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Research Center**

Involving Community Groups in Playground Renovations: Evaluating the Impact of Playground Renovations on Park Use and Physical Activity Two Years after Installation

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Research Team and Partners

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- Chicago Park District
- Friends of the Parks



Benefits of Physical Activity

Physical Health

Fitness
Quality of life
Prevention of Chronic disease

Mental Health

Reduced anxiety
and depression

Psychosocial Health

Self-efficacy
Social behaviors
Goal orientation

Brain Health

Memory
Time on task
Executive function



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Parks and Physical Activity

- Neighborhood parks are usually freely accessible to all community members.
- Low-income urban neighborhoods have access to a greater number of parks.
- Are park improvements enough to increase use and physical activity?
 - Studies of park renovations have shown mixed results.
 - May need to introduce other intervention activities.

(Wen et al. 2013, Vaughan et al. 2013, Franzini et al. 2010, Cohen et al. 2009)



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The Community Guide Recommends the following environmental approaches to increase physical activity

Environmental Policy Approach	Strategies
Enhanced School-based Physical Education	Increase # of minutes spent in MVPA
Creation of or Enhanced Access to Places for PA combined with Informational Outreach Activities	Build trails or facilities, reduce access barriers (e.g., reducing fees or changing operating hours of facilities).
Community-Scale and Urban Design Land Use Policies	Mixed use, street connectivity, aesthetics and safety
Street-Scale Urban Design Land Use Policies	Roadway design standards, traffic calming, safe street crossings, street lighting
Transportation and Travel Design Policies and Practices	Facilitating walking, biking, public transportation use, reducing car use



Background

- Study by Broyles et al. found that parks with higher levels of social capital had higher daily visitation rates and higher social capital was associated with greater levels of physical activity by park users.
- This study focused only on adult use and activity, and did not examine added impact that renovations may have on these outcomes.

Background

- A needs assessment of all Chicago parks, conducted in 2009 through 2011, identified 300 playgrounds in need of repair.
- The Chicago Plays! Initiative was created to renovate these 300 playgrounds over the next five years and enhance safety and accessibility for all Chicago residents. (Project is funded with existing capital improvement funds)
- The Chicago Park District and Friends of the Parks developed a competitive application process where community *groups* (e.g., park advisory councils, block and church groups): 1) nominated playgrounds to be renovated in Year 1 of the program and 2) proposed plans for ongoing playground maintenance.
- The process was meant to empower residents living in intervention areas (i.e., those receiving *first stage* renovated playgrounds) to improve their neighborhoods and health by increasing park utilization and PA for children and their families.



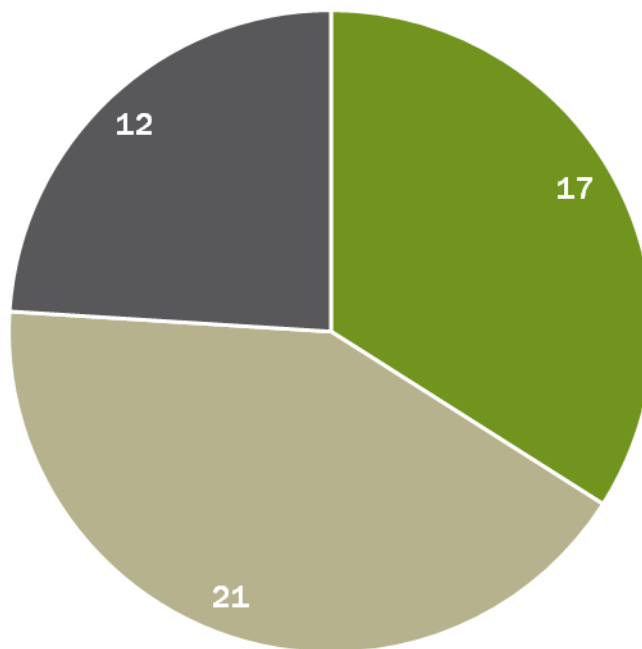
Study Purpose

- **Primary Objective:** To examine the impact of community engagement (i.e., involvement in the playground design selection process, installation, and ongoing maintenance) + park renovation compared to a matched control group of un-renovated playgrounds, not yet exposed to these community engagement activities and renovations, on park-based utilization and physical activity.



Submitted Applications

Chicago Plays! Applicants

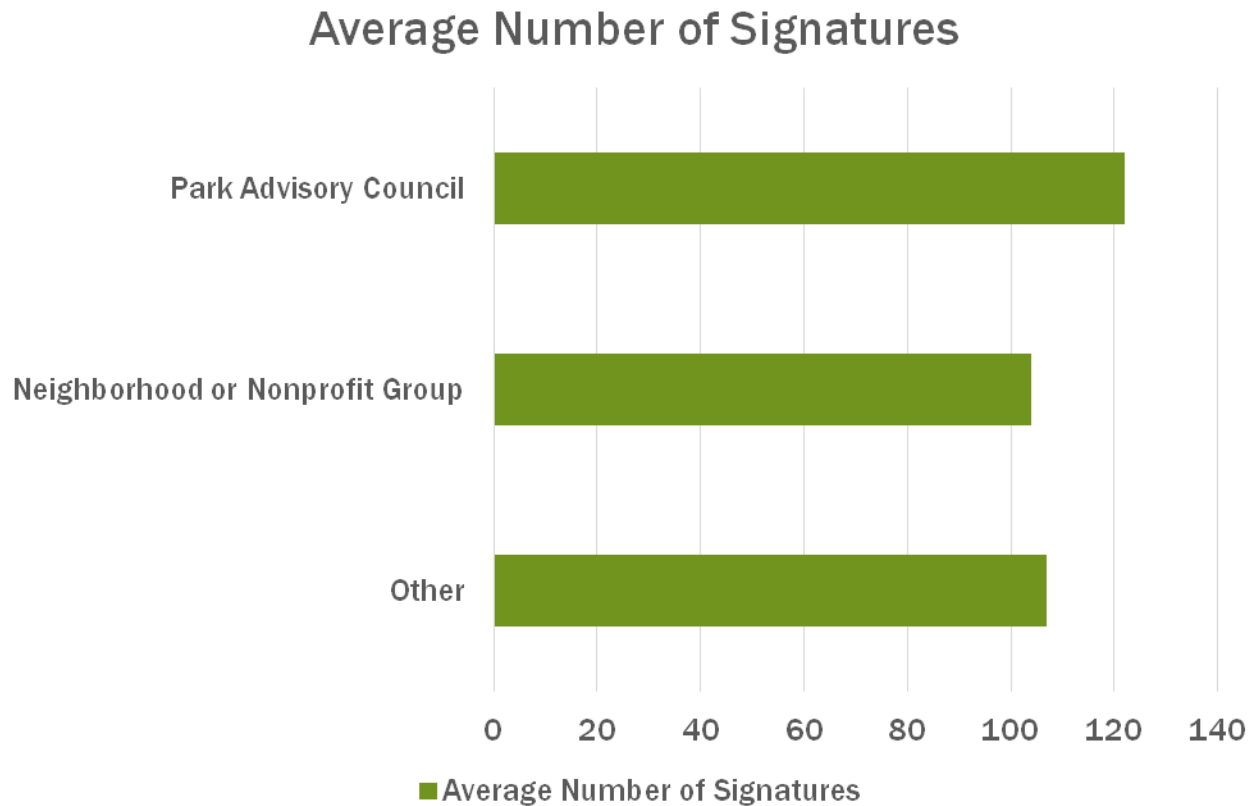


■ Park Advisory Councils ■ Neighborhood or Nonprofit Group ■ Other



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Community Support



Statement of Impact (Safety)

- **Creating safe playground space for kids**
- **Neighborhood safety**
- **Clean (problems with graffiti, dilapidated equipment)**
- **Decrease violence/crime /gang presence**
- **Playground equipment safety**
- **Minimize crossing unsafe intersections**
- **Drug-free (problems with drug/alcohol use)**



Statement of Impact (For the Community)

- **Unity among community members**
- **Attract new families**
- **Community engagement**
- **Community revitalization**
- **Benefit local businesses**
- **Neighborhood pride**
- **Cultural diversity**
- **Healthy social interactions with neighbors**
- **Quality of family life**

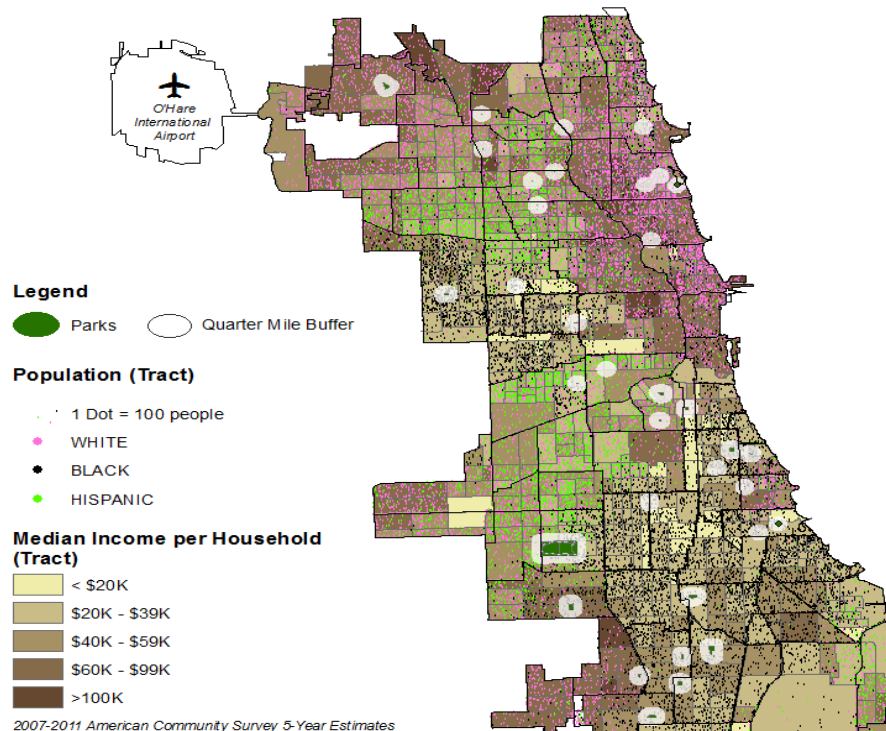


Park Sample

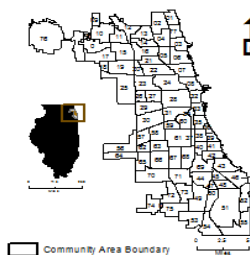
- **39 renovation parks, 39 control parks**
 - All renovation parks part of 2013 class of Chicago Plays! program
 - Control parks matched on park size and features, neighborhood predominant race/ethnicity, median household income level, and distance from renovation park



Park Sample Distribution



- Sample parks in 31 of 77 Chicago Community Areas
- Distribution by Area
 - Northside – 24 parks
 - Westside – 22 parks
 - Southside – 32 parks



Chicago Community Areas

01 - Rogers Park	20 - Hermosa	39 - Kenwood	58 - Brighton Park
02 - West Ridge	21 - Avondale	40 - Washington Park	59 - McKinley Park
03 - Uptown	22 - Logan Square	41 - Hyde Park	60 - Bridgeport
04 - Lincoln Square	23 - Humboldt Park	42 - Woodlawn	61 - New City
05 - North Center	24 - West Town	43 - South Shore	62 - West Elsdon
06 - Lake View	25 - Austin	44 - Chatham	63 - Sage Park
07 - Lincoln Park	26 - West Garfield Park	45 - Avalon Park	64 - Clearing
08 - Near North Side	27 - East Garfield Park	46 - South Chicago	65 - West Lawn
09 - Edison Park	28 - Near West Side	47 - Burnside	66 - Chicago Lawn
10 - Norwood Park	29 - North Lawndale	48 - Calumet Heights	67 - West Englewood
11 - Jefferson Park	30 - South Lawndale	49 - Roseland	68 - Englewood
12 - Forest Glen	31 - Lower West Side	50 - Pullman	69 - Greater Grand Crossing
13 - North Park	32 - Loop	51 - South Deering	70 - Ashburn
14 - Albany Park	33 - Near South Side	52 - East Side	71 - Auburn Gresham
15 - Portage Park	34 - Armour Square	53 - West Pullman	72 - Beverly
16 - Irving Park	35 - Douglas	54 - Riverdale	73 - Washington Heights
17 - Dunning	36 - Oakland	55 - Hegewisch	74 - Mount Greenwood
18 - Montclare	37 - Fuller Park	56 - Garfield Ridge	75 - Morgan Park
19 - Belmont Cragin	38 - Grand Boulevard	57 - Archer Heights	76 - O'Hare
			77 - Edgewater



Methods

- **Systematically assessed park use pre- and post-playground renovations using SOPARC (The System for Observing Play and Recreation in Communities).**
- **Observed park use on both weekdays and weekends, during the morning, afternoon and evening.**
- **Counted park users by gender, age and activity level (sedentary, moderate, vigorous PA).**



Methods

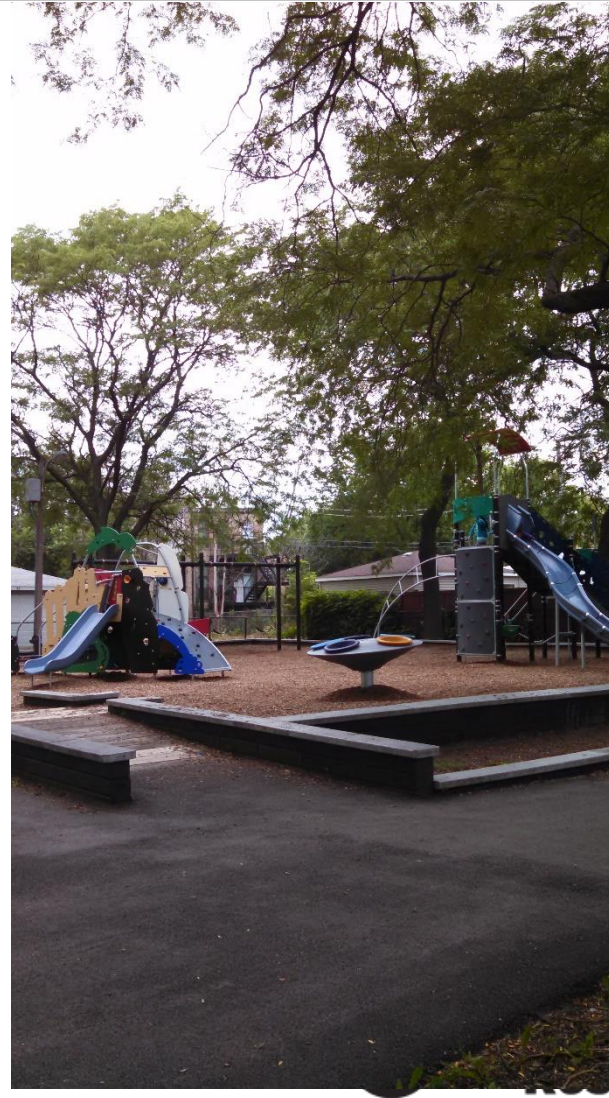
- **Conducted park audits (EAPRS, BTG-COMP).**
- **Observations were conducted July through September at each time point.**
- **Obtained Chicago Park District programming data.**
- **Obtained Chicago Police Department crime data.**

Park Observations (Before Renovation)

(2013)



Park Observations After Renovation



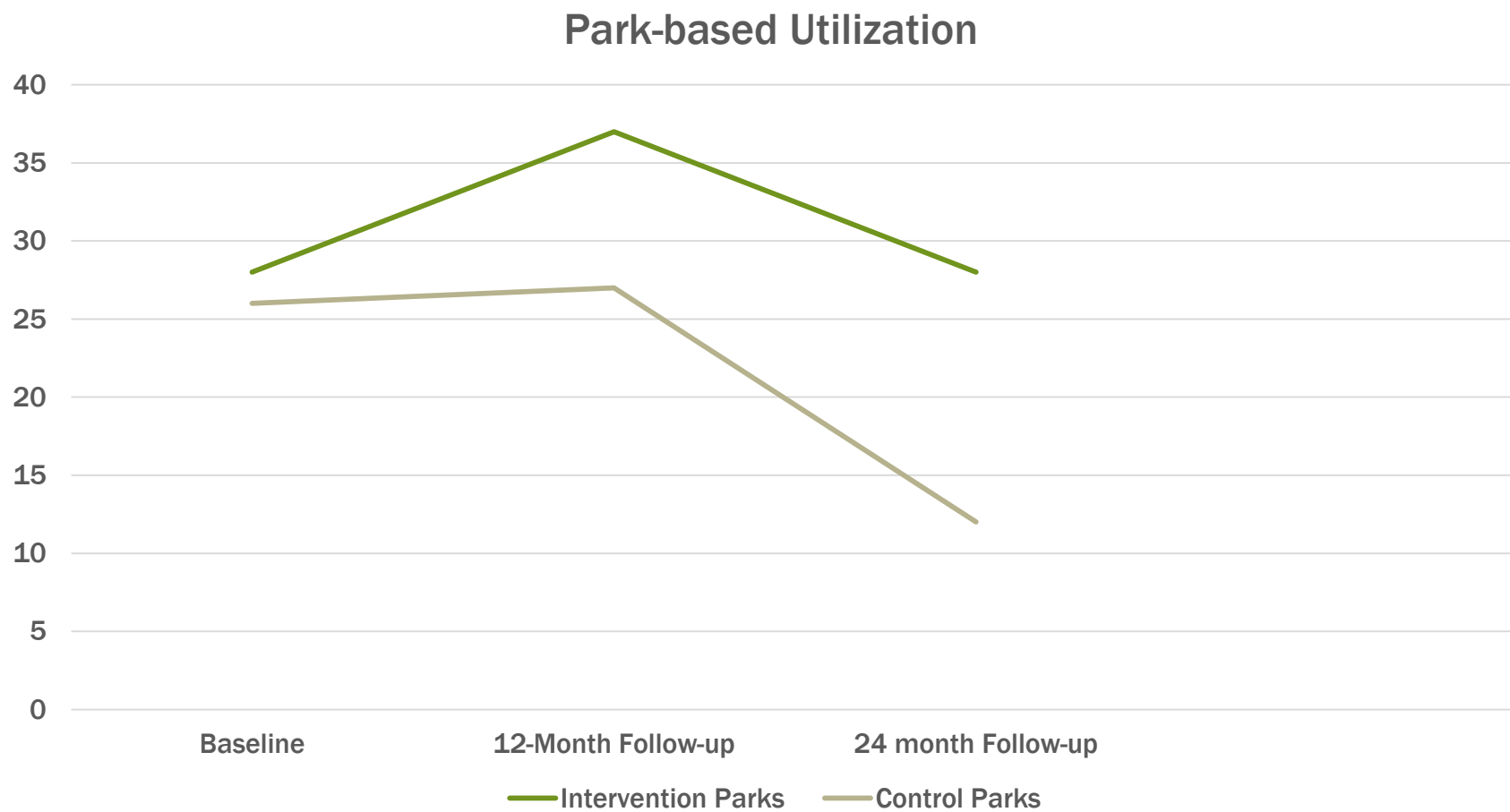
(2014)

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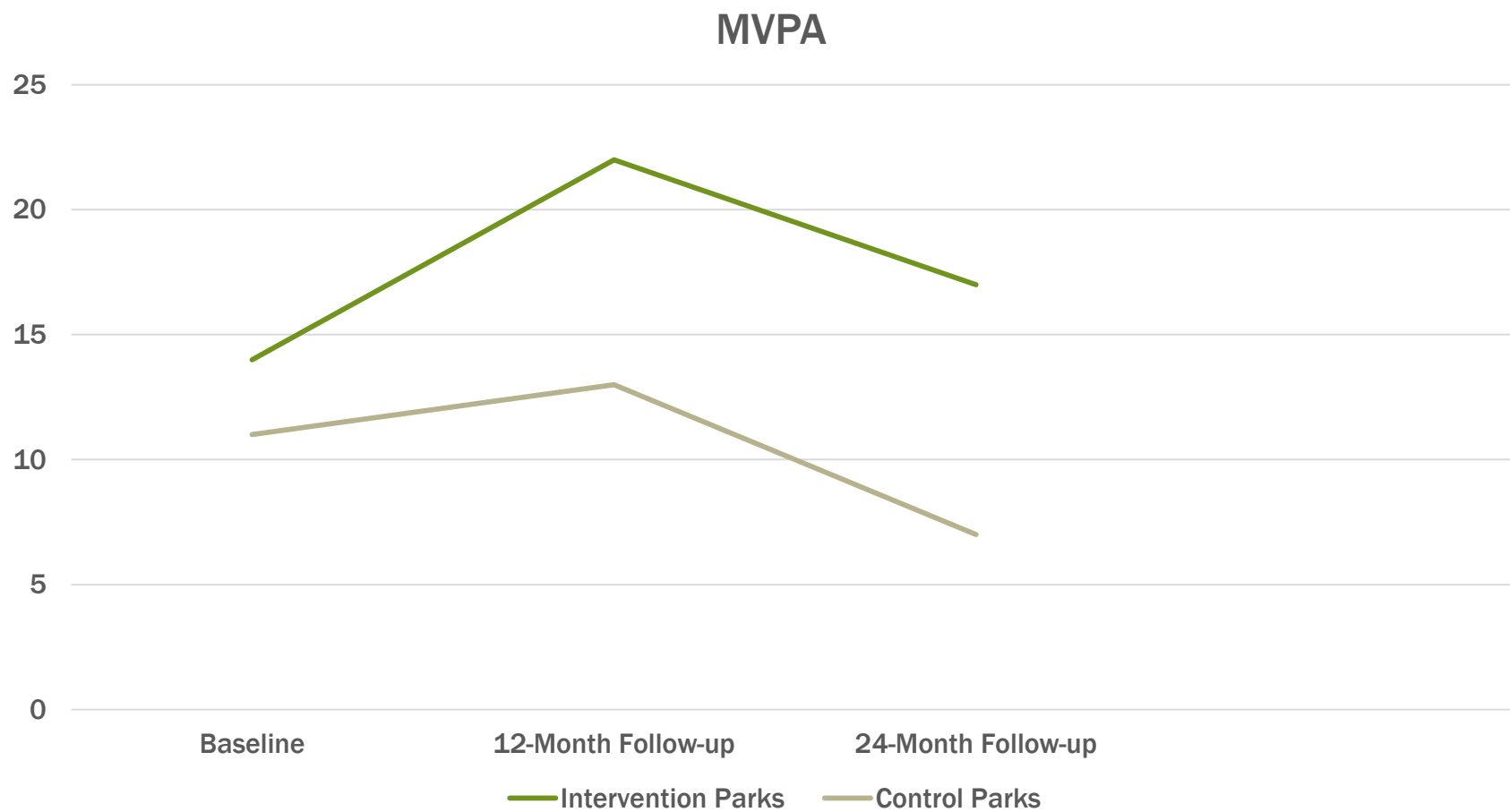
12-Month Follow-up Results

- **21,532 park users observed across 3 years**
 - **average 33 users per day per park**
 - average of 15 users in moderate-to-vigorous activity
 - average of 18 users in sedentary behavior
 - **one year after the playground renovations in the intervention versus the control parks:**
 - significant increase in park utilization
 - significant increase in people engaged in moderate-to-vigorous physical activity
 - weakly significant increase in people engaged in sedentary behavior

24-Month Follow-up Results

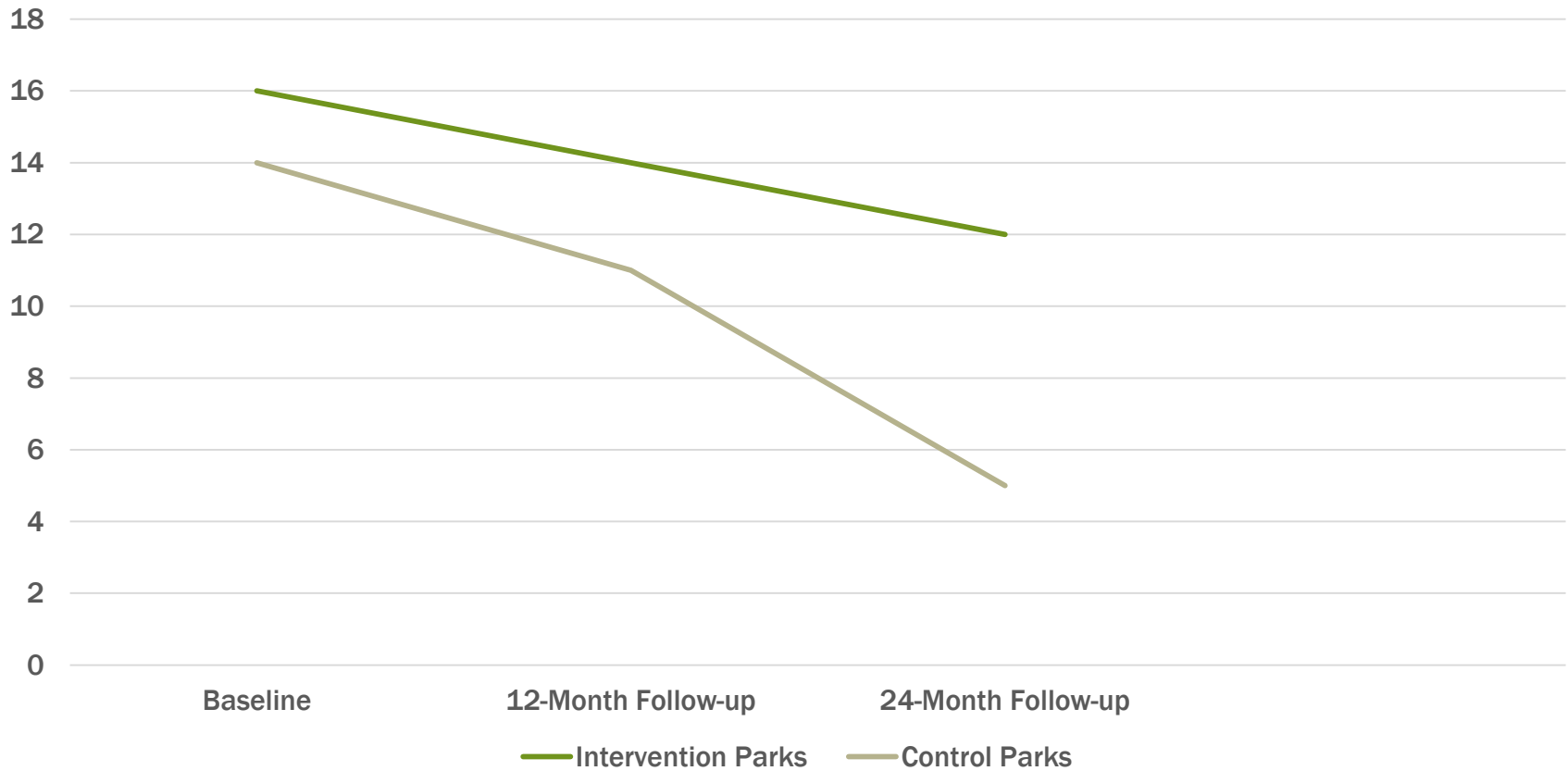


24-Month Follow-up Results



24-Month Follow-up Results

Sedentary Behavior



Study Strengths

- 1. Prospective longitudinal study design;**
- 2. Baseline data**
- 3. Large, matched sample of intervention and control parks;**
- 4. Racially/ethnically and socioeconomically diverse neighborhoods; and,**
- 5. Objective measures of park programming, safety, and maintenance measures.**

Limitations

- No individual-level physical activity measures.
- The number of days of park observation
- Cannot fully disentangle effects of the community engagement and renovation components on park utilization and MVPA.



Conclusions & Next Steps

- Involving community members in playground renovations had a positive effect on park utilization and MVPA in the short term (1 year post-renovation), but results were not sustained over time (2 years post-renovation).
- Future research is needed that includes a systematic method for collecting and measuring community engagement and its effect on park utilization and PA.
- We will be collecting qualitative data to help explain why initial intervention results were not sustained.



Acknowledgments

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Acknowledgments

- The content of this presentation is solely the responsibility of the authors and does not necessarily represent the official views of the Centers for Disease Control and Prevention, or the State of Illinois.
- Learn more at <http://go.uic.edu/IllinoisPRC>



Thank You!

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