



HEALTH

Effects of Park Improvements on Park Use and Physical Activity: Policy and Programming Implications

**Deborah Cohen, Thom McKenzie, Amber Sehgal,
Terry Marsh, Stephanie Williamson, Daniela Golinelli**

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RAND Center for Population Health and Health Disparities

Primary Goal

- To determine whether facility improvements in parks result in increases in physical activity among children and adults

Ballot Initiative: Proposition K

- Passed in 1996
- Allocates \$25 million per year for 30 years to improve parks and open spaces in the City of Los Angeles
- Serves as natural experiment to understand how parks might contribute to population level physical activity

Study Components

- Includes community based participation
- Focuses on new recreation centers and improvements over \$1,000,000
- Requires observing activity in parks, including gender, age group and race/ethnicity
- Includes surveys of park users and individuals who live in local neighborhoods

Parks Studied

- 10 Neighborhood parks (5 intervention, 5 control)
- 2 Skate parks (1 intervention, 1 comparison)
- 2 Senior citizens' centers (1 intervention, 1 comparison)

SOPARC Observation Methods*

- Park activity was observed four times per day
 - 7:30 - 8:30am
 - 12:30 - 1:30pm
 - 3:30 - 4:30pm
 - 6:30 - 7:30pm
- Park activity was observed for each day of the week and primary and secondary activities in each target area recorded, including being a spectator.
- Individuals were counted and recorded by:
 - Gender (female or male)
 - Age group (child, teen, adult, or senior)
 - Race/ethnicity (Latino, black, white, or other)
 - Activity level (sedentary, walking, or vigorous)

(SOPARC found to be reliable)

Survey Methods

- Park users were surveyed based on:
 - Target Area (busy and quiet areas)
 - Activity Level (sedentary, walking, or vigorous)
 - Gender (50% male, 50% female)
- Neighborhood residents were surveyed based on random selection of households in specified increments from the park:
 - 1/4 mile
 - 1/2 mile
 - One mile
 - Two miles

Promotoras



Counter

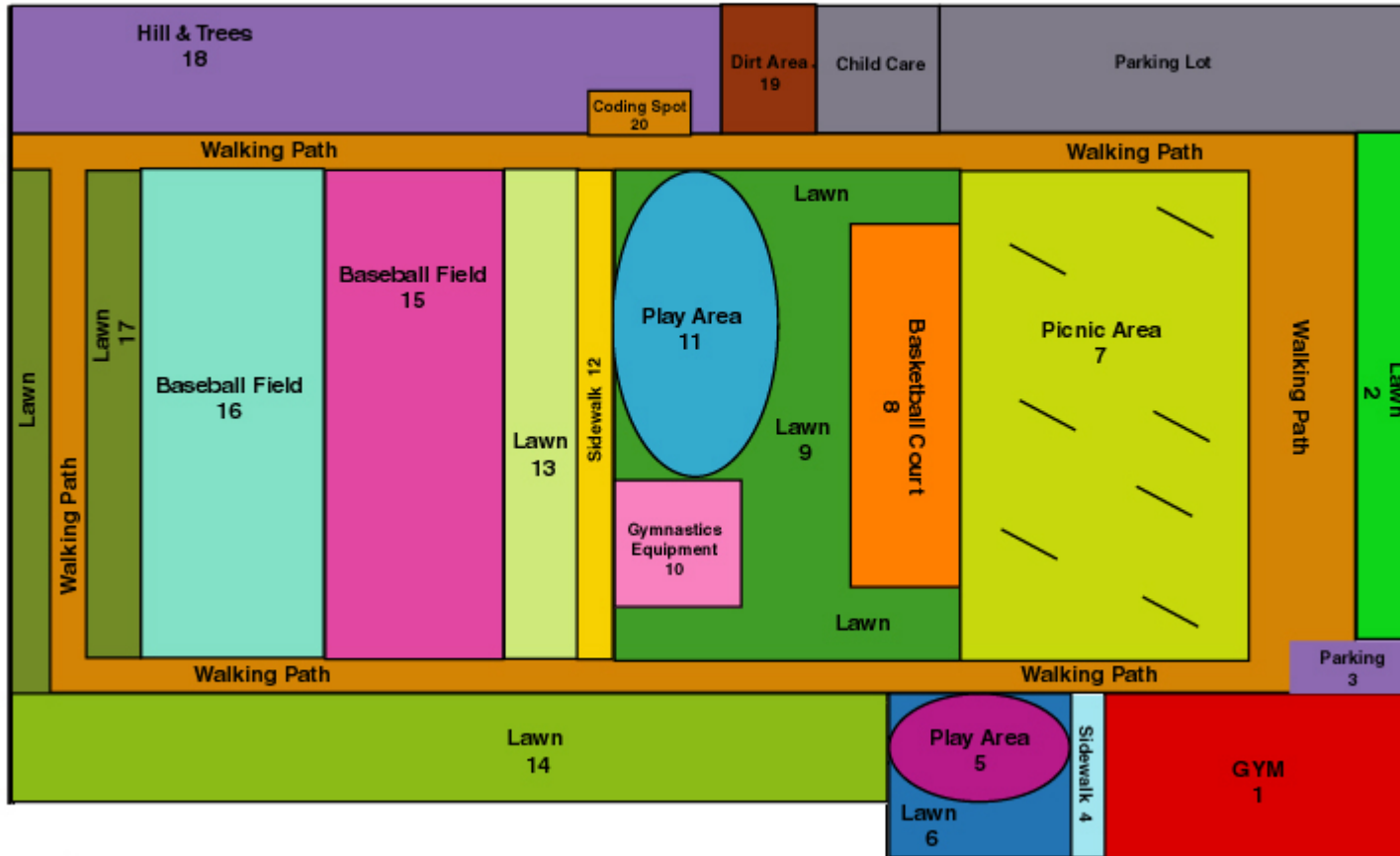


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Park Map of Activity Areas

BELLEVUE RECREATION CENTER



Skate Park to be Remodeled, 2004



Remodeled Skate Park, 2007





Comparison Park



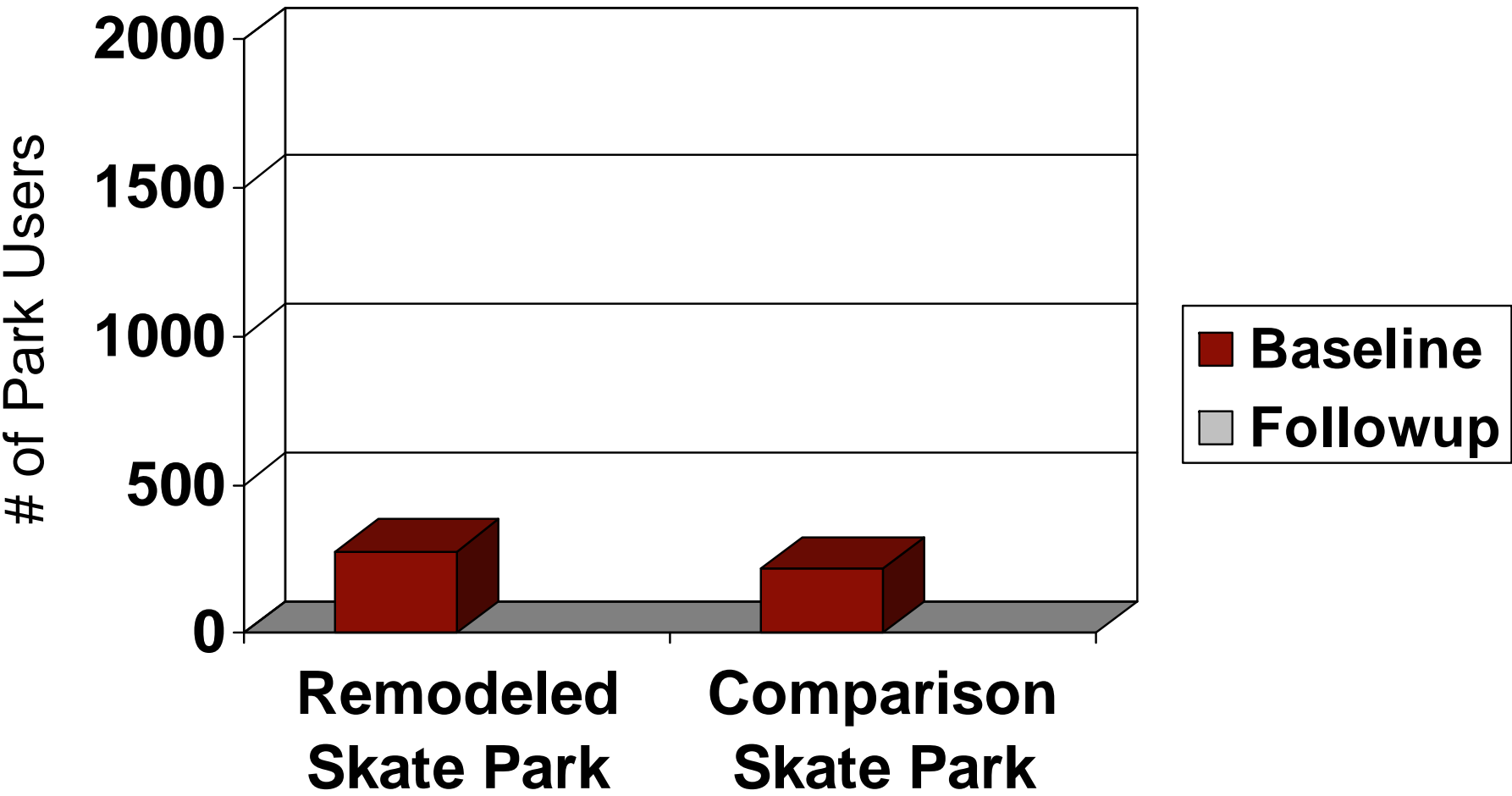
Comparison Park

Comparison of Neighborhoods Characteristics of Skate Parks

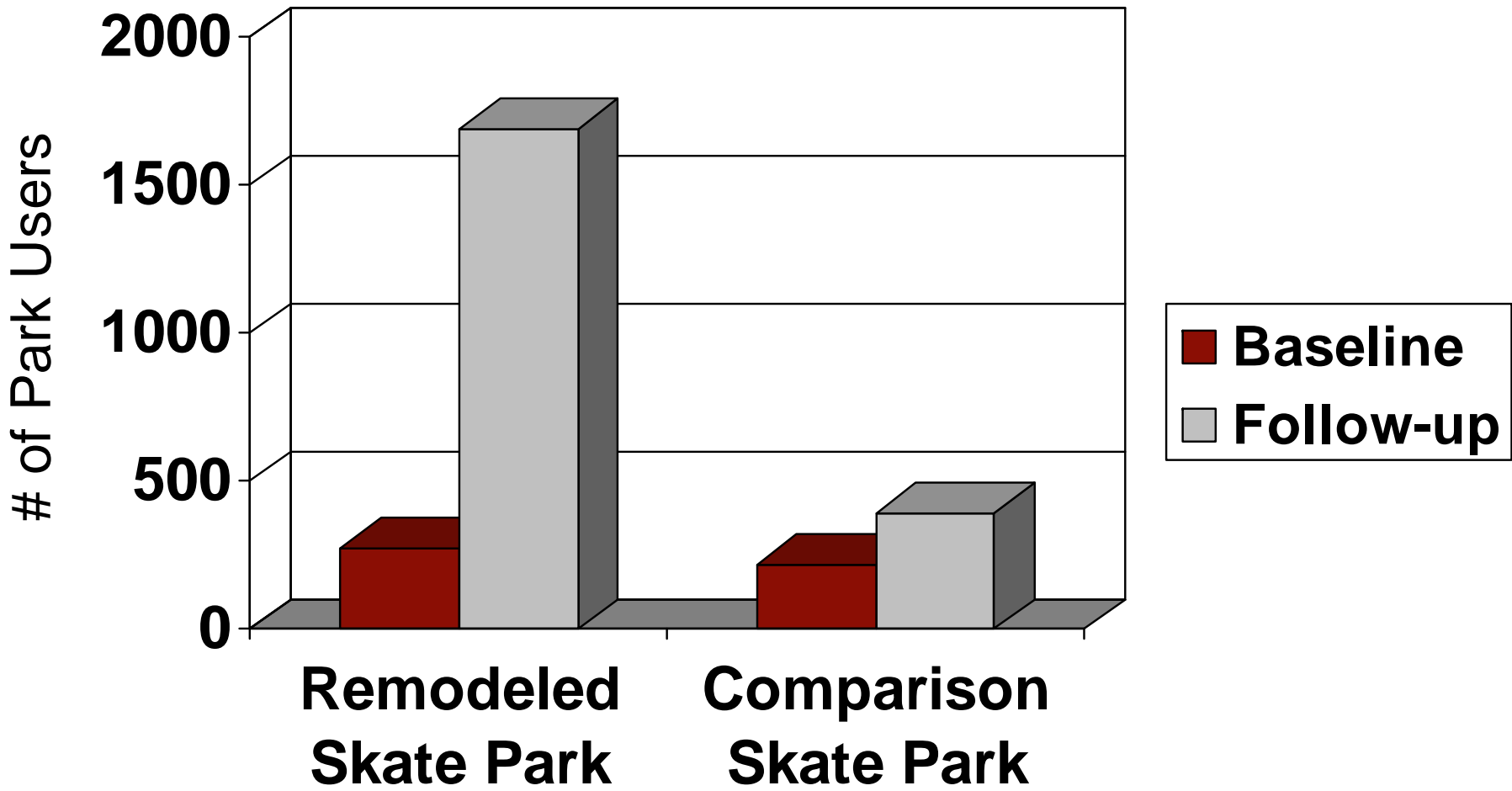
	Pedlow	Monrovia
% White only	55.1%	63.1%
% African American only	6.1%	8.3%
% Asian only	6.7%	7.2%
% Hispanic or Latino (of any race)	50.4%	35.3%
% individuals living below poverty level	17.9%	12.5%
Population density within a 1 mile radius	61,555	24,719

Source: U.S. Census Bureau, Summary File 1 (SF 1) and Summary File 3 (SF 3)

Change in Number of Skate Park Users

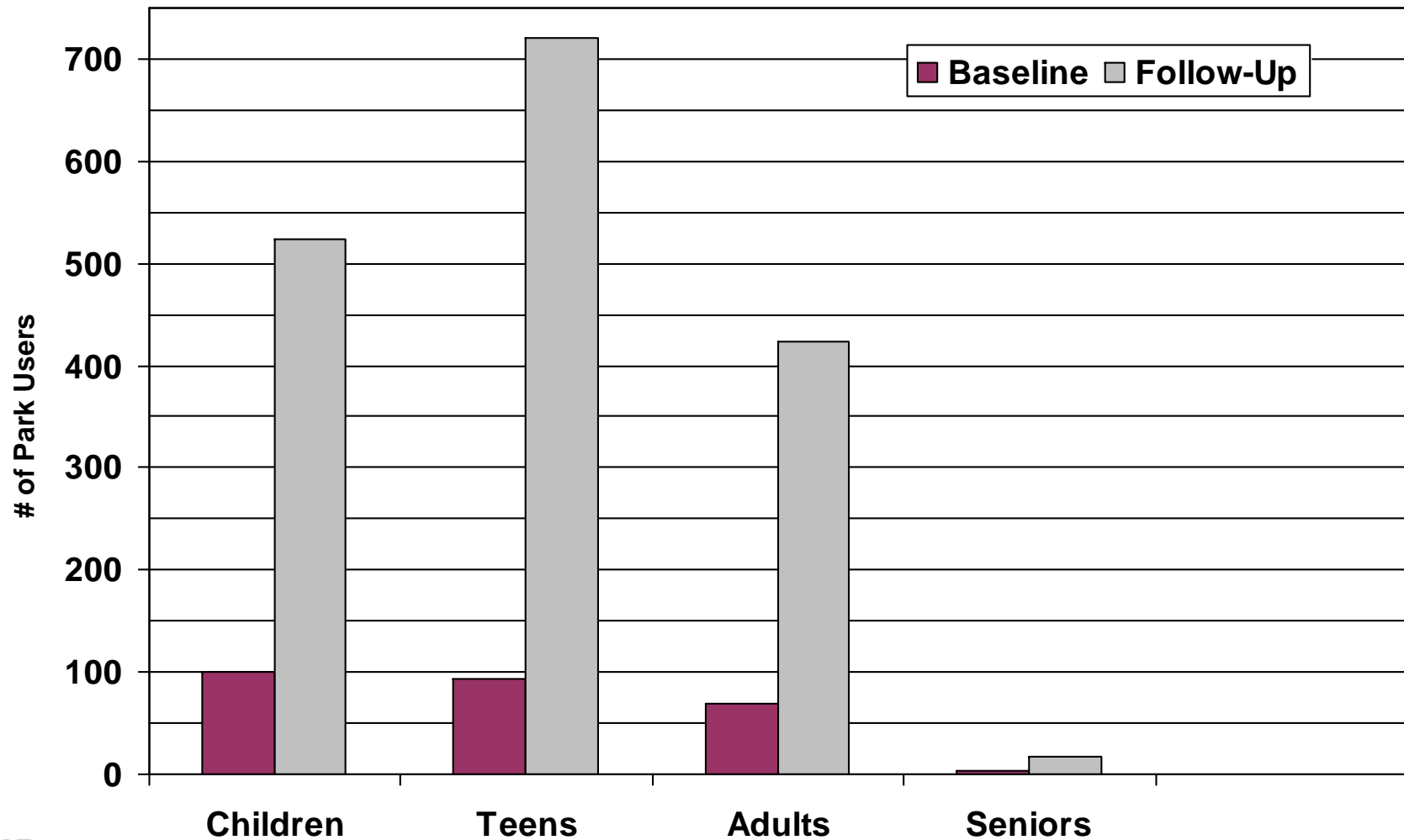


Change in Number of Skate Park Users



A HUGE INCREASE at Remodeled Skate Park

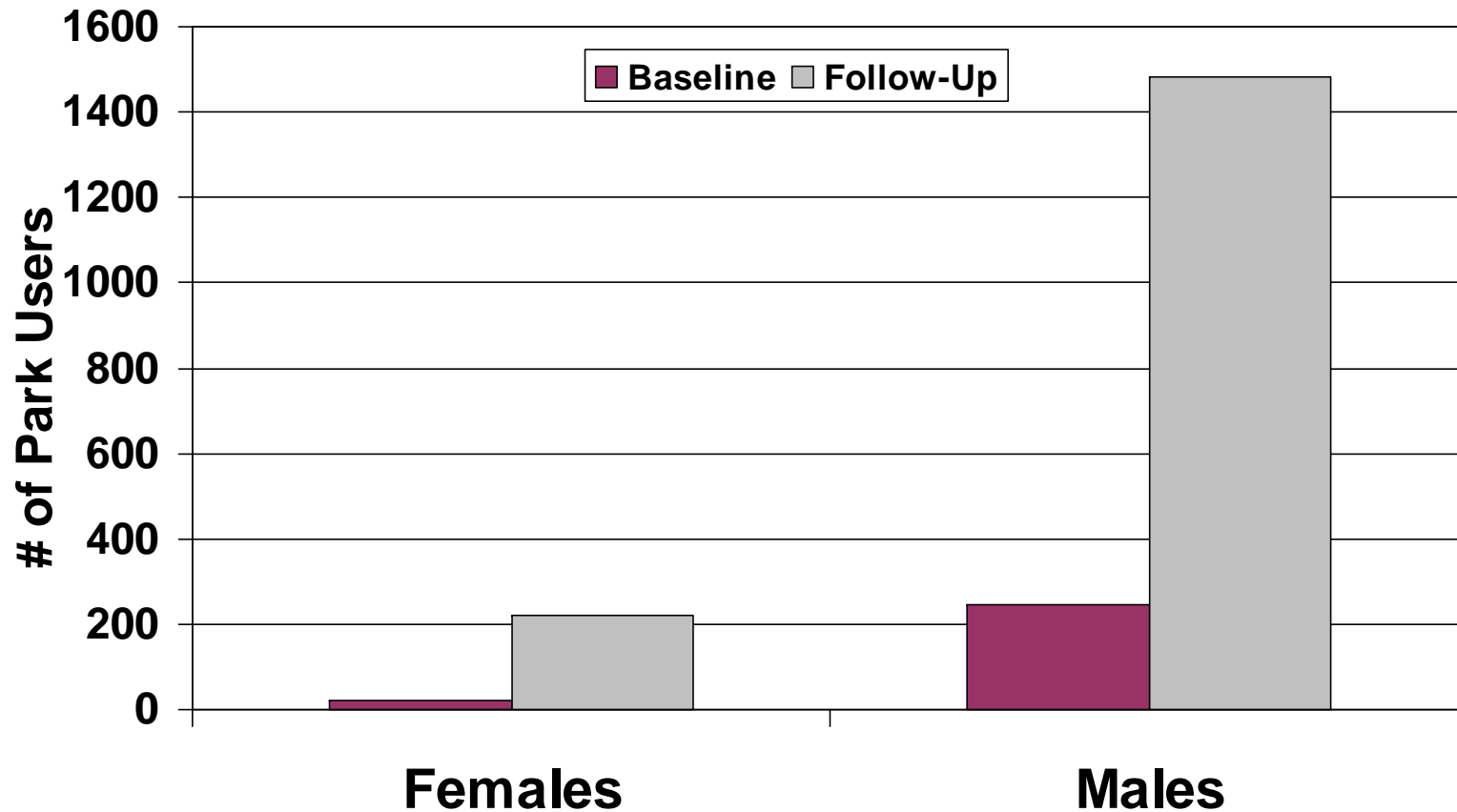
(More than 6x as many users)



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Girls Increased by 11x, Boys by 6x



Other Skate Park Changes

- Summer Camp
- Class on Saturday and Sunday
- More staff added



Senior Citizen's Center to be Remodeled



NO ANIMALS
ALLOWED
CHILDREN'S
PLAY AREA





Remodeled Sr. Center











Comparison Senior Center

Comparison Senior Center



Senior Centers

Remodeled

Comparison

**Population in
Tract**

8,569

4,898

% > 60 yrs

19%

8%

% White

55%

52%

% in poverty

11%

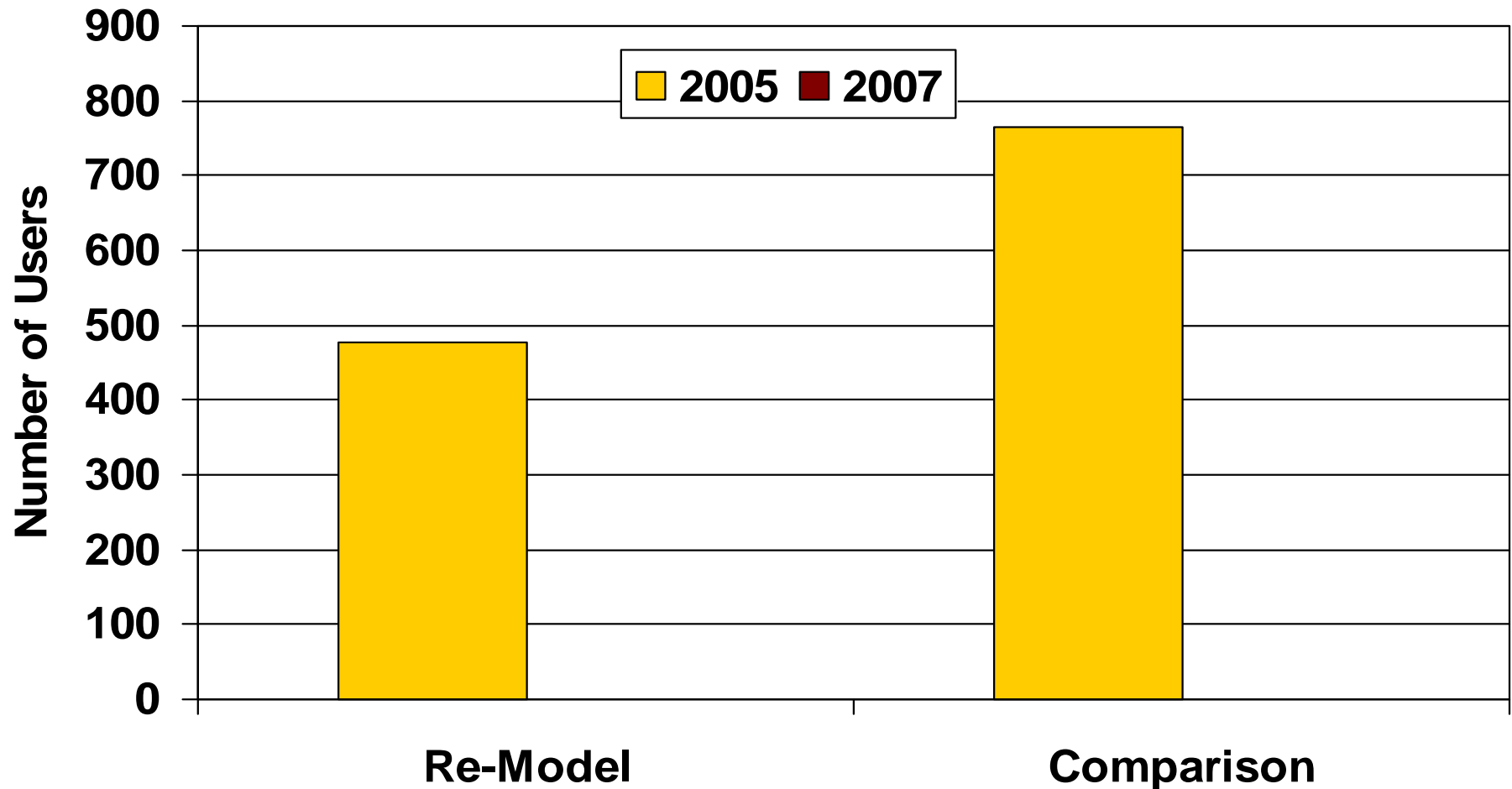
23%

Follow-up

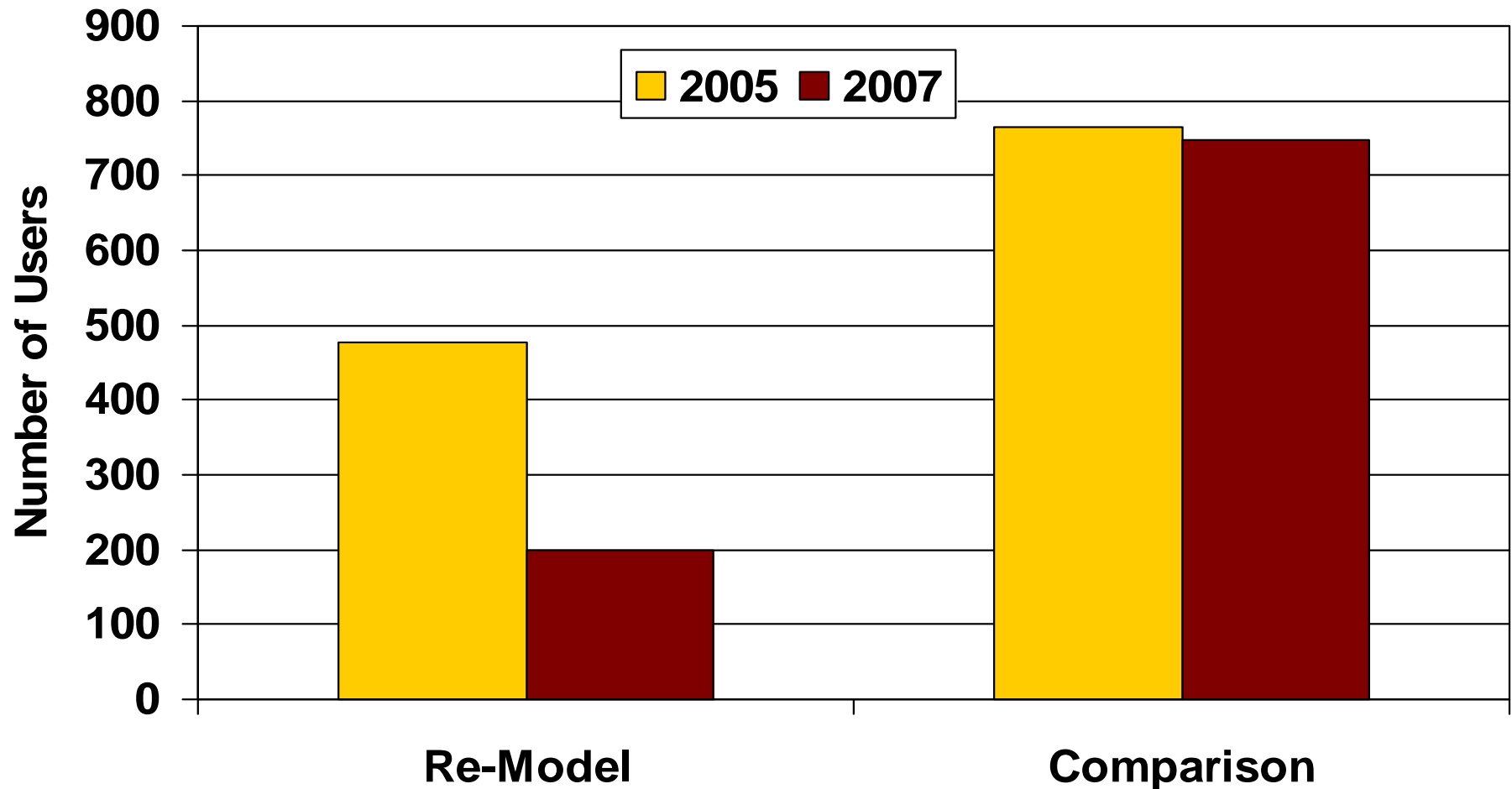
- **Conducted three months after center re-opened**
- **New director at remodeled center**

Baseline Number of Users

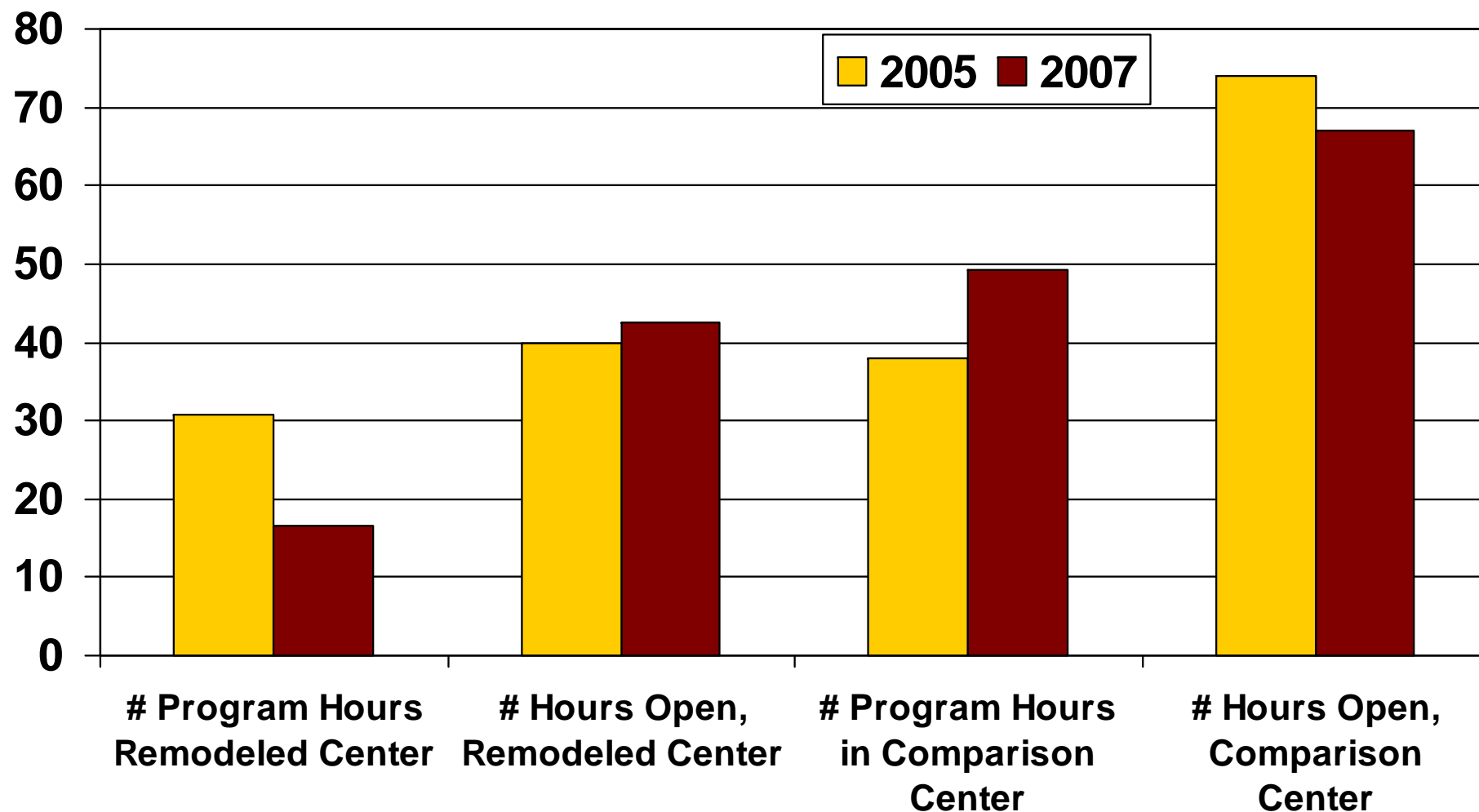
Two Senior Citizen Centers



Change in Number of Users *Two Senior Citizen Centers*



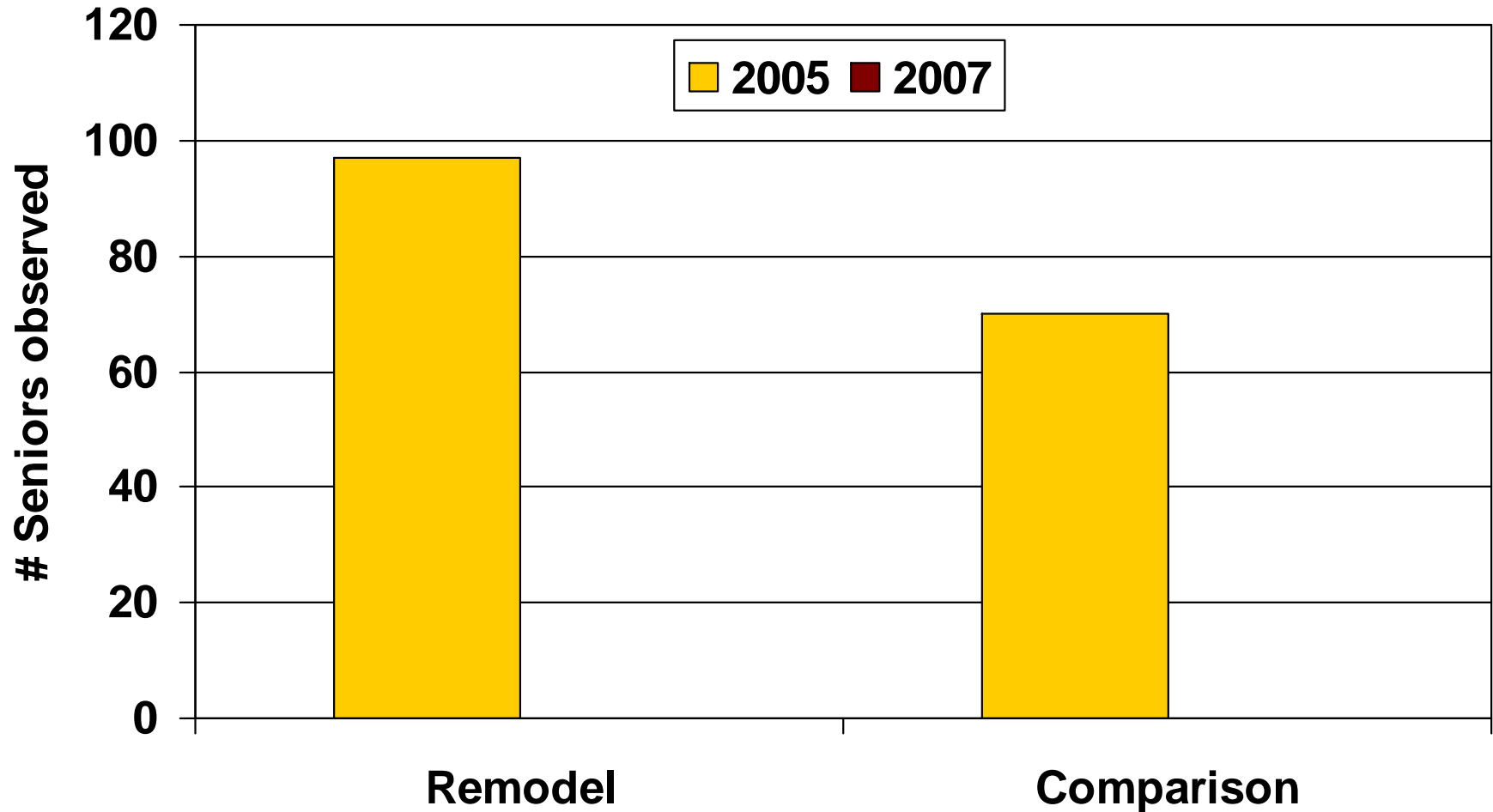
Sr. Citizens Centers- Change in Participation



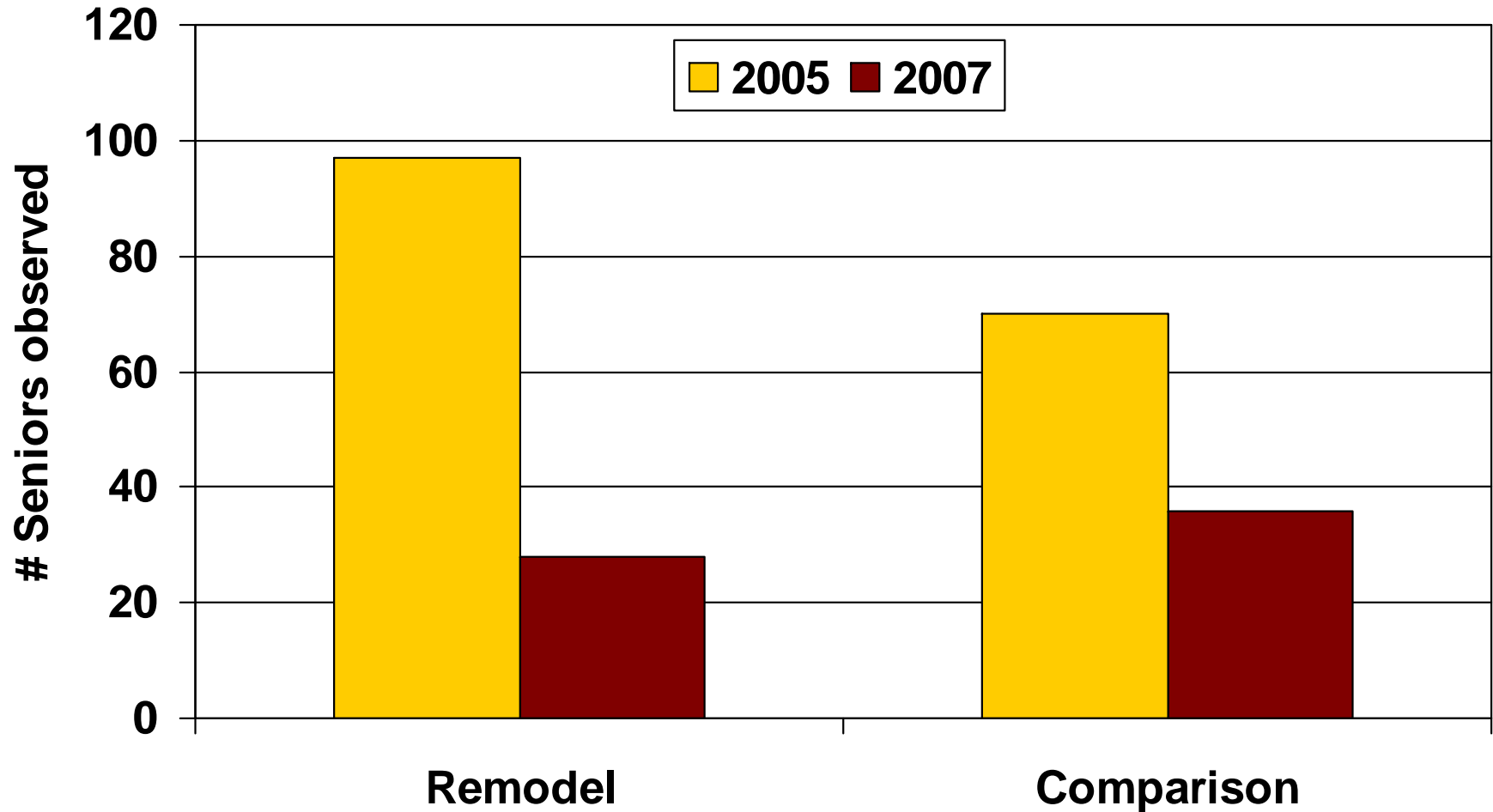
Use of Exercise Machines

- **Only 15 people observed using machines in 28 observation periods**
 - **9 seniors**
 - **6 adults**

Changes in Use of Walking Path by Seniors



Changes in Use of Walking Path by Seniors



Interpretation

- Programming increased in comparison, but decreased in remodeled senior center
- Social factors possibly more important for elderly compared to youth, where physical challenges may be more attractive
- May be measured too soon; longer term follow-up scheduled.

10 Neighborhood Parks

- Most parks included in this study are in predominantly Latino and African-American neighborhoods
- Most parks studied are in low-income neighborhoods (average 31% households in poverty) and serve an average of 67,000 people in 1 mile radius and 210,000 people in 2 mile radius
- Park size ranges from 3.4 to 16 acres, with an average of 8 acres

What Is the Effect of Adding New Facilities to Parks?

Replace this rec center . . .



What Is The Effect of Adding New Facilities to Parks?

Replace this rec center . . .



. . . with this new center



Old Sport Facilities Before Improvements



New Gym After Improvements



Play Area Prior to Improvements

-



Improved Play Area



Undeveloped Space



New Picnic Area

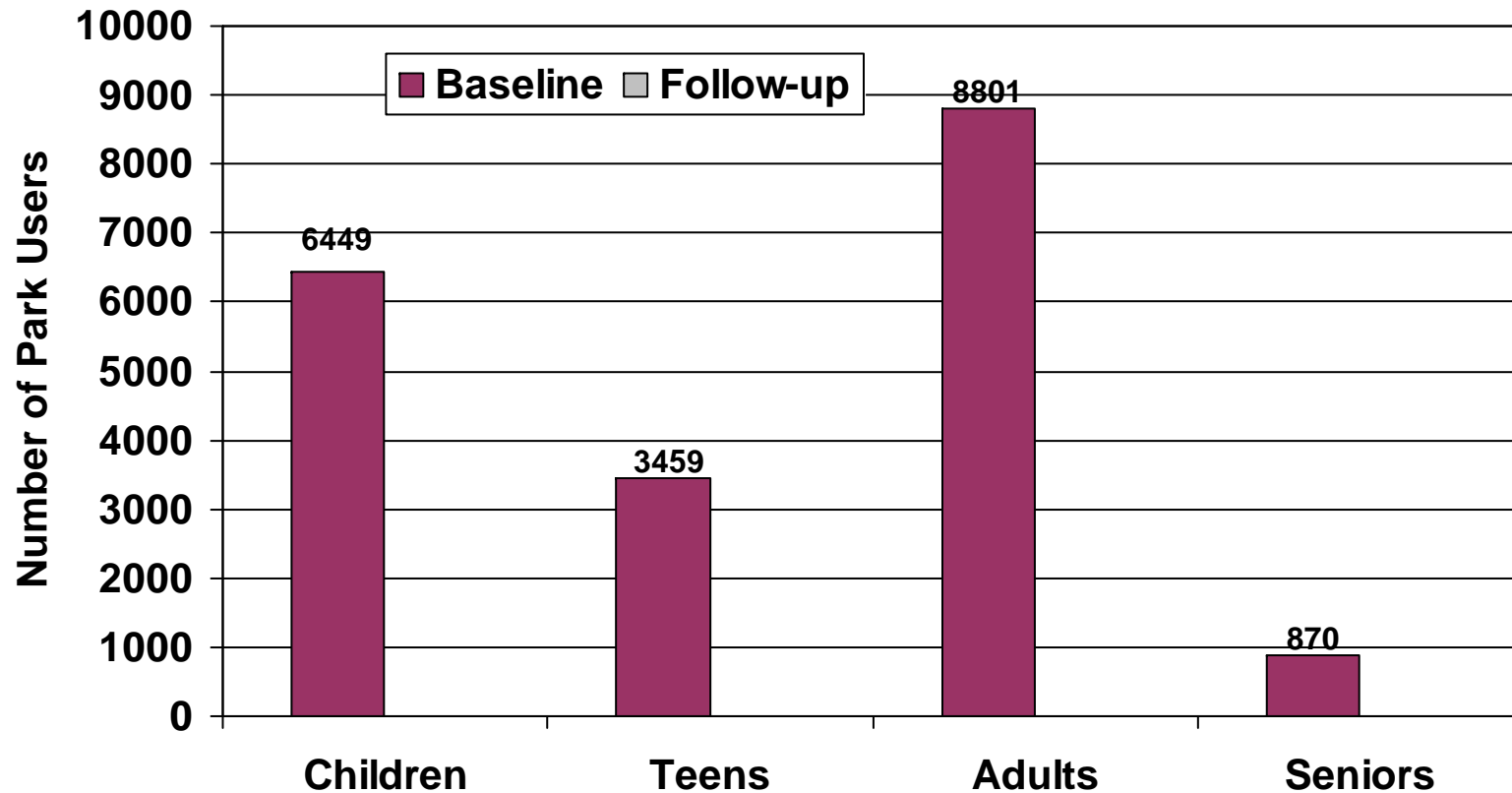


Tennis Courts Replaced with Gym



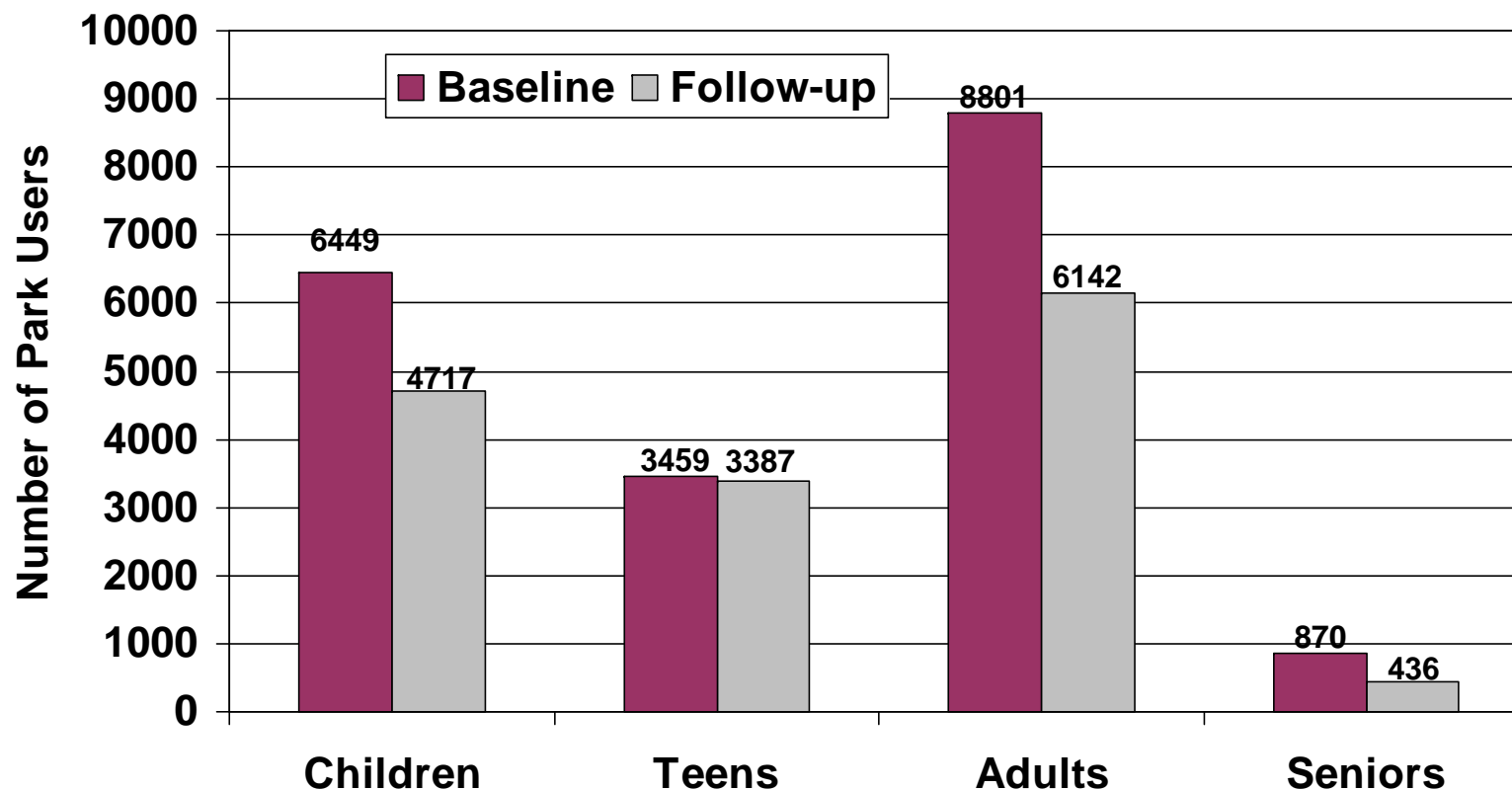


Baseline Park Use



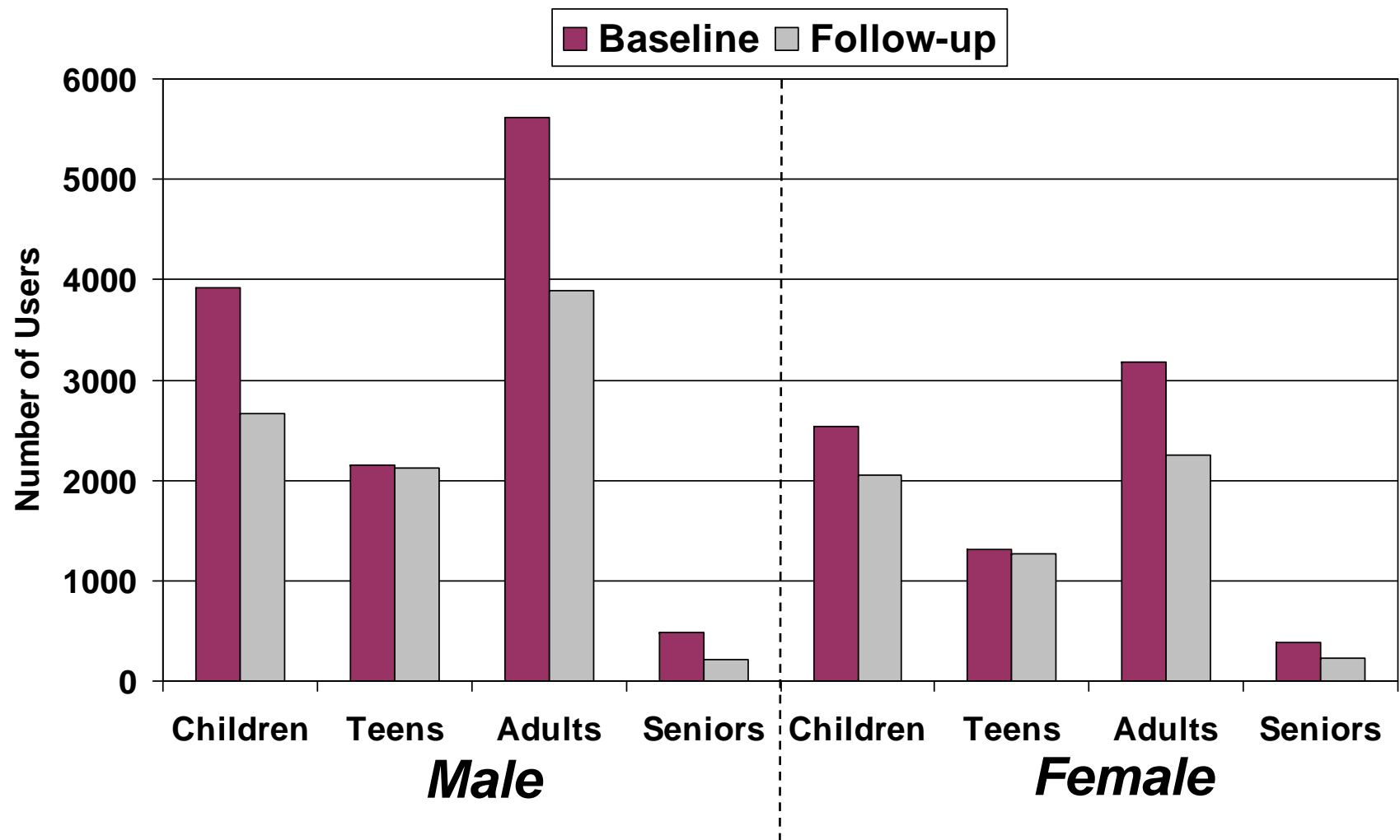
Baseline: Avg of 2000 persons observed per park

Overall, Use of 10 Parks Declined

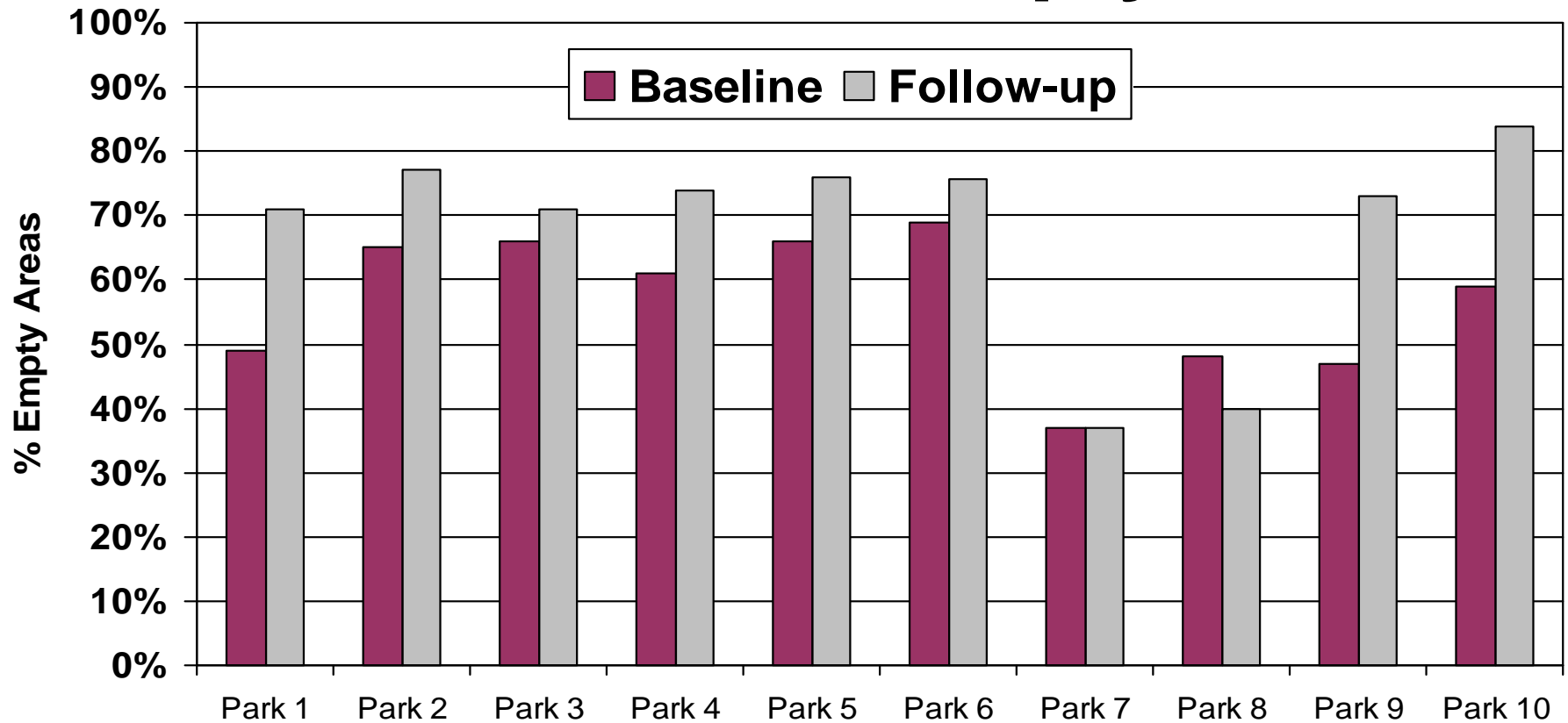


Baseline: Avg of 2000 persons observed per park
Follow-up: avg of 1500 persons observed per park

Park Users by Gender



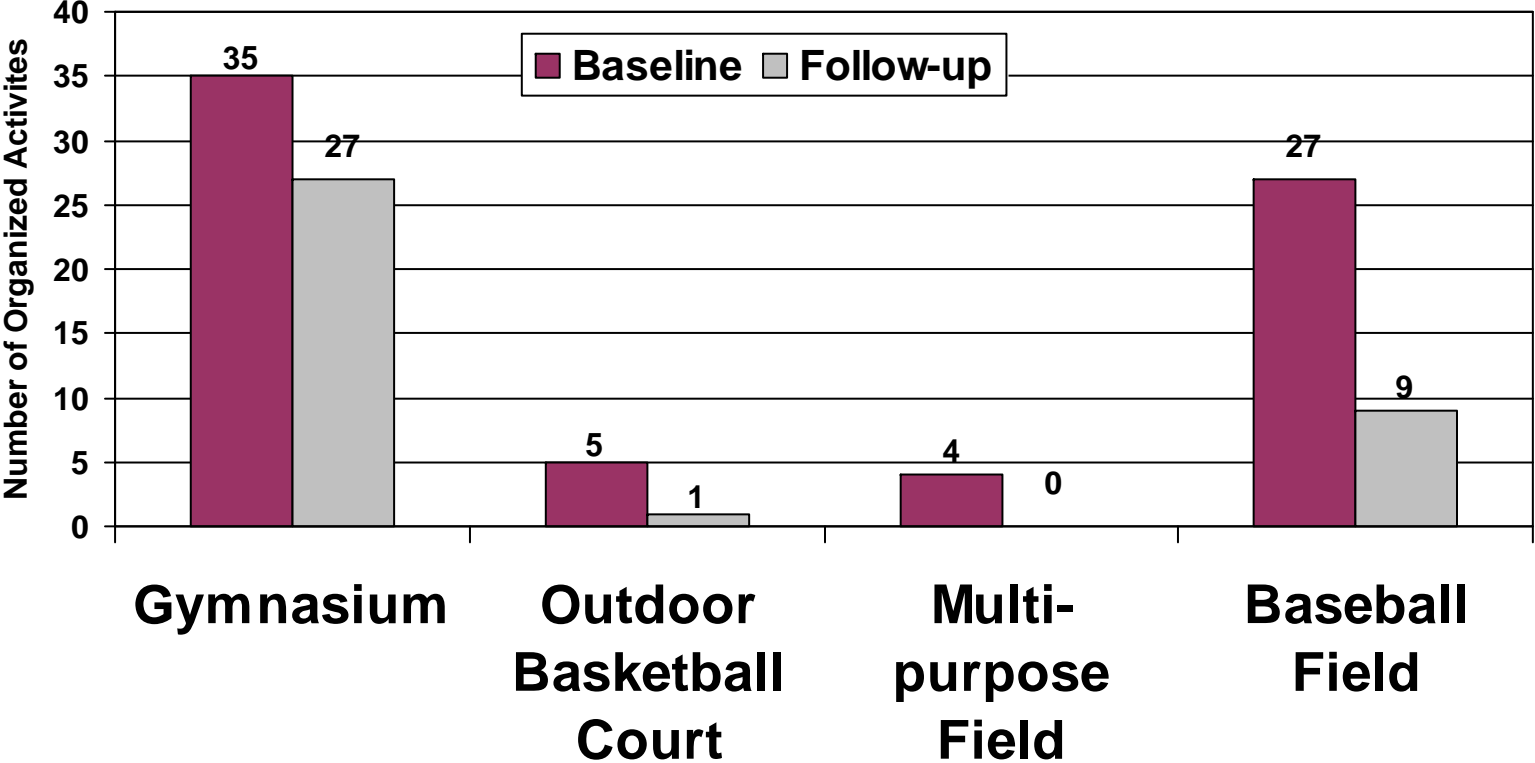
Many Target Areas in the Parks were Empty



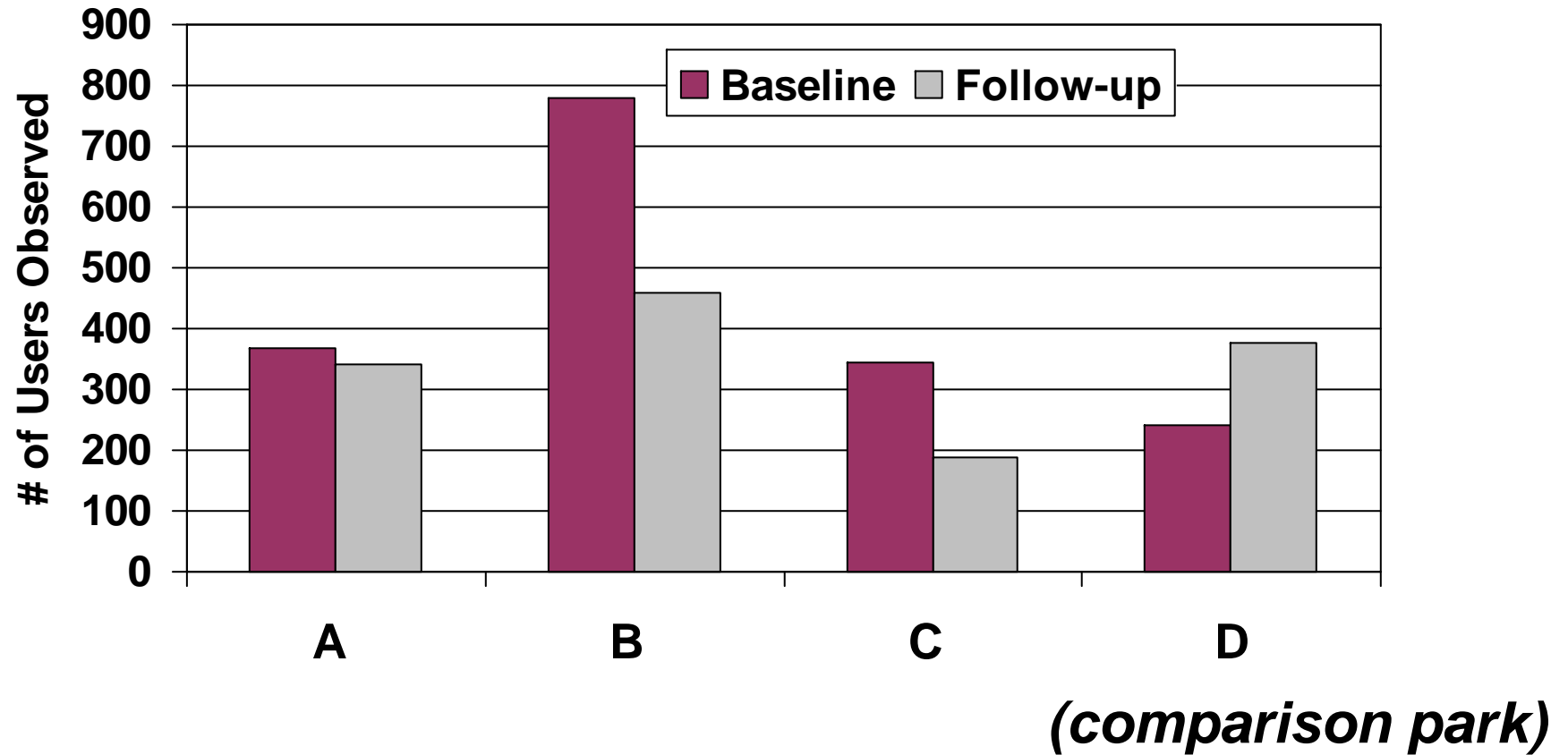
Baseline: 57% empty

Follow-up: 69% empty

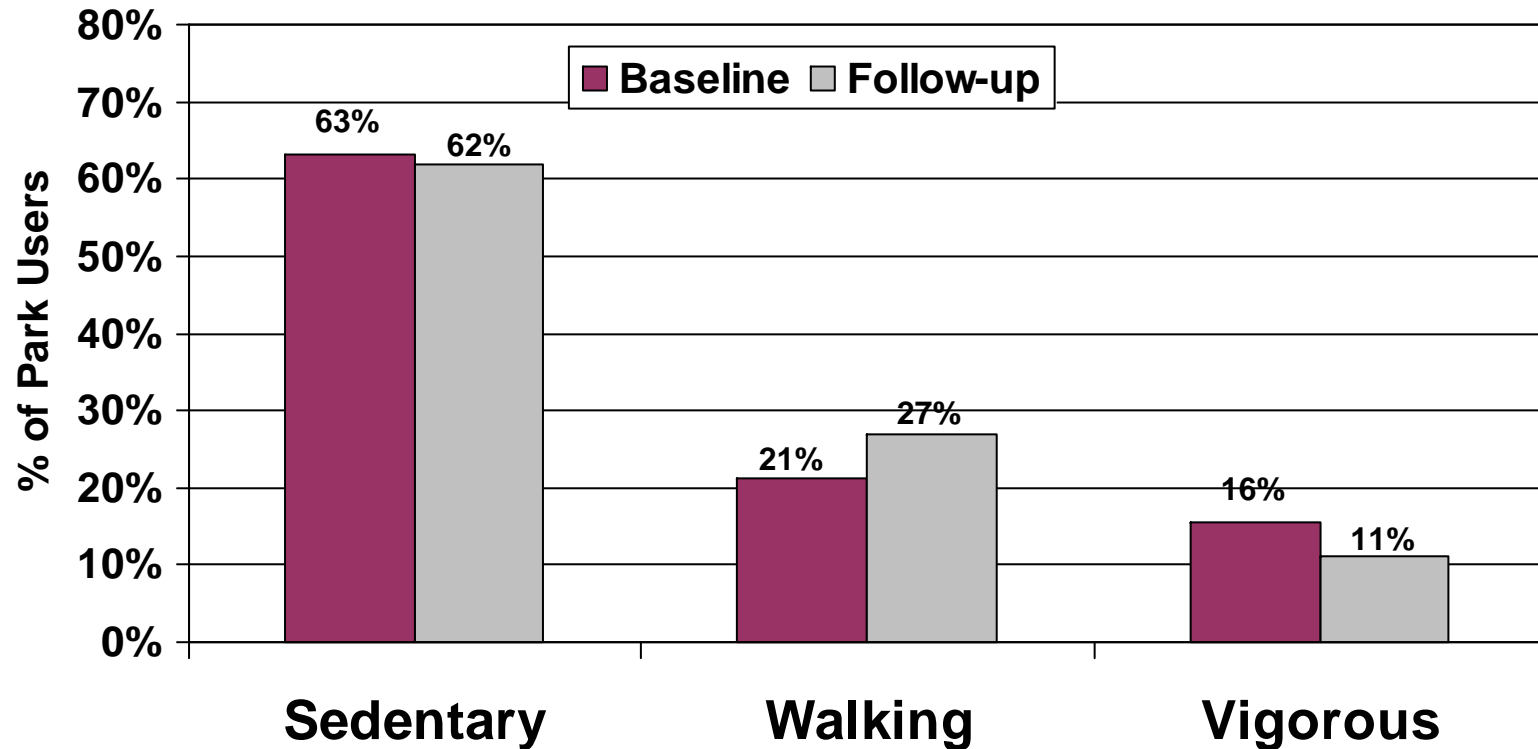
Number of Organized Activities Over Time



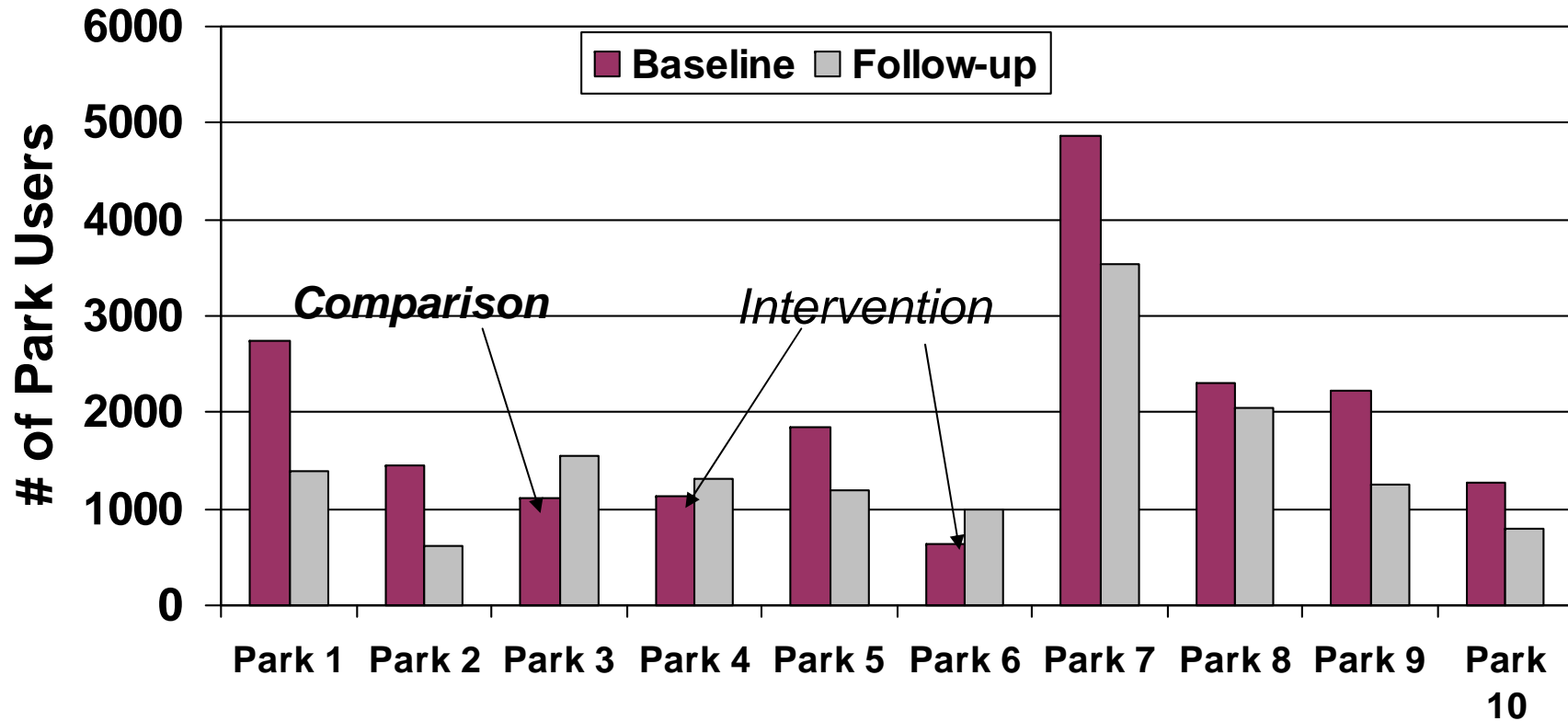
Walking Paths



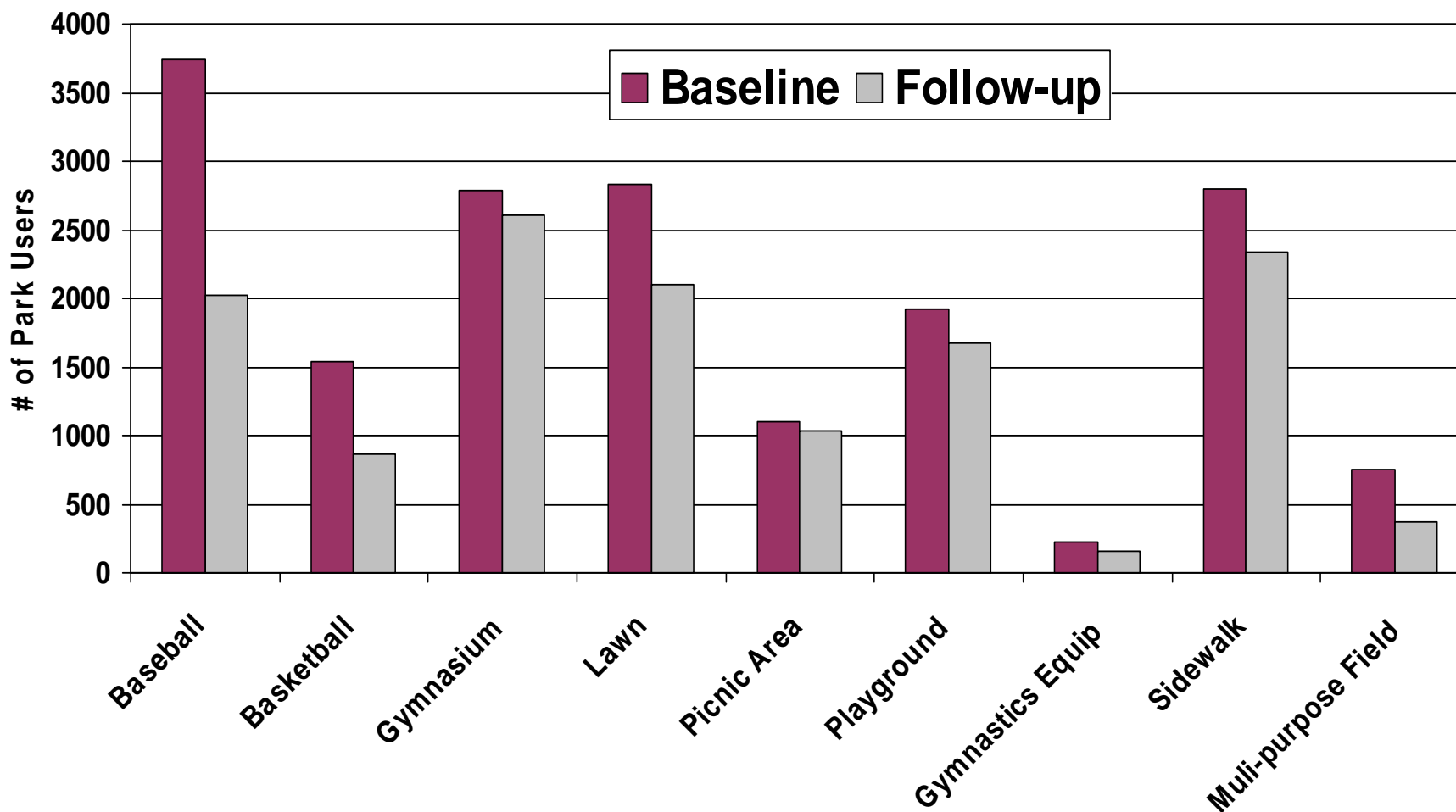
Level of Activity Over Time



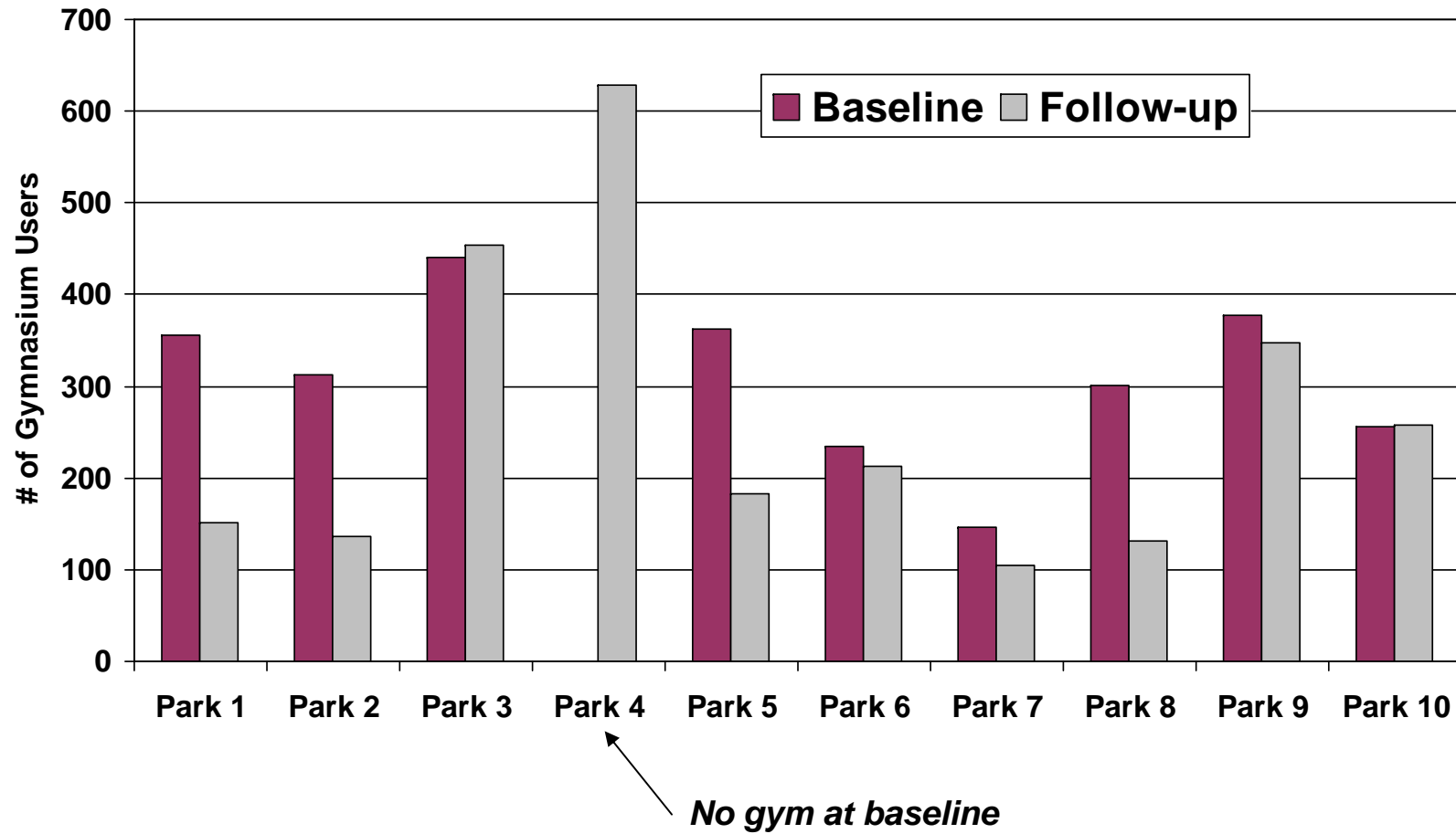
Over Time, There Was a Decrease in Use for 7 of 10 Parks



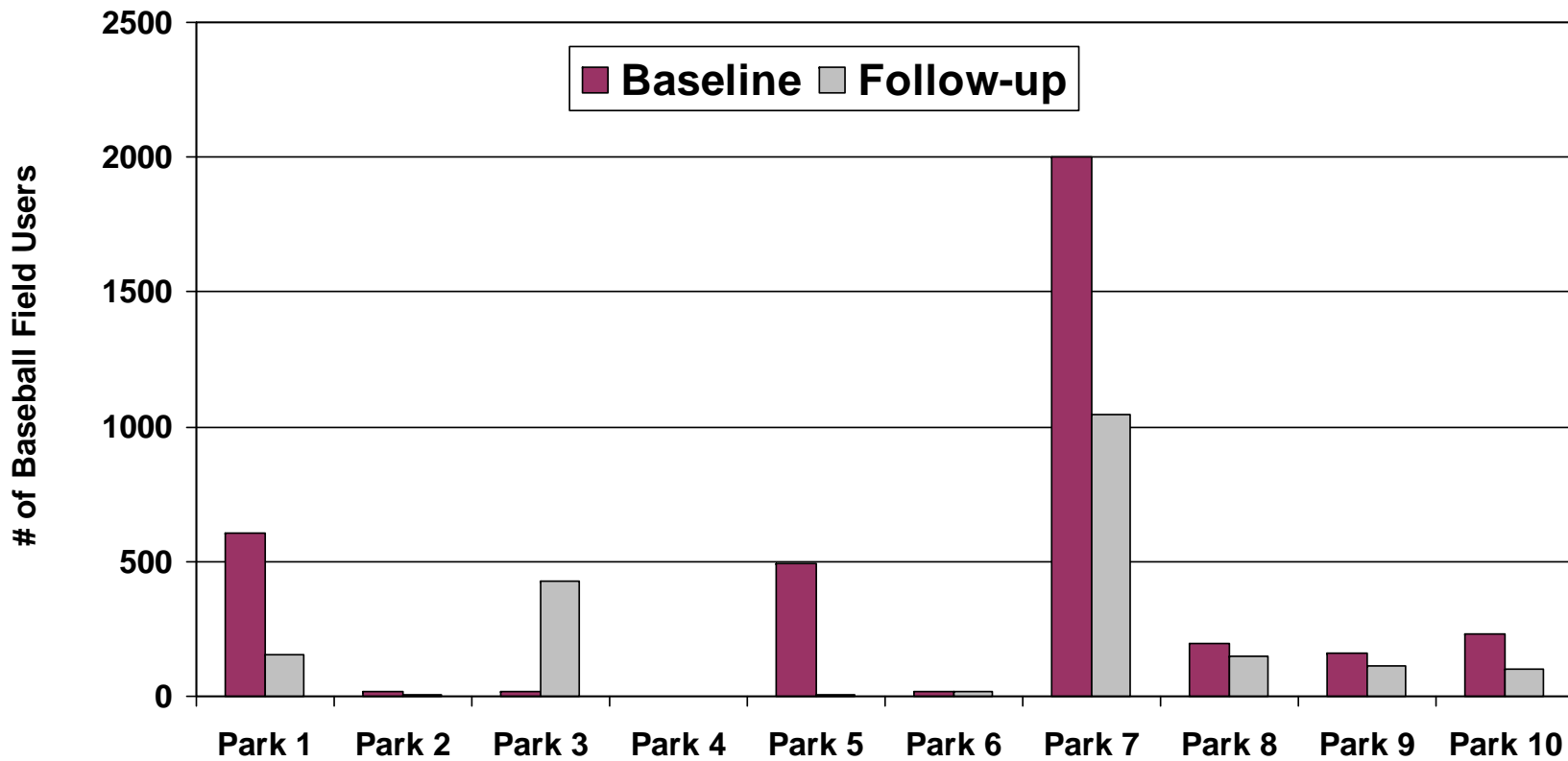
Number of Users by Target Area Type



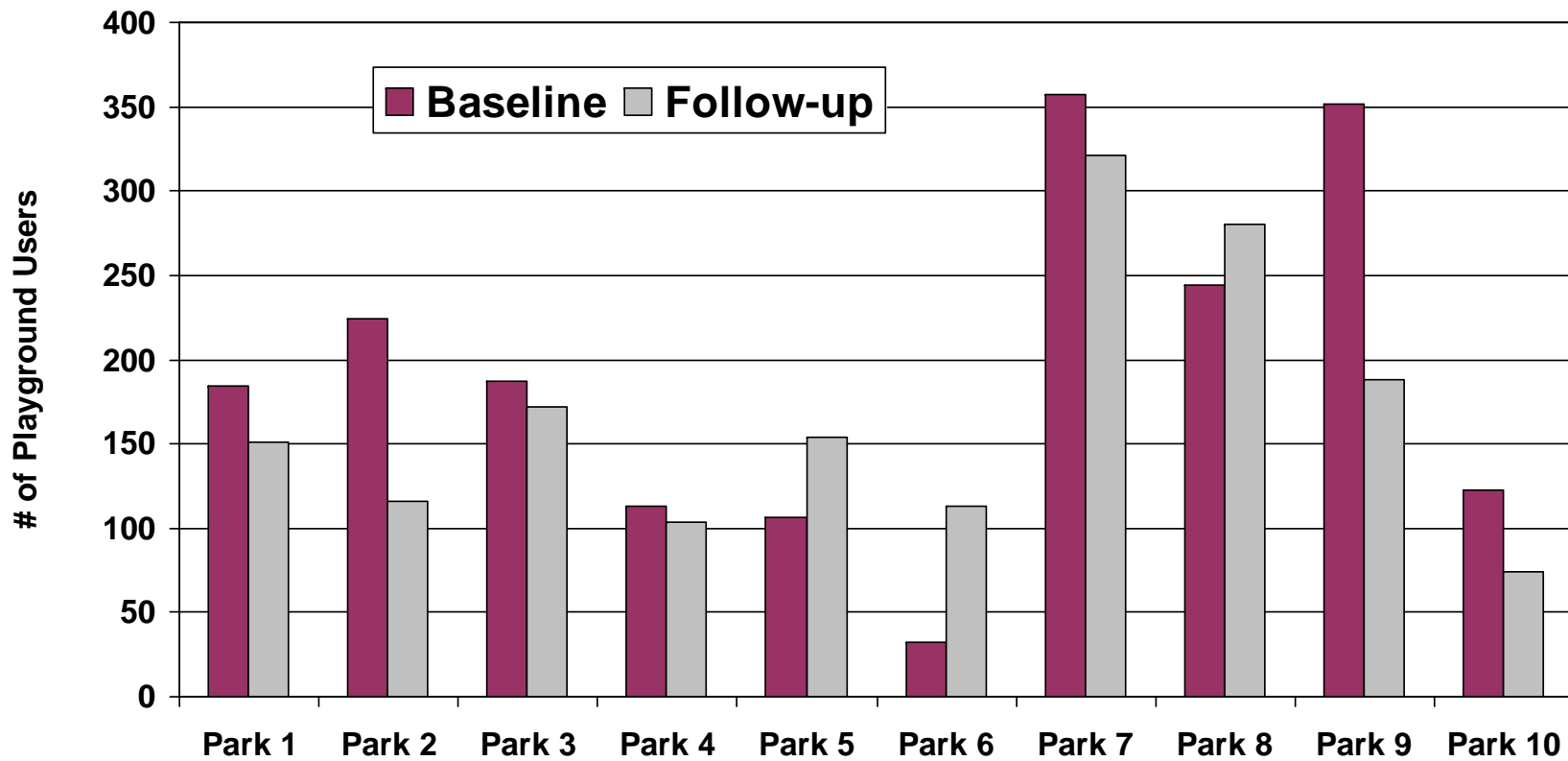
Gymnasium Users by Park



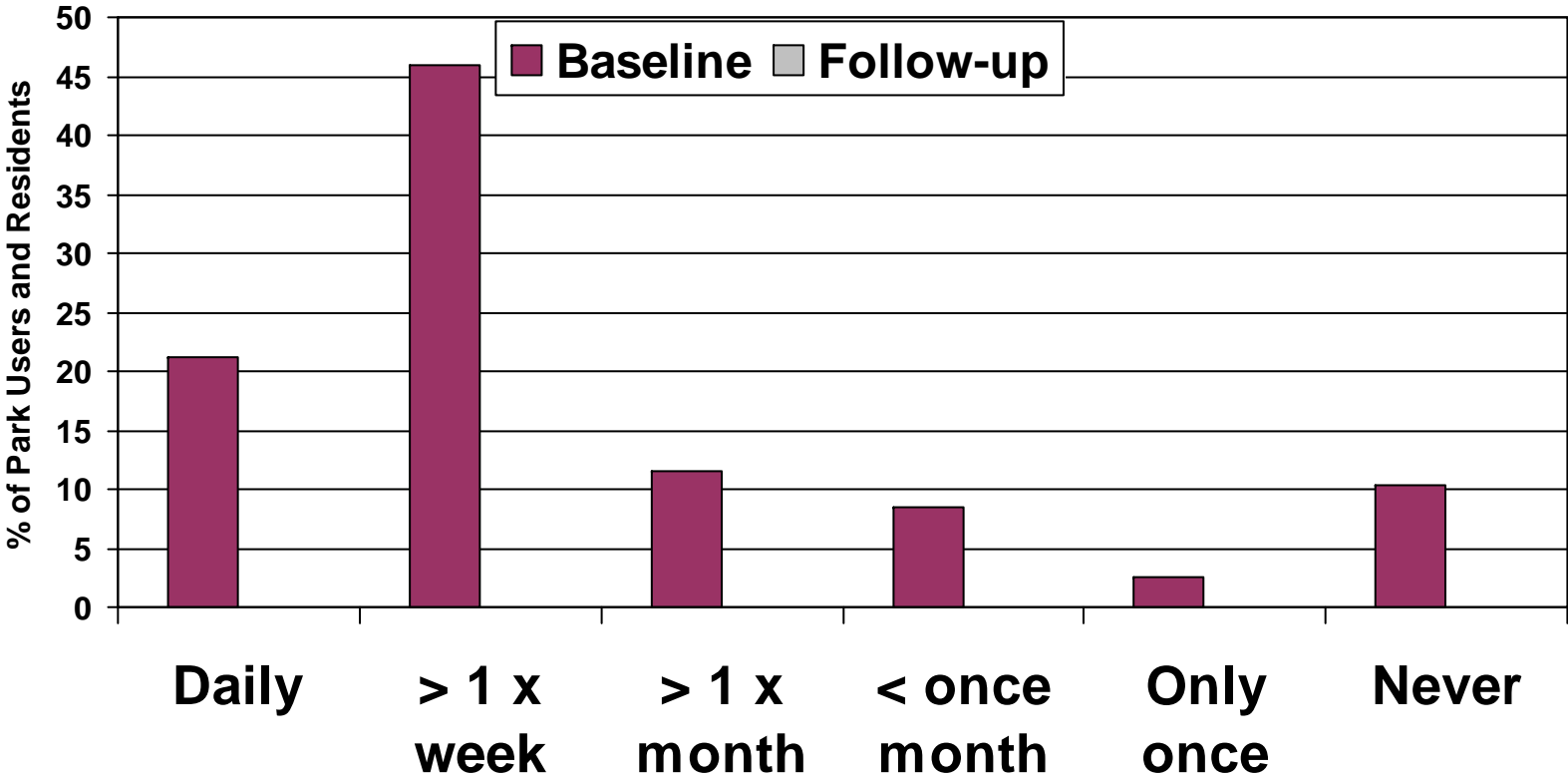
Baseball Field Users by Park



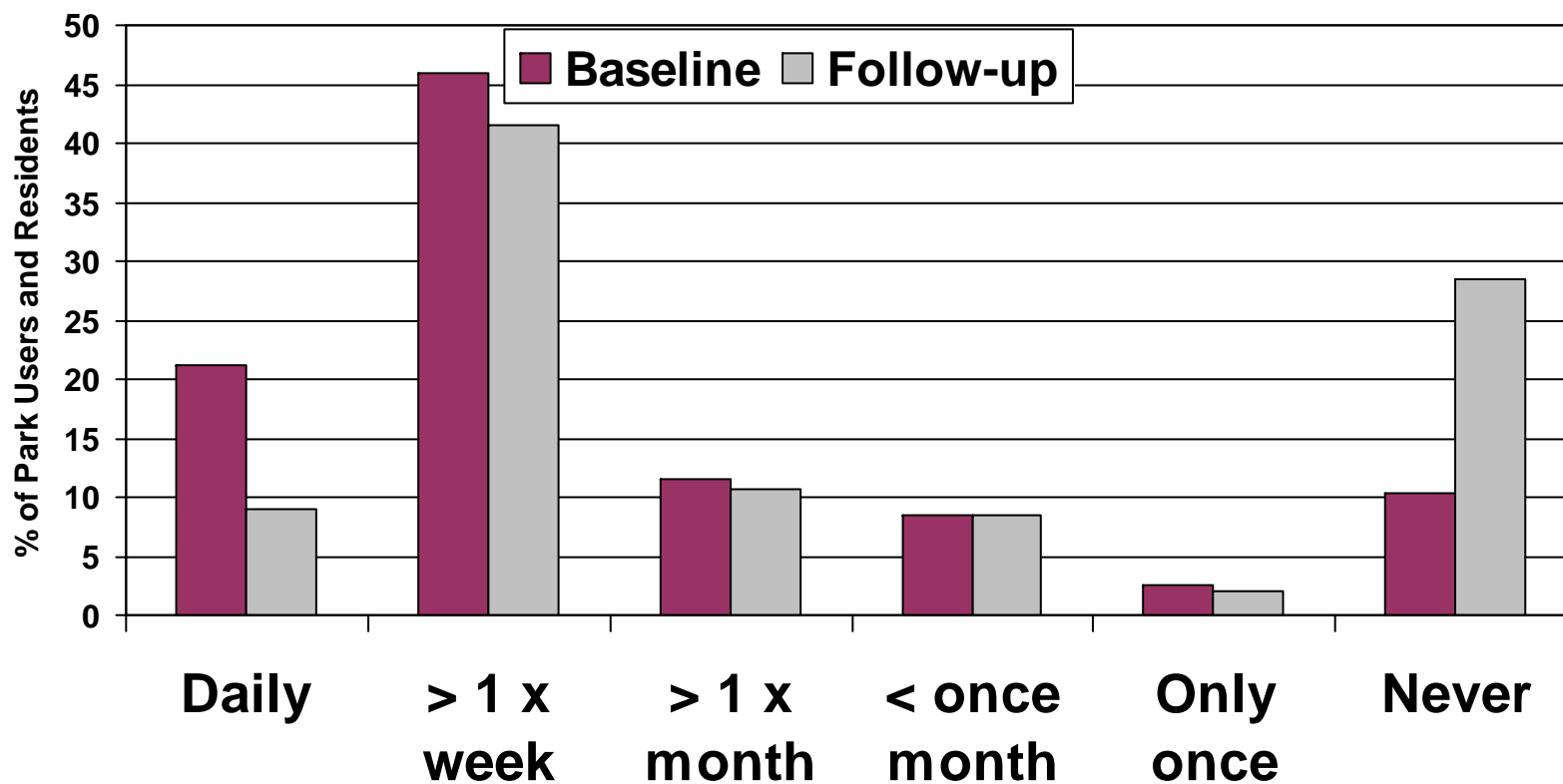
Playground Users by Park



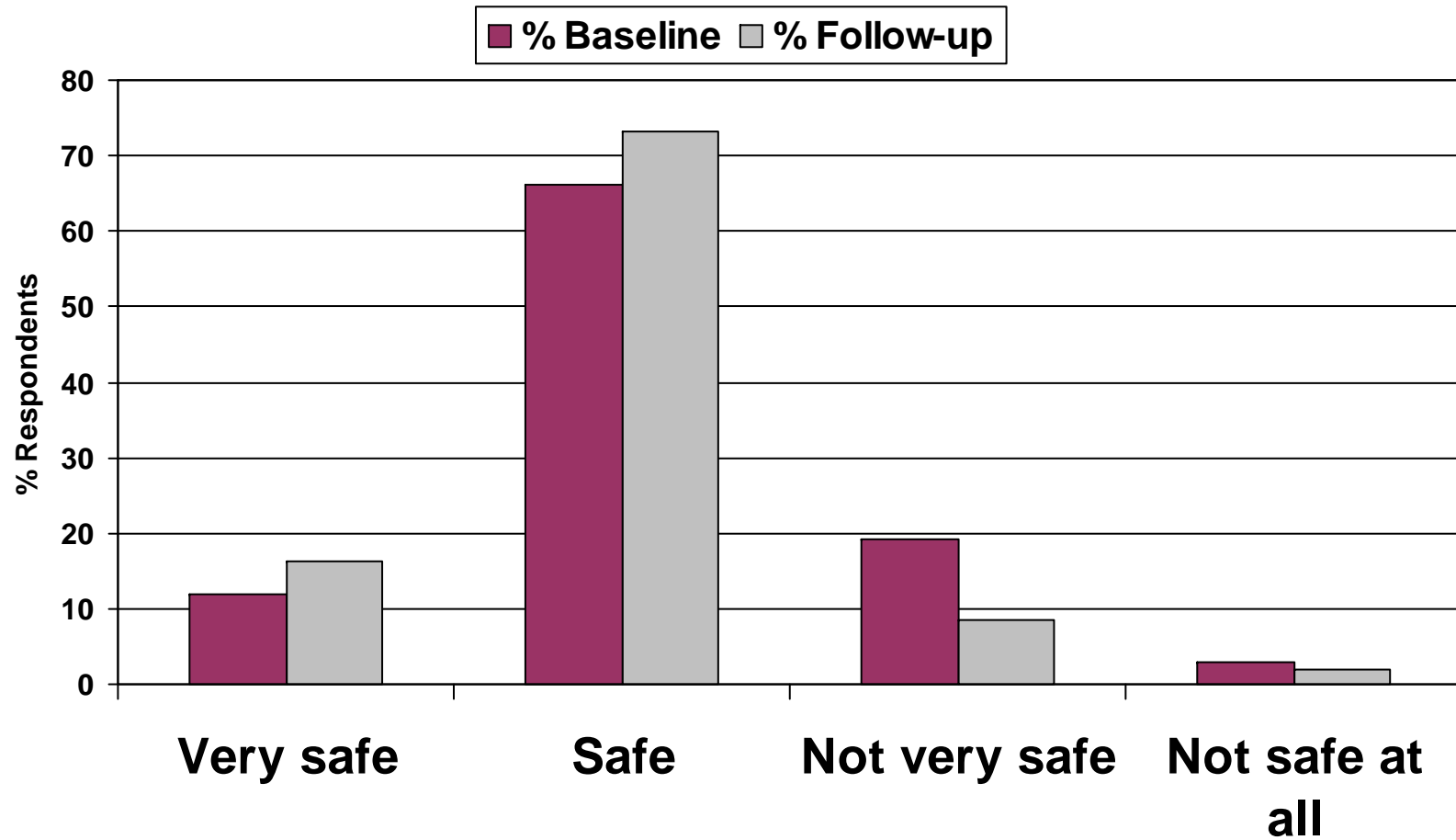
Reported Frequency of Park Use



Reported Frequency of Park Use Also Decreased



People Felt the Parks Were Safer



What Happened?

- Secular trend for decreased park use
- Improving facilities and making parks safer won't necessarily increase park use
- Reduced hours for several gyms; shortened baseball season
- Reduced "face time" with public, more administrative tasks
- No budget increases for more staff or programs, only cuts or flat funding

Why Did Park Use Seem to Have Gone Down After Improvements Were Made?

- Improving physical structures alone may not change physical activity
- Social structures need to be in tune with physical changes

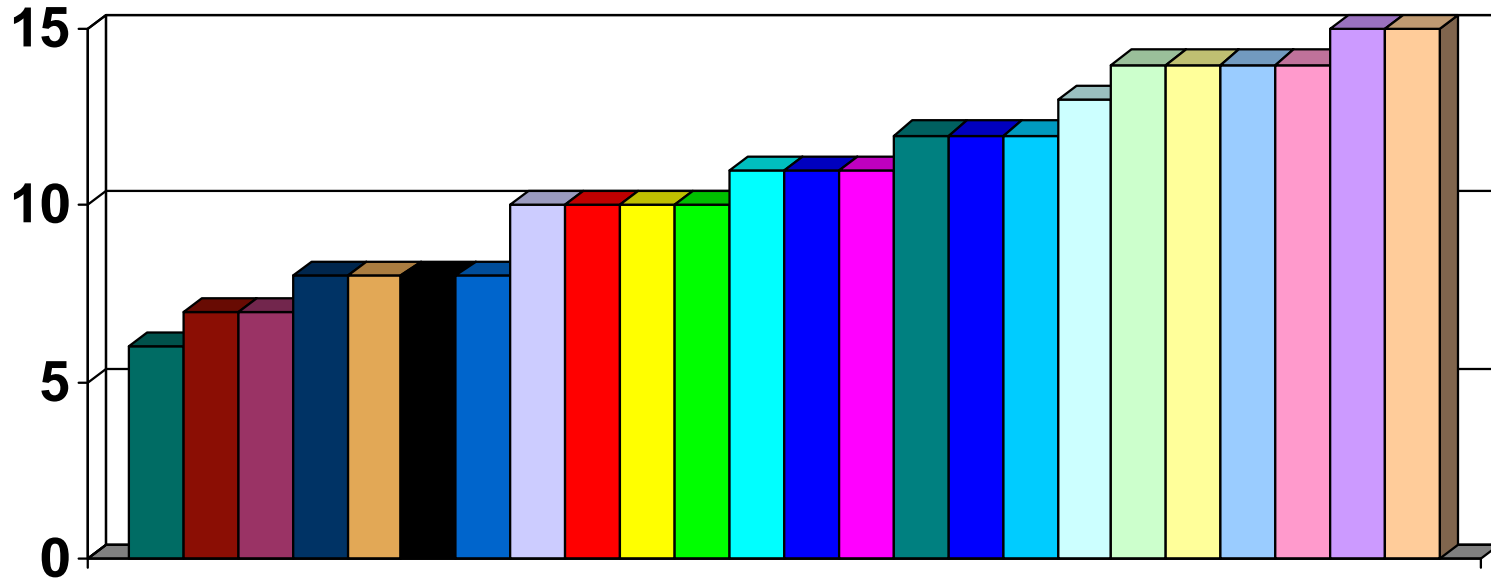
Findings Emphasize Importance of Both Physical and Social Factors in the Environment

- Venues and physical features of a location matter in determining
 - What activity occurs
 - Intensity of activity
- Social factors are potential multipliers of PA
 - Determine when and whether people will be exposed to specific physical environments

Jane Jacob's View of Parks

- People confer use on park
- Location is critical
- Absent location, parks have to provide “demand goods”

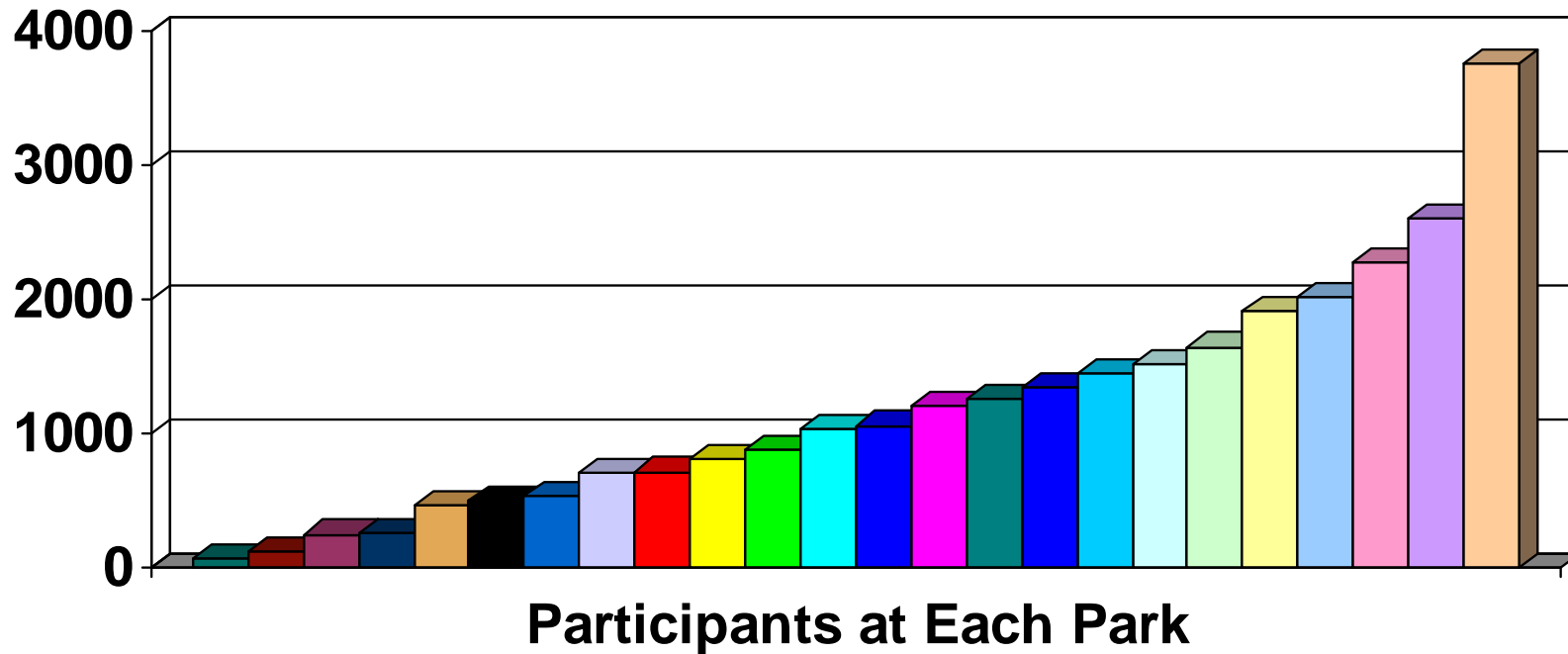
Variation in Number of Park Programs



Number of Programs at Each Park

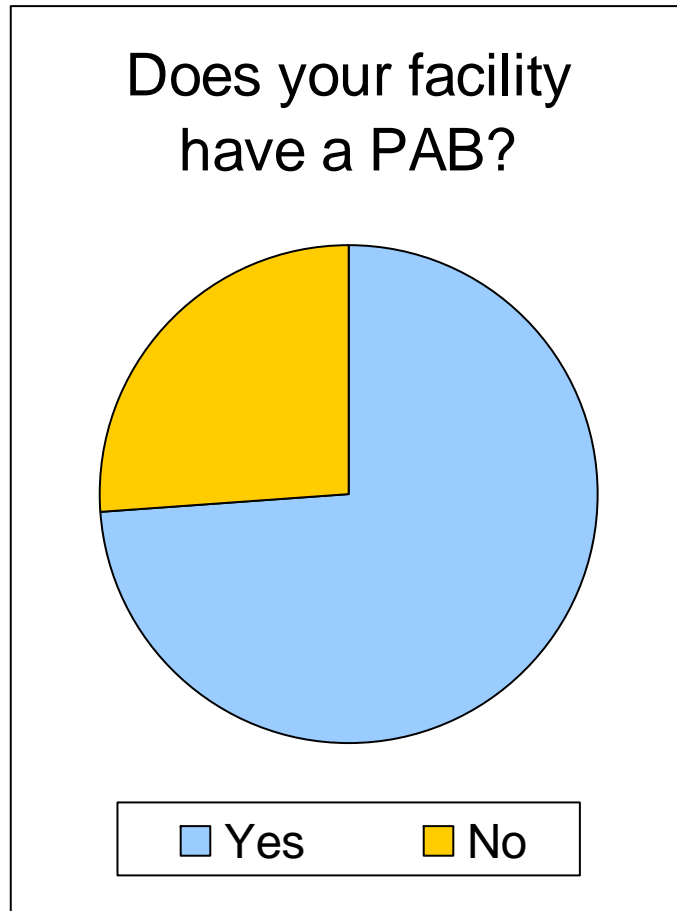
Hollenbeck Rec Ctr	Martin J. Bogdanovich Rec Cntr	Denker Rec Cntr	Roscrans Rec Cntr
Tarzana Rec Cntr	Barrington Rec Cntr	Toberman Rec Cntr	Yosemite Rec Cntr
Poinsettia Rec Cntr	Lincoln Heights Rec Cntr	109th Street Rec Cntr	Palisades Rec Cntr
Panorama Rec Cntr	Vineyard Rec Cntr	North Hollywood Rec Cntr	Encino Comm Ctr
Queen Anne Rec Cntr	David M. Gonzales Rec Center	Glassell Park Rec Cntr	Palms Rec Cntr
Alpine Rec Cntr	Shatto Rec Cntr	Valley Plaza Recreation Center	Silverlake Rec Ctr

Variation in Program Participation Not Explained by Park Size or Population Characteristics



Hollenbeck Rec Ctr	Vineyard Rec Cntr	Roscrans Rec Cntr	Denker Rec Cntr
Toberman Rec Cntr	109th Street Rec Cntr	David M. Gonzales Rec Center	Shatto Rec Cntr
Palisades Rec Cntr	Palms Rec Cntr	Poinsettia Rec Cntr	North Hollywood Rec Cntr
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Barrington Rec Cntr	Encino Comm Ctr	Alpine Rec Cntr	Valley Plaza Recreation Center

Park Advisory Boards



1. # Annual Meetings
 - Average: 3.8
 - Range: 1 – 8
2. # Annual Events
 - Average: <1
 - Range: 0 – 3
3. PAB / Park relationship
 - Average: 4.3
 - Range: 0 – 5
4. Approximately half of all PABs participated in fundraising in 2007

Conclusion

- Other issues that determine park programming and attractiveness need exploration, like park leadership, community participation, and standards and benchmarks for participation
- Park programming may be more important than facilities in attracting park users
- Parks have the potential and capacity to do more to facilitate physical activity

Number of Months Between End of Construction and Assessment

