabric; 6) retail and services; and 7) childcare.
4) **Mapping assets:** We mapped the distribution of children in the community (age 0-5), by race and census block. Using ArcGIS, we geocoded the asset database and plotted each asset address on an Area 4 street map. We generated a seven-map series to correspond to the systems of our model and illustrate the precise location of assets in each system.
5) **Stakeholder[‡] interviews:** To find potential interview candidates, we used the "snowball sampling method". Starting with school leaders, we used their recommendations of colleagues from related community organizations as potential interviewees. Five stakeholders were interviewed. Audio recordings of the interviews were transcribed and read and analyzed twice; first, to generate codes to organize the qualitative data; second, to identify salient domain-specific themes from within and across interviews. Interviews provided deeper insight into Area 4 and helped prioritize potential collaborations and identify barriers for program planning (5).
6) **Synthesizing information and generating recommendations:** A community group viewed each of the seven asset maps overlaid with the distribution of Area 4 children to analyze the proximity of assets to children and the distribution of and patterns among assets in each system. Data from stakeholder interviews and community meetings supplemented the asset and demographic data.

† An asset is defined as an organization and resource that has potential to promote HEAL and school readiness among Area 4's pre-kindergarten children.

‡A stakeholder is defined as one connected to and invested in the Area 4 community. In this case, a stakeholder may be a community organization, community member, or a local or government program serving the community. A potential partner is defined as an Area 4 stakeholder whose purpose or goals coincides with our HEAL goals.

RESULTS

We identified 239 potential assets across seven systems to an Area 4-based HEAL initiative. Analysis of the housing and built environment system maps, overlaid with 2010 Census data demonstrating the distribution of children by age and race, indicated that Area 4 Black children (age 0-5) and their families predominantly reside in public housing in the southeast corner of the neighborhood (see Figure 1). The asset map series demonstrated that families living in public housing have limited access to HEAL assets. Specifically, two of Area 4's three large green spaces are approximately a half-mile walk for children living in the public housing clusters. Similarly, Area 4's three large grocery stores are located along the neighborhood's boundaries and not equally accessible to all residents. The community support/community fabric system map, however, illustrated the dense and even distribution of community organizations and services. Among these neighborhood-based assets are municipal services, such as the Department of Public Health, the Cambridge Housing Authority, the Cambridge Health Alliance, an integrated hospital and community health care organization, and a local non-profit organization that distributes state childcare subsidies and connects families to a range of childcare programs and services. There is also a meaningful presence of faith-based organizations, with 19 sites within the neighborhood's boundaries (see Figure 2).

Analysis of school and community stakeholder interviews supplemented and enriched the asset and demographic data with valuable insight on neighborhood characteristics, best practices and essential HEAL program elements. For example, Area 4 leaders play a critical role in mobilizing residents. To maintain community support and ownership, the project was advised to embed program activities within existing community structures or trusted organizations. To reduce barriers to participation, stakeholders suggested providing childcare, language-specific groups or interpreter services, and parking. Community stakeholders also highlighted the importance of trust in program staff and partners. To garner interest and participation in any early childhood intervention, the best communication strategies include door-to-door outreach and word-of-mouth from trusted sources.

IMPLICATIONS

The asset assessment identified priority partners to engage in planning an intervention to prepare children physically and developmentally for academic success and reduce racial/ethnic disparities in excess weight. Collaborating with the following preeminent organizations – each currently engaged with our target Area 4 population – may provide opportunities for potentially high-impact HEAL activities:

- Cambridge Housing Authority – Could promote physical activity through: built environment changes; extensive access to residents for a social marketing campaign; the co-development of programming for families that fosters economic and health improvement.
- Childcare Resource Center – Could facilitate access to childcare settings and providers to implement national policy recommendations.
- Faith-based organizations – As trusted leaders with a visible presence in the community, could model healthy behaviors and policies and provide a conduit for health communication and social marketing.
- Cambridge Public Schools – Could foster HEAL through Full Circle, food service, physical education, recess, and other policies and programming.
- Cambridge Health Alliance – Could consistently assess and monitor young children's weight status and provide preventive care and treatment for obesity among young children.

Our findings informed our understanding of the expanded Area 4 community and helped prioritize high-impact intervention partners and settings for our next steps in planning a place-based, early childhood intervention to address persistent racial/ethnic disparities in obesity and school readiness.

SUMMARY BOX:

What is already known on this topic?
Despite overall declines in overweight and obesity rates among Cambridge children, racial and ethnic disparities in excess weight persist. Asset-oriented community assessments are foundational to planning and implementing community-based/community-supported, culturally specific and multi-disciplinary health interventions.

What is added by this report?
This report illustrates a formative mixed methods asset assessment that communities and/or researchers can use to identify and prioritize high-impact assets and essential elements for a healthy eating and physical activity initiative for children (age 0-5) and their families. To promote replication and dissemination of the methods utilized, the essential steps to conducting a community asset assessment are outlined, with a specific focus on community engagement and participation.

What are the implications for public health practice/policy/research?
Our process highlights how community asset assessments can be useful for: 1) defining a community; 2) capitalizing on existing strengths and community readiness; 3) producing tangible maps that can be shared among community partners; and 4) identifying concrete next steps for intervention planning and collaboration.

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Figure 1

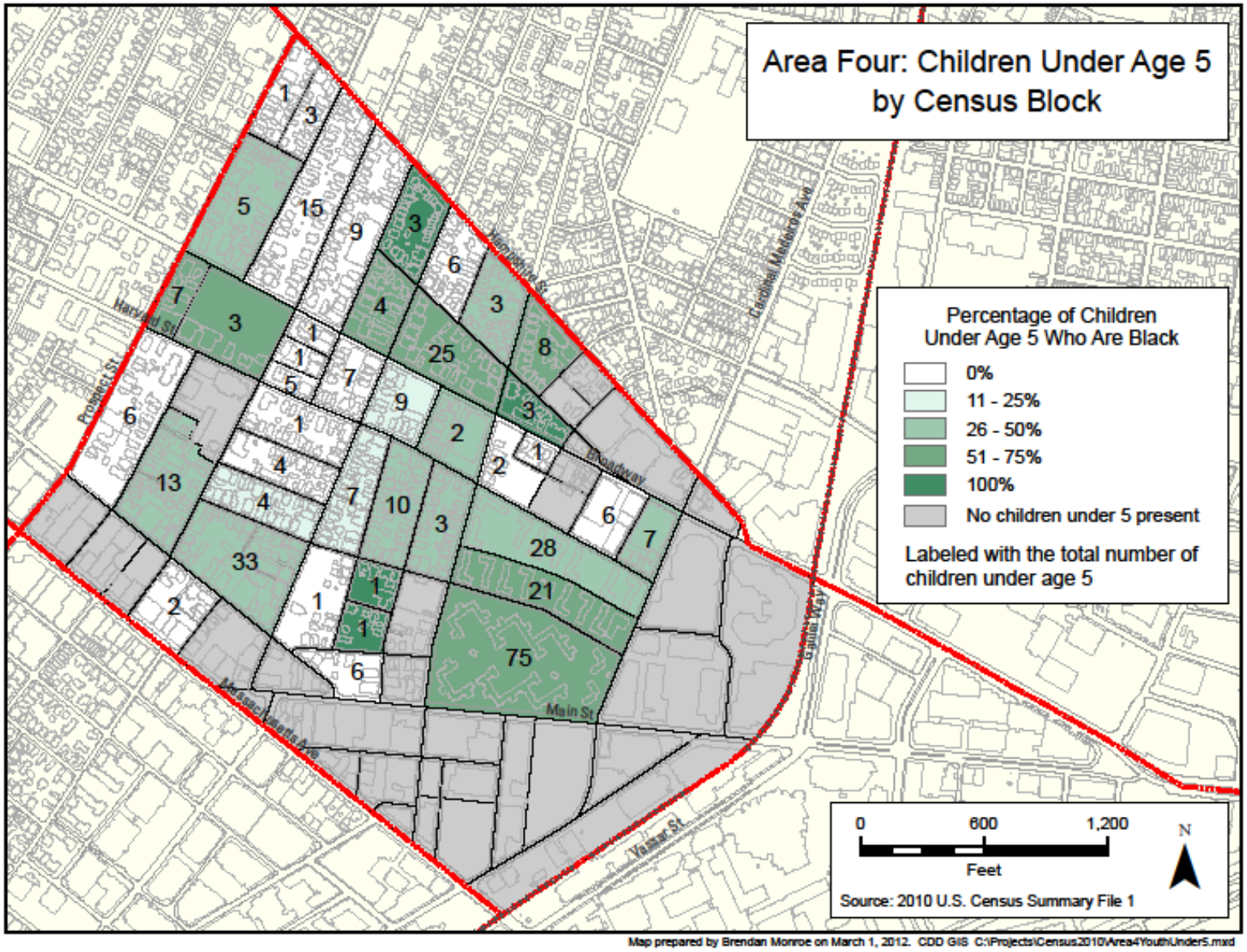
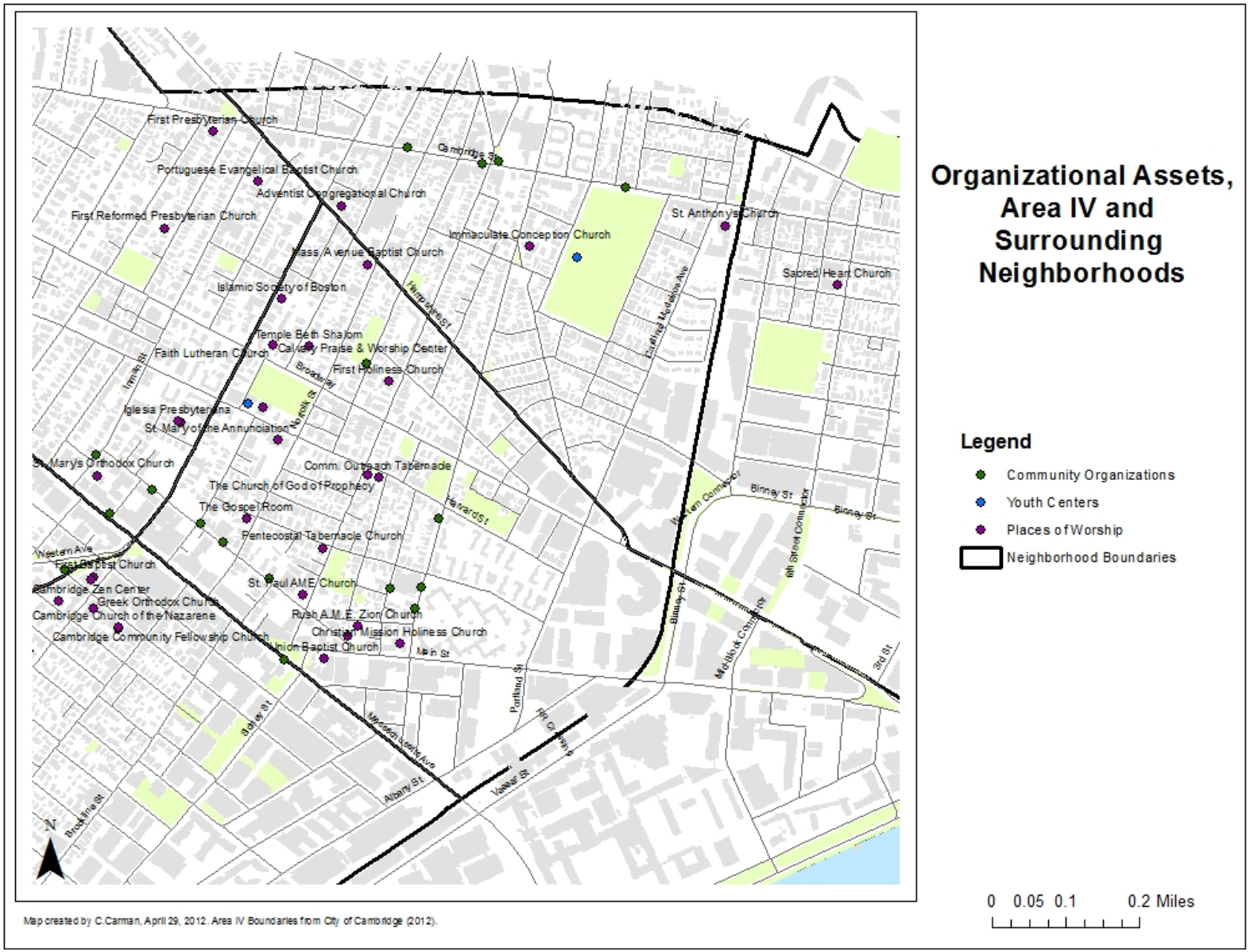

Area Four: Children Under Age 5 by Census Block
Percentage of Children Under Age 5 Who Are Black
0%
11 - 25%
26 - 50%
51 - 75%
100%
No children under 5 present
Labeled with the total number of children under age 5
0
600
1,200
Feet
N
Source: 2010 U.S. Census Summary File 1
Map prepared by Brendan Monroe on March 1, 2012. CDD GIS C:\Projects\Census2010\Area4Youth\Under5.mxd
Harvard St
Prospect St
Hampshire St
Cardinal Mahoney Ave
Broadway
Grand Ave
Main St
Massachusetts Ave
Vassar St

Figure 2


First Presbyterian Church
Cambridge St
Portuguese Evangelical Baptist Church
Adventist Congregational Church
First Reformed Presbyterian Church
Immaculate Conception Church
St. Anthony's Church
Mass Avenue Baptist Church
Sacred Heart Church
Islamic Society of Boston
Temple Beth Shalom
Calvary Praise & Worship Center
Faith Lutheran Church
First Holiness Church
Broadway
Iglesia Presbyteriana
St. Mary of the Annunciation
Norfolk St
St. Marys Orthodox Church
Comm. Outreach Tabernacle
The Church of God of Prophecy
The Gospel Room
Harvard St
Penteocostal Tabernacle Church
Western Ave
First Baptist Church
Cambridge Zen Center
St. Paul AME Church
Greek Orthodox Church
Rush A.M.E. Zion Church
Cambridge Church of the Nazarene
Christian Mission Holiness Church
Cambridge Community Fellowship Church
Union Baptist Church
Main St
Portland St
Sidney St
Albany St
Vassar St
Binney St
3rd St
N
Legend
Community Organizations
Youth Centers
Places of Worship
Neighborhood Boundaries
Organizational Assets, Area IV and Surrounding Neighborhoods
0 0.05 0.1 0.2 Miles
Map created by C.Carman, April 29, 2012. Area IV Boundaries from City of Cambridge (2012).