Adaptive Bike Share: Expanding Bike Share to People with Disabilities and Older Adults

1394 – Bicycling Toward Equity: Opportunities, Barriers, and Policies for Vulnerable Groups
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BREAKING BARRIERS TO BIKE SHARE

RESULTS FROM A RESIDENT SURVEYS
Market / Need
insights from a survey in low-income communities of color

Ability to ride, by age

- 65+ (n=332)
- 55-64 (n=344)
- 45-54 (n=308)
- 35-44 (n=234)
- 25-34 (n=341)
- 18-24 (n=47)

- Green: Temporarily unable to ride
- Blue: Not able to ride
Market / Need
insights from a survey in low-income communities of color

Ability to ride, by income

- $75,000+ (n=325)
  - Temporarily unable to ride: 3%
  - Not able to ride: 97%

- $35,000-74,999 (n=403)
  - Temporarily unable to ride: 12%
  - Not able to ride: 88%

- $0-34,999 (n=820)
  - Temporarily unable to ride: 9%
  - Not able to ride: 91%
Market / Need
insights from a survey in low-income communities of color

Ability to ride, by race and ethnicity

Black or African American (n=1060)

Asian (n=68)

White (n=357)

Latinx (n=138)

[Bar chart showing the percentage of respondents temporarily unable to ride and not able to ride for each race and ethnicity group.]

- Black or African American: 50% temporarily unable to ride, 50% not able to ride
- Asian: 25% temporarily unable to ride, 75% not able to ride
- White: 15% temporarily unable to ride, 85% not able to ride
- Latinx: 25% temporarily unable to ride, 75% not able to ride

- Temporarily unable to ride
- Not able to ride
Market / Need
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Ability to Ride, by gender

- All respondents (n=1768)
  - Temporarily unable to ride
  - Not able to ride

- Women (n=1158)
  - Temporarily unable to ride
  - Not able to ride

- Men (n=502)
  - Temporarily unable to ride
  - Not able to ride
Market / Need
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Do you know how to ride a bike?

- Physically able to ride
- Not physically able to ride
- Temporarily Unable

Options: Yes, No, Not well
When did you last ride a bicycle?

- Physically able to ride:
  - In the past 12 months: 0%
  - 1-5 years ago: 20%
  - More than 5 years ago: 60%
  - Never: 40%

- Not physically able to ride:
  - In the past 12 months: 10%
  - 1-5 years ago: 30%
  - More than 5 years ago: 60%
  - Never: 10%

- Temporarily Unable:
  - In the past 12 months: 10%
  - 1-5 years ago: 30%
  - More than 5 years ago: 50%
  - Never: 10%
Market / Need
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Interest / Use for biking, Percent Agree

- I would like to ride a bicycle (for transportation) more than I currently do.
- I would like to use bike share more than I currently do.
- Riding a bike would make me more independent in getting around.
- Riding a bike would be a good way for me to get exercise.
- I see people like me using bike share in my neighborhood.

Physically able to ride | Not physically able to ride | Temporarily Unable
Barriers to bicycling

Bicycling Barriers, Percentage stating each is a “big barrier”

- Traffic makes riding a bike in my neighborhood feel dangerous
- The places that I need to go are too far away to reach on a bike
- I don't have a bike or related gear (such as helmet / lock / lights)
- Carrying things on a bike is too difficult
- Biking might aggravate my personal health issues
- I am too old to ride a bike
- I am too out of shape to ride a bike

Legend:
- Temporarily Unable
- Not physically able to ride
- Physically able to ride
Barriers – specific to bike share

Barriers to bike share, Percentage stating each is a “big barrier”

- I don't know enough about how to use it
- I worry that the bike share bikes wouldn't adjust to fit me
- Signing up for bike share is too complicated
- Checking out and returning bike share bikes is too complicated

Barriers:
- Temporarily Unable
- Not physically able to ride
- Physically able to ride
ADAPTIVE CYCLING

Results from National Scan of Bike Share Equity Programs
Equality vs. Equity

Equality

Equity
Adaptive Bicycles

Trikes/quadricycles

Tandems

Hand cycles

Electric bikes/scooters
Emerging Programs

- Of the **70 systems** that responded to the survey, **10** indicated that they had adaptive bikes in their systems: BIKETOWN, in Portland, OR, Bublr in Milwaukie, WI, Blue Bikes in New Orleans, LA, CoGo Bike Share in Columbus, OH, LimeBike Ithaca in Ithaca, NY, mBike in College Park, MD, MoGo in Detroit, MI, PeaceHealthRides in Eugene, OR, and Pedal Corvalis in Corvallis, OR.
Bike Library Model

- Pick-up location, rental store usually near recreational access
- Specific hours of operations, reservations
- Staff to assist sizing and questions
- Parking or storage for personal equipment
- Various types of equipment available
- Cost per hour/day, discount programs
Partnerships

Adaptive BIKE TOWN: Increase access to biking for people with disabilities

MADE POSSIBLE BY...

PEAC  MoGo  WHEEL HOUSE

Ralph C. Wilson Jr. Legacy Funds of the Community Foundation for Southeast Michigan

DALMAC®
Adaptive Biketown offers folks the ability to choose within their abilities a recreational vehicle of sorts to experience our beautiful city in a new way which is not only fun, but also good for the body, for the mind, and for the soul. - Deidre Hall
Integrated Model

- Integrated into existing bike share system, same pricing
- Limited model types
- Limited access for some, parking
- Various pricing models
- No storage
Challenges facing the programs and operators

- Who to serve and how?
- Integration
- Cost
- Logistics and density
- Personalized assistance/fitting
- Maintenance
- Types of bikes
Further work is needed

• Develop a better understanding of the needs and experiences of people with disabilities with regard to cycling/bike share.
• Explore how to design and scale the bike share systems to be more inclusive to all users.
• Develop new technologies and vehicles that can expand current bike share systems
• Understand how to structure, fund, and manage adaptive bike share programs to maximize their ongoing viability.
Contact Information

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National Scan of Bike Share Equity Programs
https://trec.pdx.edu/research/project/1278