

# Hawai'i County

## Built Environment & Physical Activity

### Data Brief



September 2018



Prepared for the Healthy Eating + Active Living Coalition of Hawai'i County

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Chronic Disease Prevention & Health Promotion Division



# Overview of Data Sources

This report summarizes the most recent available data characterizing aspects of the built environment (BE) that relate to physical activity (PA). The purpose of this report is to provide county-level data that can be used to inform coalition efforts around changing policies, systems, and environments to promote PA and active living.

Year	Source	Brief Description
2016	<b>Behavioral Risk Factor Surveillance System (BRFSS)</b> <i>Category: PA Behavior</i>	<ul style="list-style-type: none"><li>• Annual telephone survey conducted with ~8,000 Hawai'i adult residents.</li><li>• Collects information on self-reported PA behaviors including leisure-time physical activity. More detailed PA module administered every other year to assess whether adults achieve recommended levels of PA.</li><li>• <a href="http://health.hawaii.gov/brfss/">http://health.hawaii.gov/brfss/</a></li><li>• <a href="http://ibis.hhdw.org/ibisph-view/query/selection/brfss/_BRFSSSelection.html">http://ibis.hhdw.org/ibisph-view/query/selection/brfss/_BRFSSSelection.html</a></li></ul>
2017	<b>Youth Risk Behavior Survey (YRBS)</b> <i>Category: PA Behavior</i>	<ul style="list-style-type: none"><li>• Paper-based survey of 12,000 students attending public middle and high schools. Questions cover physical activity and sedentary behaviors.</li><li>• Data are weighted by sex, grade, and race/ethnicity.</li><li>• <a href="http://hhdw.org/health-reports-data/data-source/yrbs-reports/">http://hhdw.org/health-reports-data/data-source/yrbs-reports/</a></li><li>• <a href="http://ibis.hhdw.org/ibisph-view/query/selection/yrbs/_YRBSSelection.html">http://ibis.hhdw.org/ibisph-view/query/selection/yrbs/_YRBSSelection.html</a></li></ul>
2016-2017	<b>School Safety and Wellness Survey (SAWS)</b> <i>Category: PA Resources</i>	<ul style="list-style-type: none"><li>• Online survey administered annually to all public school principals to monitor implementation of Hawai'i State Department of Education (DOE) Wellness Guidelines.</li><li>• <a href="http://www.hawaiipublicschools.org/TeachingAndLearning/HealthAndNutrition/WellnessGuidelines/Pages/home.aspx">http://www.hawaiipublicschools.org/TeachingAndLearning/HealthAndNutrition/WellnessGuidelines/Pages/home.aspx</a></li></ul>
2017	<b>Healthy Hawai'i Initiative (HHI) Rolling Survey</b> <i>Category: BE Perceptions</i>	<ul style="list-style-type: none"><li>• A random digit-dial telephone survey conducted with 1,600 Hawai'i adults.</li><li>• Gathers information on the perceived neighborhood built environment (items from PANES, <a href="http://sallis.ucsd.edu/measure_panes.html">http://sallis.ucsd.edu/measure_panes.html</a>), bicycle ownership, and familiarity with bikeshare programs.</li><li>• Administered when funding is available (not on a regular basis).</li></ul>
2017	<b>Hawai'i Public Health Institute (HIPHI) Public Opinion Poll</b> <i>Category: PA/BE Attitudes</i>	<ul style="list-style-type: none"><li>• A telephone survey conducted with 804 adults who are registered to vote in Hawai'i. Assesses voters' opinions on a range of health-related policy issues.</li><li>• Counties are oversampled and data are weighted by age and island.</li><li>• Administered annually by HIPHI to inform policy &amp; advocacy efforts.</li></ul>
2016	<b>Pedestrian Environmental Data Scan (PEDS)</b> <i>Category: BE Audit</i>	<ul style="list-style-type: none"><li>• Audit of selected neighborhood street segments in areas where counties have planned Complete Streets projects. Trained observers rate streets using a validated instrument (<a href="http://planningandactivity.unc.edu/RP1.htm">http://planningandactivity.unc.edu/RP1.htm</a>).</li><li>• Data are not representative of the county-wide built environment.</li><li>• Conducted by the University of Hawai'i HHI Evaluation Team every 5-7 years.</li></ul>

# List of Data Indicators

p.	Indicator	Category
5	% of adults who engage in leisure-time PA	Self-reported PA
5	% of adults who participated in 150+ min of moderate aerobic PA per week	Self-reported PA
5	% of adults who report walking as their primary type of PA	Self-reported PA
5	% of adults who report bicycling as their primary type of PA	Self-reported PA
6	% middle school students who meet federal PA guidelines	Self-reported PA
6	% high school students who meet federal PA guidelines	Self-reported PA
6	% middle school students who walk/bike to/from school (1+ days during an average week)	Self-reported PA
6	% high school students who walk/bike to/from school (1+ days during an average week)	Self-reported PA
7	% of schools with a Safe Routes to School program	School programs
8	% of schools that encourage community use of its grounds or facilities for physical activity	School shared use
8	% of schools that have had community use of its grounds or facilities for physical activity	School shared use
9	% of adults who feel safe from traffic while walking/bicycling in neighborhood	Perceived BE
10	% of adults who feel safe from crime while walking/bicycling in neighborhood	Perceived BE
11	% of adults who have many shops/stores within easy walking distance of their homes	Perceived BE
11	% of adults who have a bus stop within a 10-15 minute walk from their homes	Perceived BE
12	% of adults who have sidewalks on most of the streets in neighborhood	Perceived BE
12	% of adults who have bicycling facilities in or near neighborhood (e.g., lanes, separate trails)	Perceived BE
13	% of adults who live in neighborhood with free or low-cost recreation facilities (e.g., parks)	Perceived BE
14	% of adults who currently own or have access to a bicycle that is in working condition	Bikeshare
14	% of adults who are <u>not at all familiar</u> with how bikeshare programs work	Bikeshare
15	% of adults who would be more willing to ride a bicycle if there were more: bicycle lanes, bicycle paths separated from traffic, secure bicycle parking, slower traffic speeds, signs that indicate safer routes to destinations, and training and education in bicycling	Bicycling
16	% of registered voters who view the following as major problems facing Hawai'i families: diabetes, heart disease, obesity, and lack of physical activity	Public opinions
17	% of adults who are overweight or obese (BMI $\geq$ 25)	Weight status
17	% of high school students who are overweight or obese (BMI $\geq$ 85th percentile)	Weight status

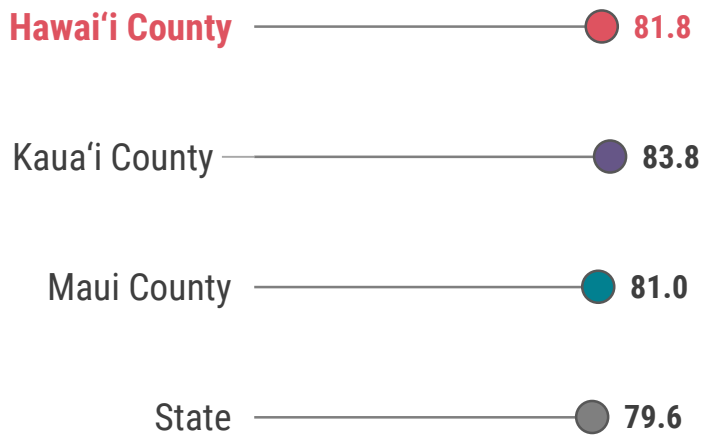
# List of Data Indicators (cont.)

p.	Indicator	Category
17	% of adults with diabetes or prediabetes	Chronic disease
17	% of adults with high blood pressure	Chronic disease
18	% of registered voters who <u>strongly support</u> increasing government funding for more walking/biking infrastructure to prevent childhood obesity	Public opinions
18	% of registered voters who <u>strongly agree</u> that the government should spend more transportation dollars on walking/biking infrastructure	Public opinions
21	% of street segments with bus stops with shelters	Street features
21	% of street segments with bus stops with benches	Street features
21	% of street segments with bus stops with only signage	Street features
21	% of street segments with striped bicycle lane designation	Street features
21	% of street segments with bicycle route signs	Street features
21	% of street segments with visible bicycle parking facilities	Street features
21	% of street segments with sidewalks	Street features
21	% of street segments with paved shoulders with stripes	Street features
21	% of street segments with unpaved shoulders	Street features
21	% of street segments with no pedestrian facility (must walk in roadway)	Street features
22	% of sidewalks that are in good condition	Street features
22	% of sidewalks that are complete within segment	Street features
22	% of street segments that have poles or signs blocking the pedestrian path	Street features
22	% of street segments that have parked cars blocking the pedestrian path	Street features
22	% of street segments with at least one crosswalk present	Street features
22	% of street segments with a pedestrian signal	Street features
22	% of street segments with landscape buffering the pedestrian path	Street features
22	% of street segments with pedestrian-scale lighting	Street features
22	% of street segments with garbage cans	Street features
22	% of street segments with benches	Street features
22	% of street segments with some or dense tree coverage shading pedestrian path	Street features

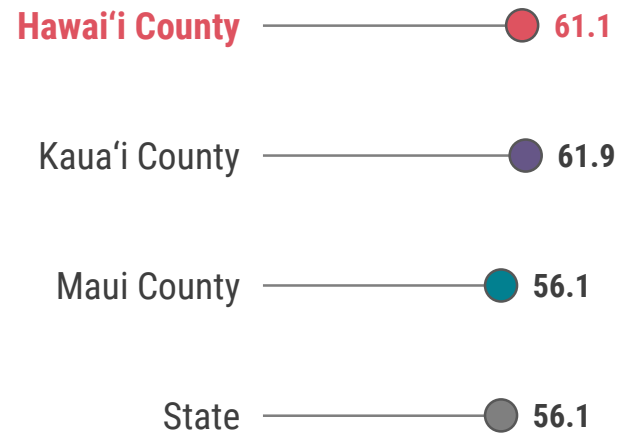
# How physically active are adults?

Most adults participated in some physical activity during their leisure time, but only 61.1% achieved the minimum recommended level. Walking is the most common type of leisure-time physical activity.

% of adults who participate in any leisure-time physical activity (LTPA)<sup>1</sup>



% of adults who achieve the minimum recommendation of at least 150 minutes of moderate-intensity aerobic PA per week<sup>2</sup>



## 54.9%

of Hawai'i County adults **walk** as their primary or secondary form of LTPA<sup>3</sup>

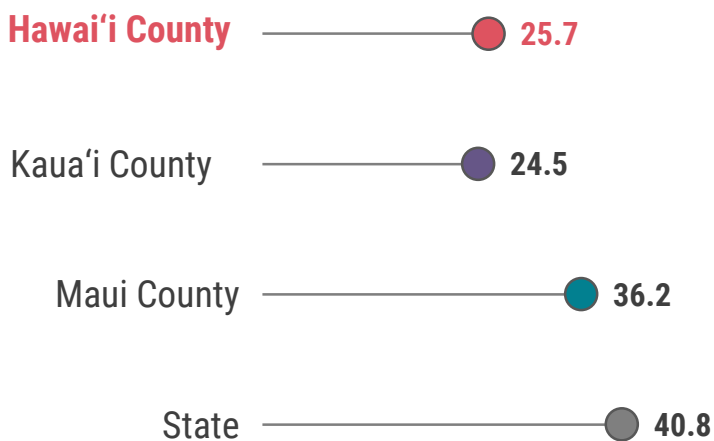
## 4.1%

of Hawai'i County adults **bike** as their primary or secondary form of LTPA<sup>3</sup>

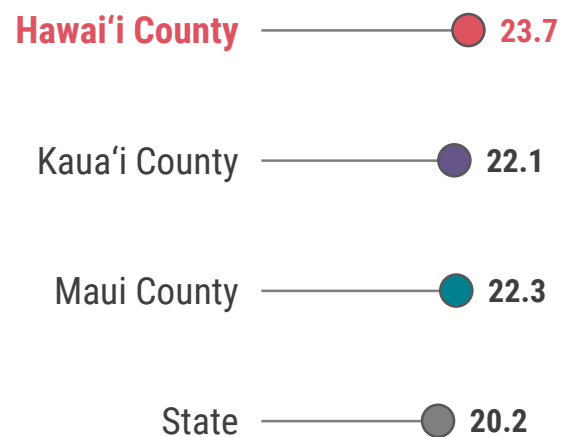
# How physically active are youth?

In Hawai'i County public middle and high schools, about 1 in 4 students walk or bike to or from school at least 1 day per week. Most students do not achieve the recommended levels of physical activity.

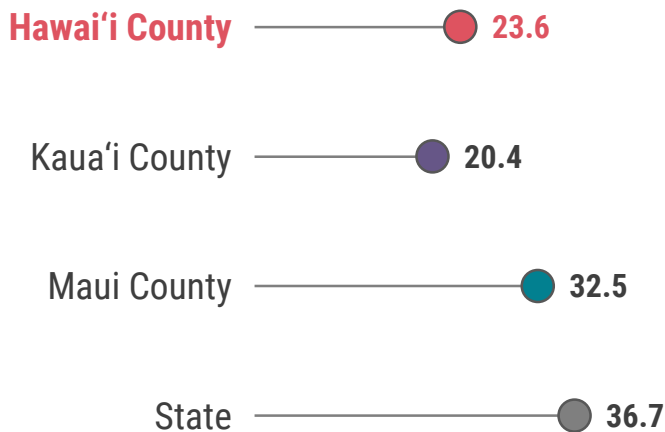
## % of middle school students who walk or bike to/from school (1+days/week)



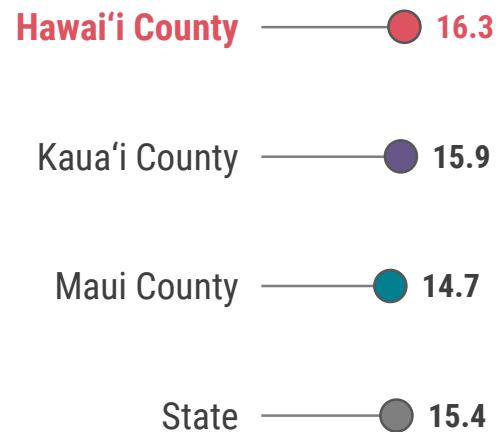
## % of middle school students who meet federal PA guidelines



## % of high school students who walk or bike to/from school (1+days/week)

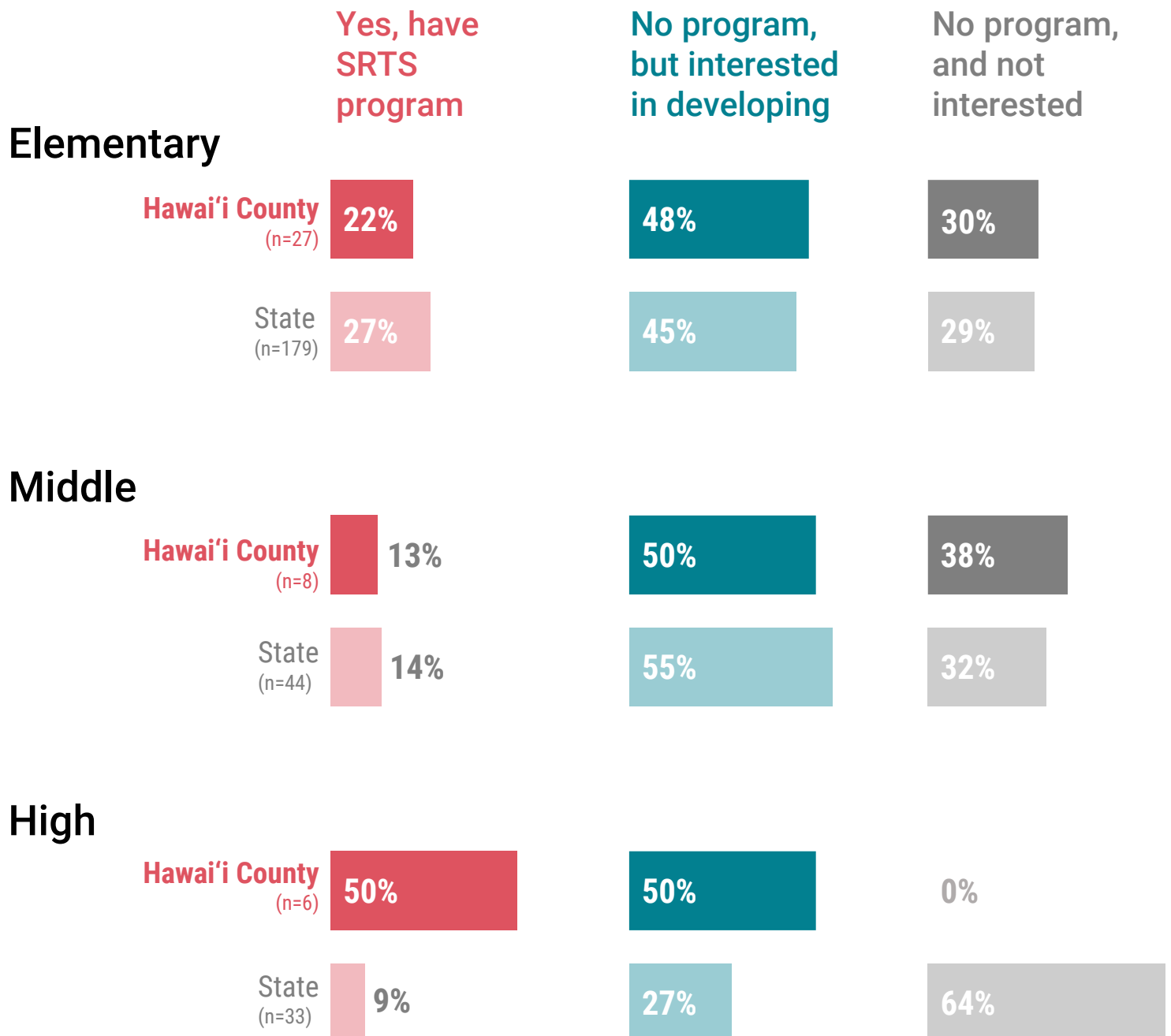


## % of high school students who meet federal PA guidelines



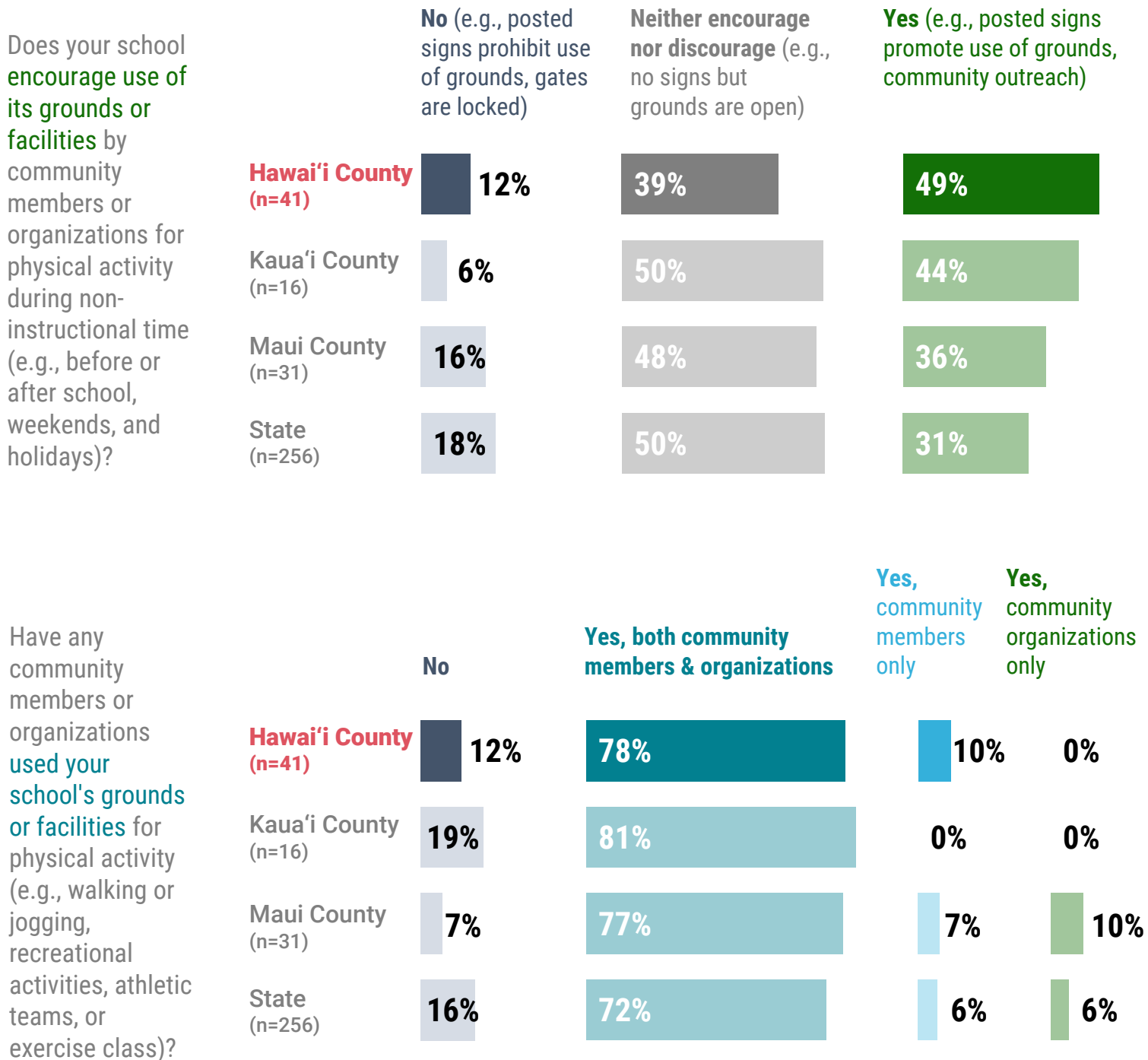
# Do public schools have Safe Routes to School programs to promote walking and bicycling to school?

Relatively few public elementary and middle schools have Safe Routes to School (SRTS) programs in Hawai'i County. The interest in developing additional SRTS programs is strong.



# Are public schools used as a shared community physical activity resource?

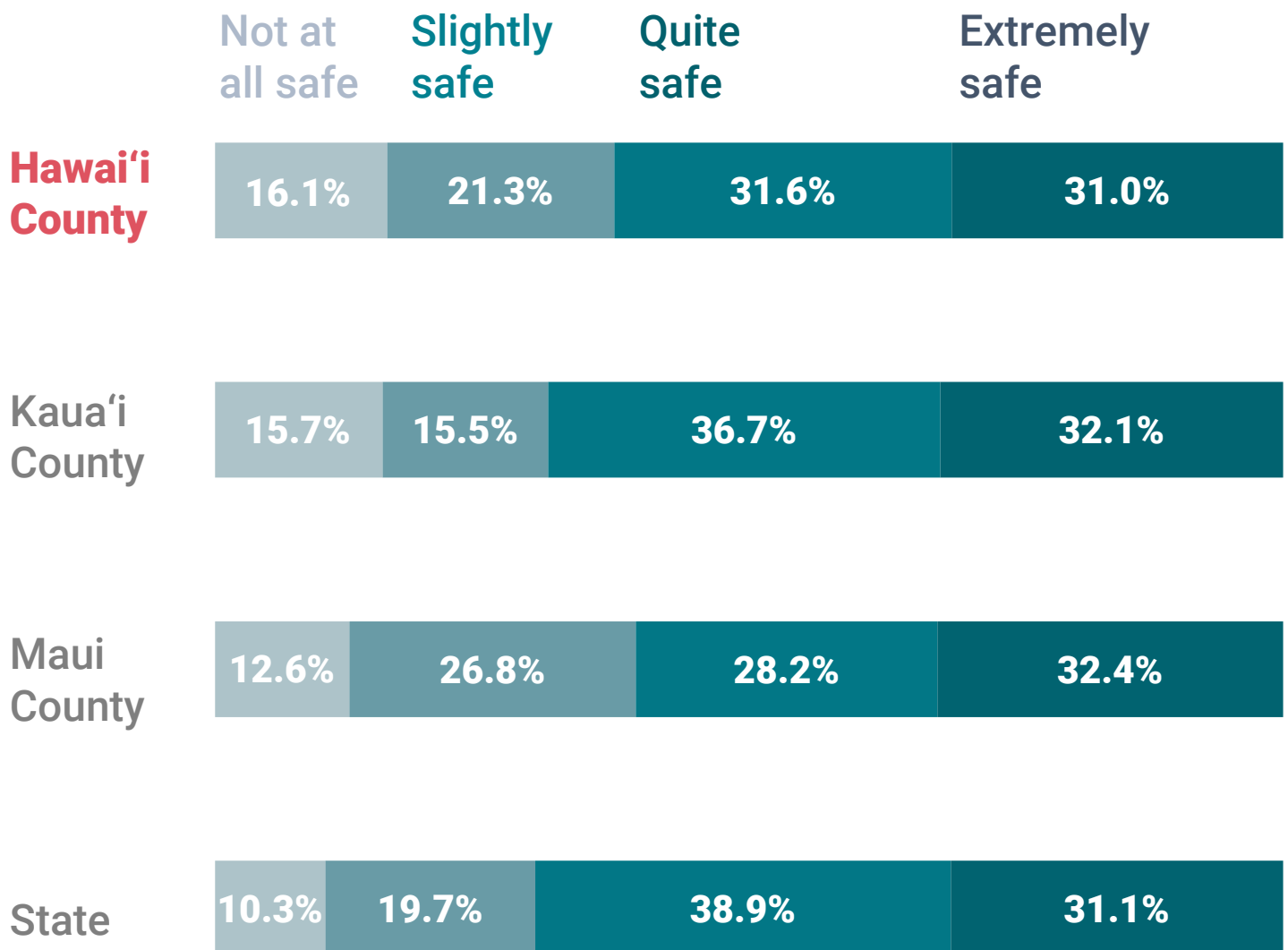
In most Hawai'i County public schools, community members and organizations are able to utilize school grounds and facilities for physical activity during non-instructional time.





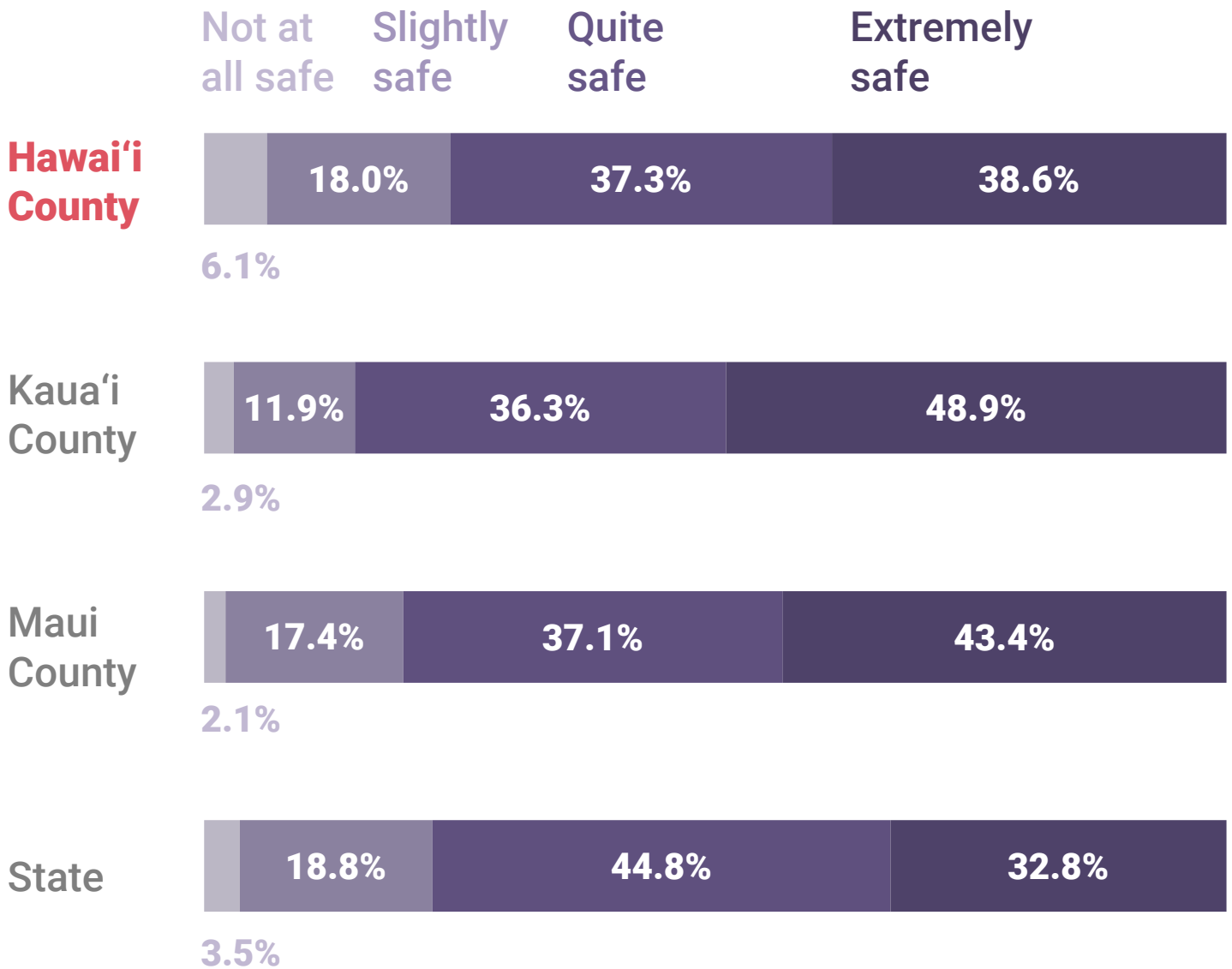
# How safe from traffic do residents feel while walking/bicycling in their neighborhoods?

More than one-third of Hawai'i County residents feel not or only slightly **safe from traffic** while walking or bicycling in their neighborhoods.



# How safe from crime do residents feel while walking/bicycling in their neighborhoods?

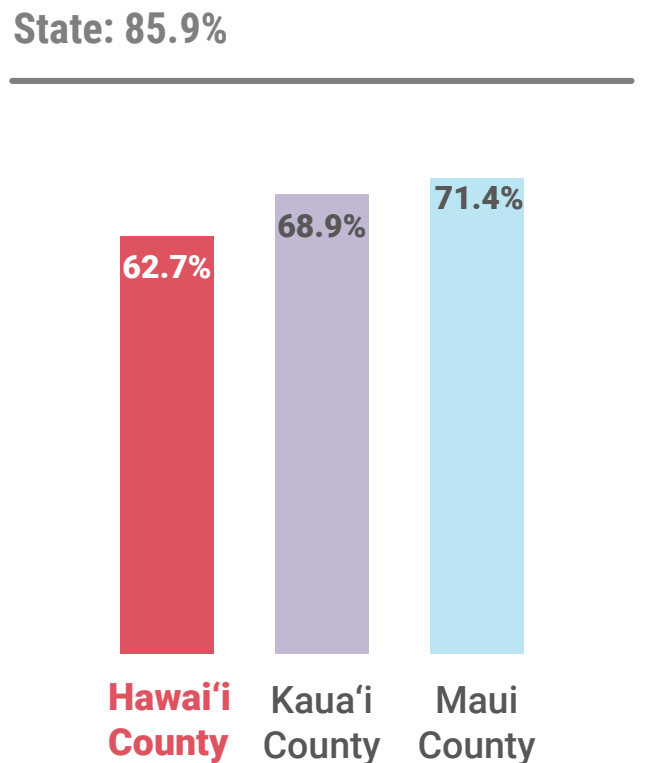
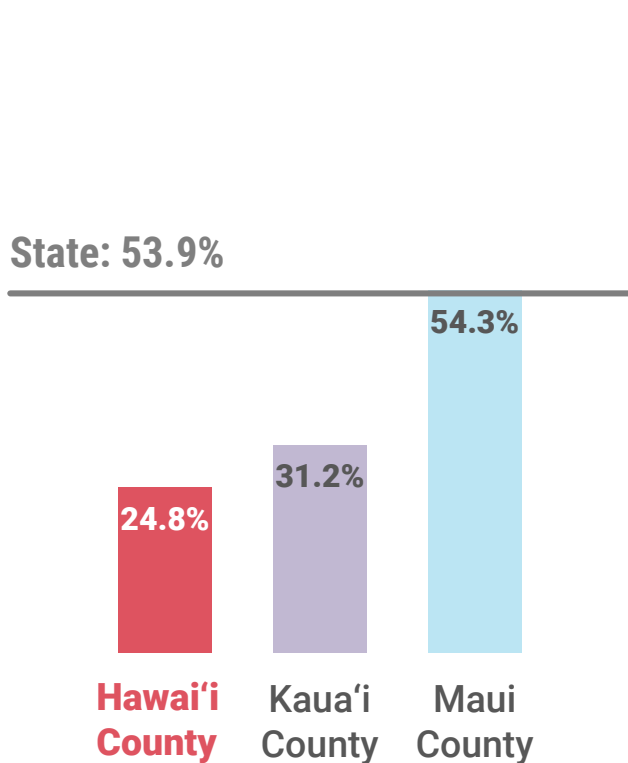
The majority of Hawai'i County residents tend to feel **safe from crime** while walking or bicycling in their neighborhoods.



# Are neighborhood resources within walking distance of homes?

**24.8%** of Hawai'i County residents have many **shops, stores, markets,** or other places to buy needed things within easy walking distance of their homes.

**62.7%** of Hawai'i County residents have a **bus stop** within a 10-15 minute walk from their homes.



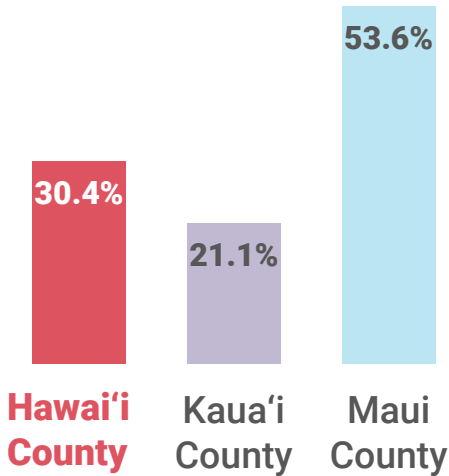
# What is the perceived availability of walking and bicycling facilities?

**30.4%** of Hawai'i County residents have **sidewalks** on most of the streets in their neighborhoods.

**29.0%** of Hawai'i County residents have **facilities to bicycle** in or near their neighborhoods, such as special lanes, separate paths or trails, or shared-use paths for bicycles and pedestrians.

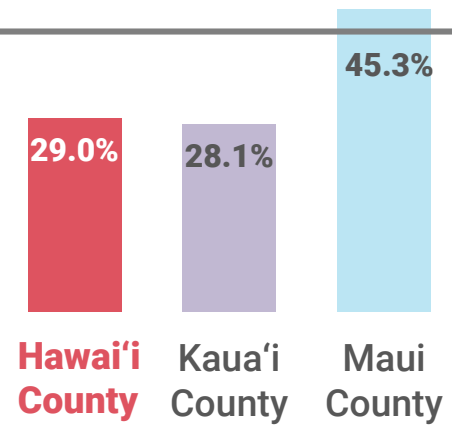
State: 69.6%

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State: 42.0%

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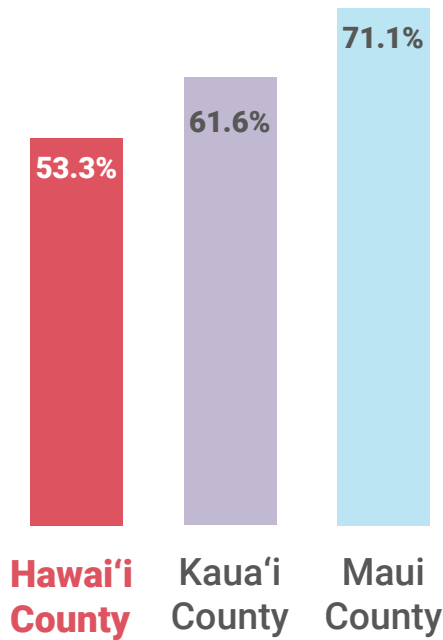


# What is the perceived availability of neighborhood recreation facilities?

**53.3%** of Hawai'i County residents live in neighborhoods that have **several free or low-cost recreation facilities**, such as parks, walking trails, bike paths, recreation centers, playgrounds, or public swimming pools.

**State: 73.7%**

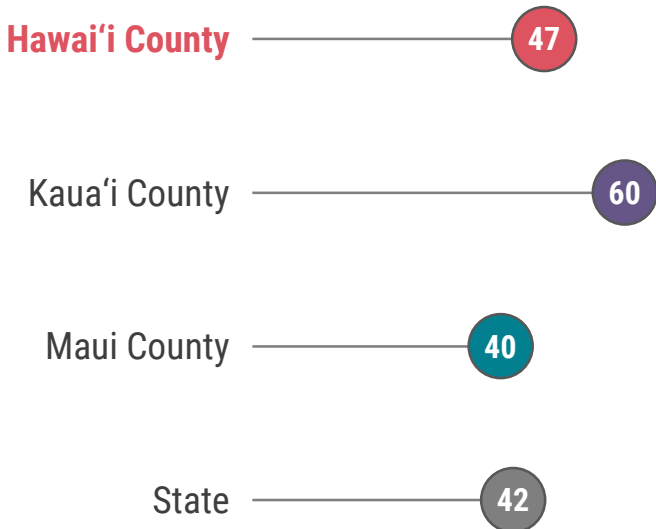
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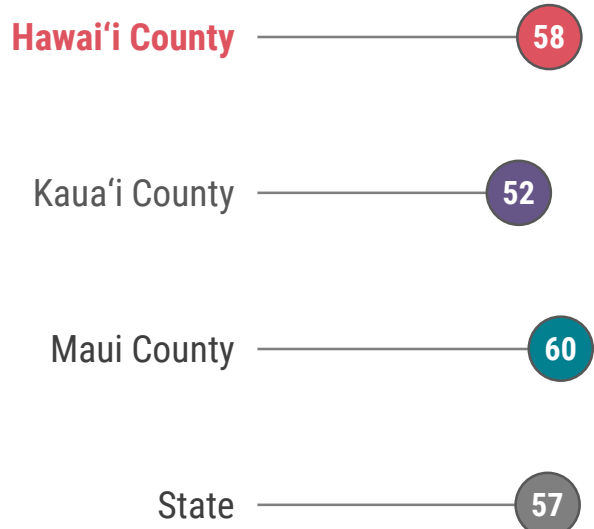
# Do adults have access to bicycles? Do they understand bikeshare programs?

In Hawai'i County, 47% of adults report owning or having access to a bicycle that is in working condition. Over half of adults are not familiar with how bikeshare programs work, indicating a need for outreach and education if bikeshare were being considered for Hawai'i County.

**% of adults who currently own or have access to a bicycle that is in working condition**

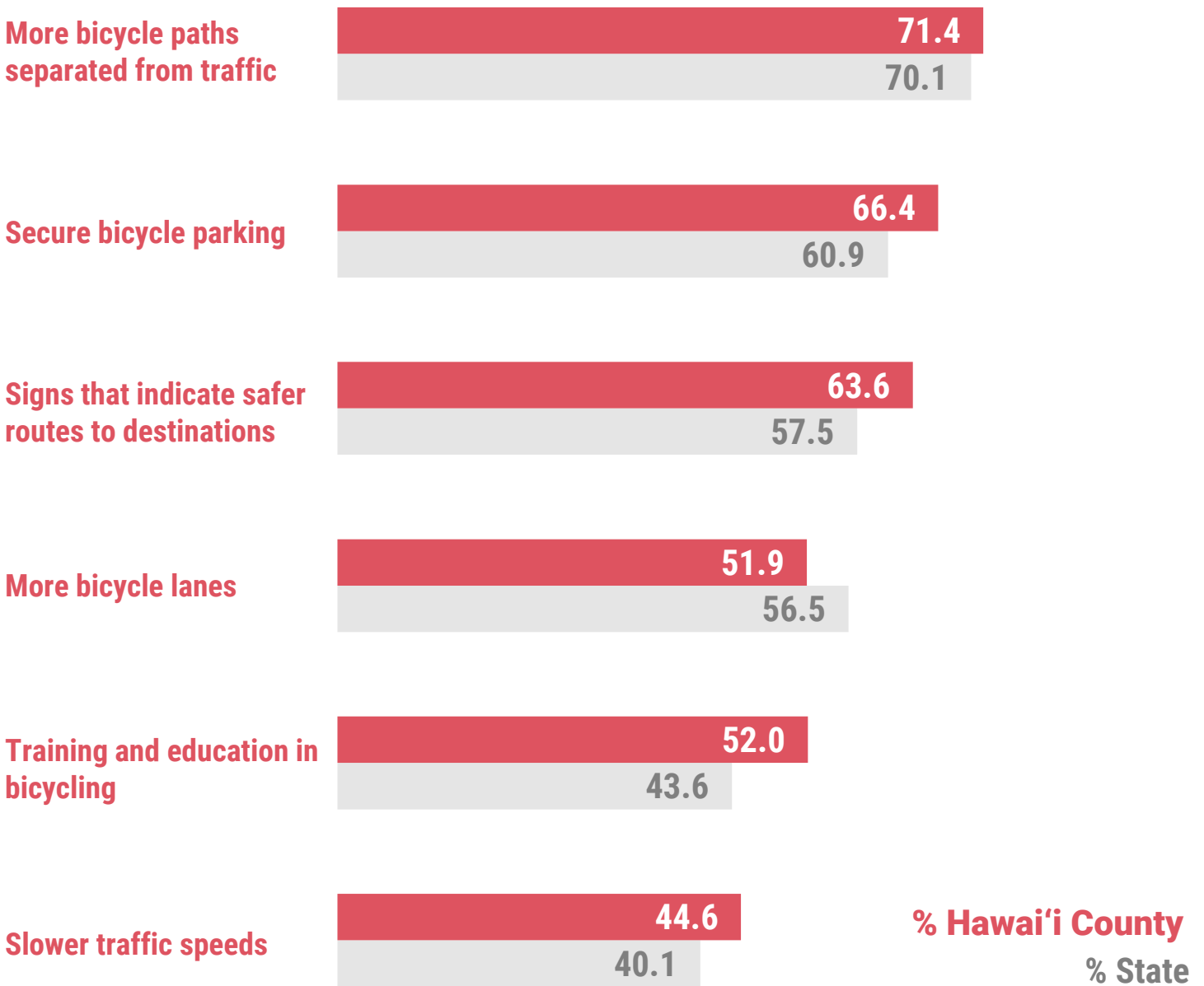


**% of adults who are not at all familiar with how bikeshare programs work**



# What would encourage adults to ride a bicycle for short trips?

Adults\* were asked what would increase their willingness to ride a bicycle for short trips of less than two miles. For Hawai'i County respondents, the top two choices were more bicycle paths separated from traffic and secure bicycle parking.

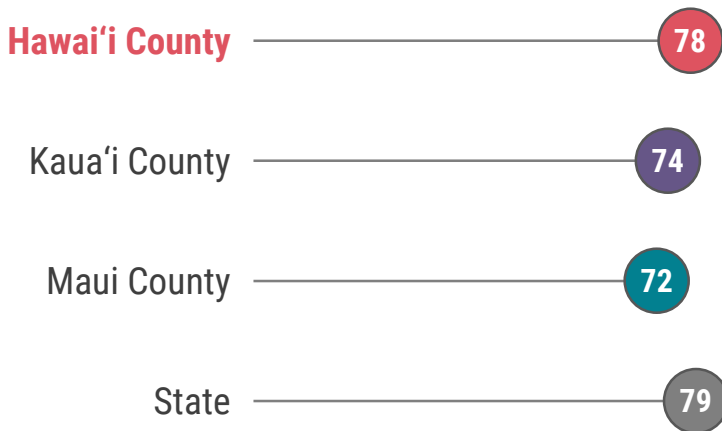


\*Excludes adults who reported being physically unable to ride a bicycle

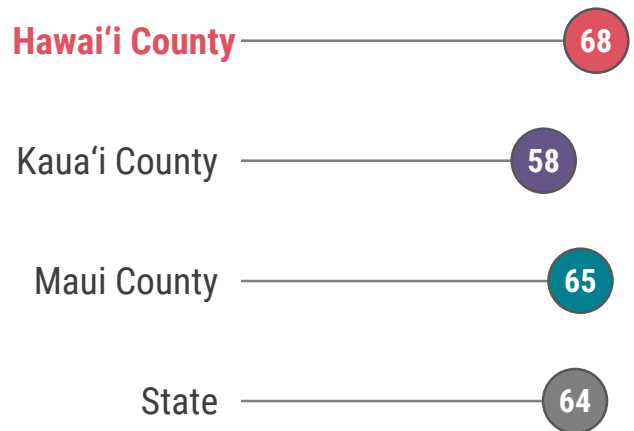
# What do registered voters view as major problems facing Hawai'i families?

In Hawai'i County, three-fourths of registered voters view diabetes and obesity as significant problems facing children, teens, and families in Hawai'i.

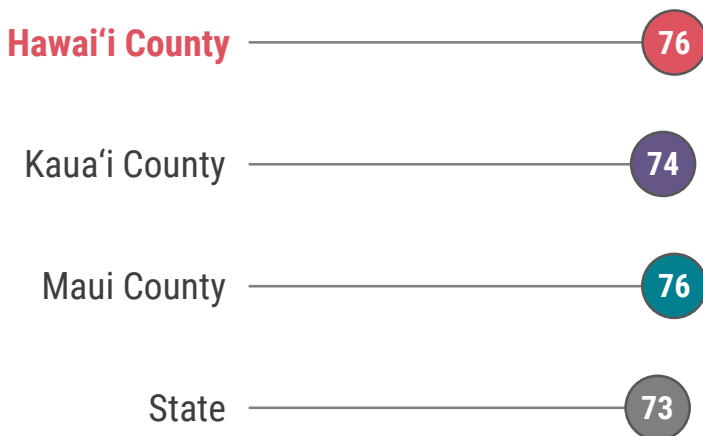
% of voters who think that **diabetes** is a major problem



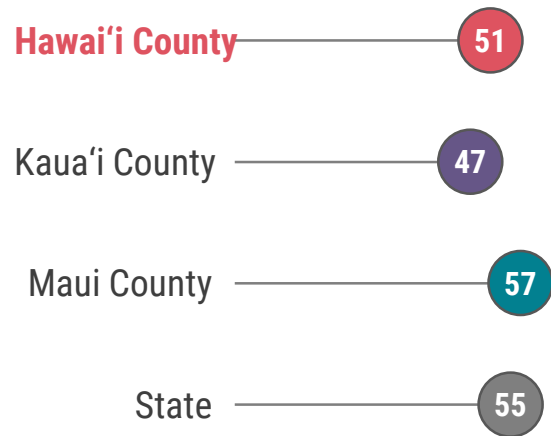
% of voters who think that **heart disease** is a major problem



% of voters who think that **obesity** is a major problem



% of voters who think that **lack of physical activity** is a major problem

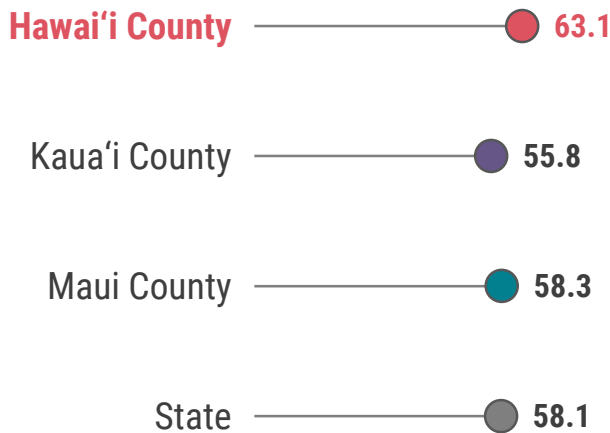




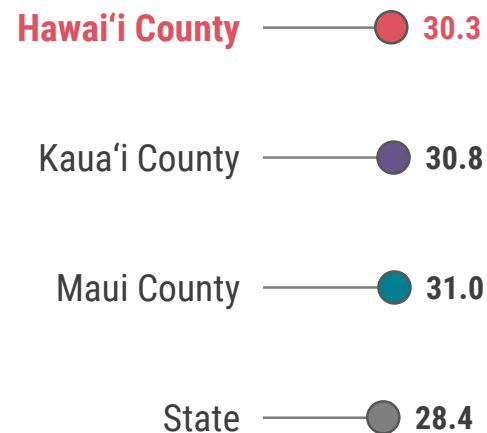
# What is the prevalence of health problems that concern voters?

Based on self-reported weight and height, 63.1% of adults in Hawai'i County are considered overweight or obese. Almost one-third of high school students are also considered overweight or obese.

**% of adults who are overweight or obese**  
(based on self-reported weight & height, BMI  $\geq$  25)<sup>1</sup>



**% of high school students who are overweight or obese**  
(based on self-reported weight & height, BMI  $\geq$  85<sup>th</sup> percentile for age and sex)<sup>2</sup>



## 11.5%

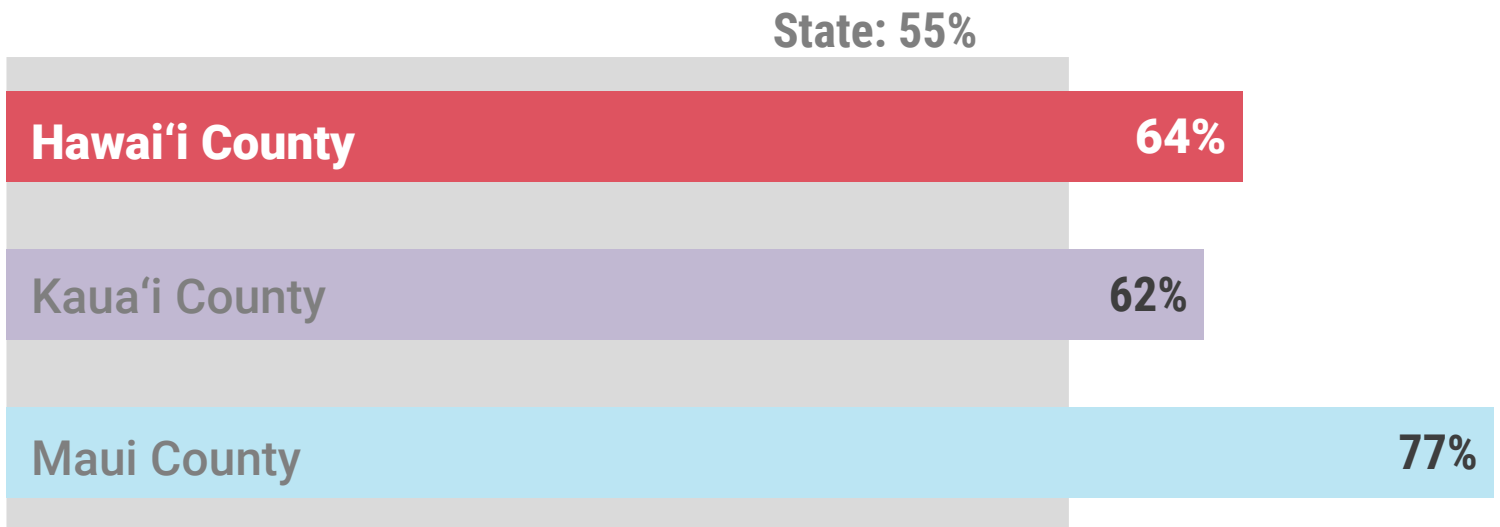
of Hawai'i County adults have been told by their doctor that they have **diabetes**; an additional **13.7%** have **prediabetes**<sup>3</sup>

## 28.3%

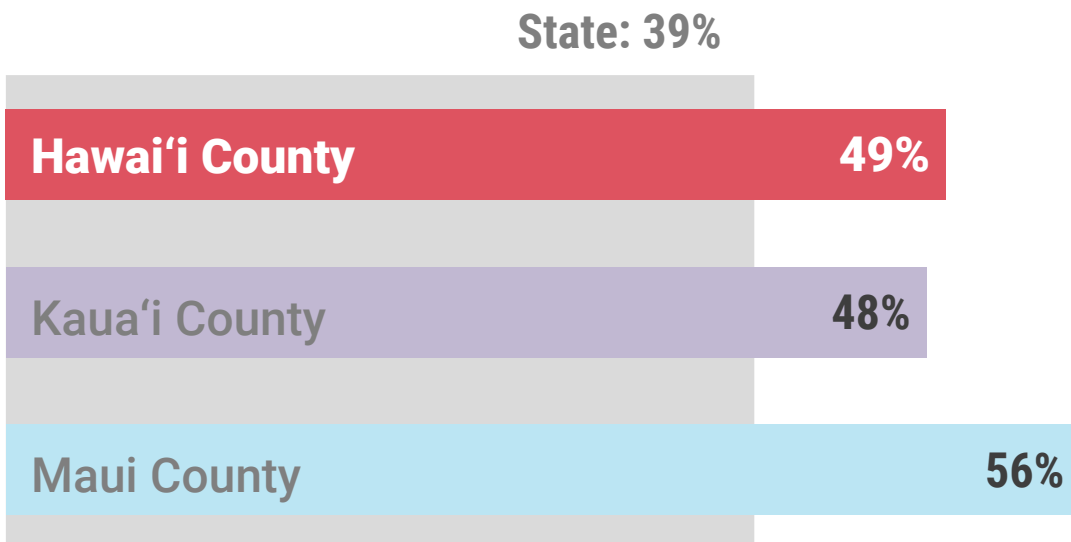
of Hawai'i County adults have been told by their doctor that they have **high blood pressure**<sup>4</sup>

# Do voters support increasing funding for walking/bicycling infrastructure?

To address childhood obesity, **64%** of Hawai'i County voters strongly support increasing government funding to provide more infrastructure for walking and bicycling (such as bike lanes, sidewalks, or multi-use paths).

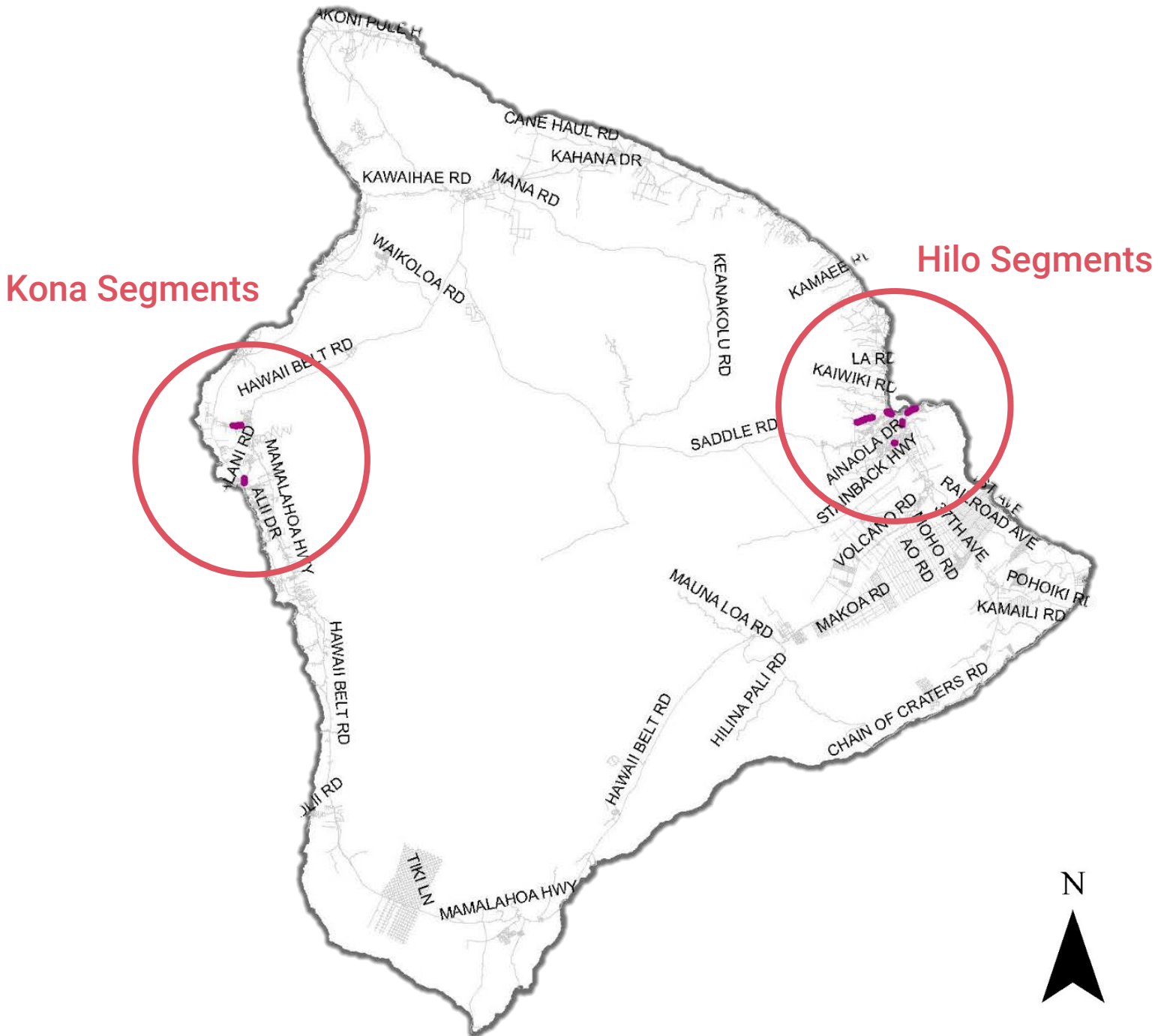


Half (**49%**) of Hawai'i County voters strongly agree that the government should spend more of its transportation dollars on biking and walking infrastructure projects (such as bike lanes, sidewalks, or multi-use paths).



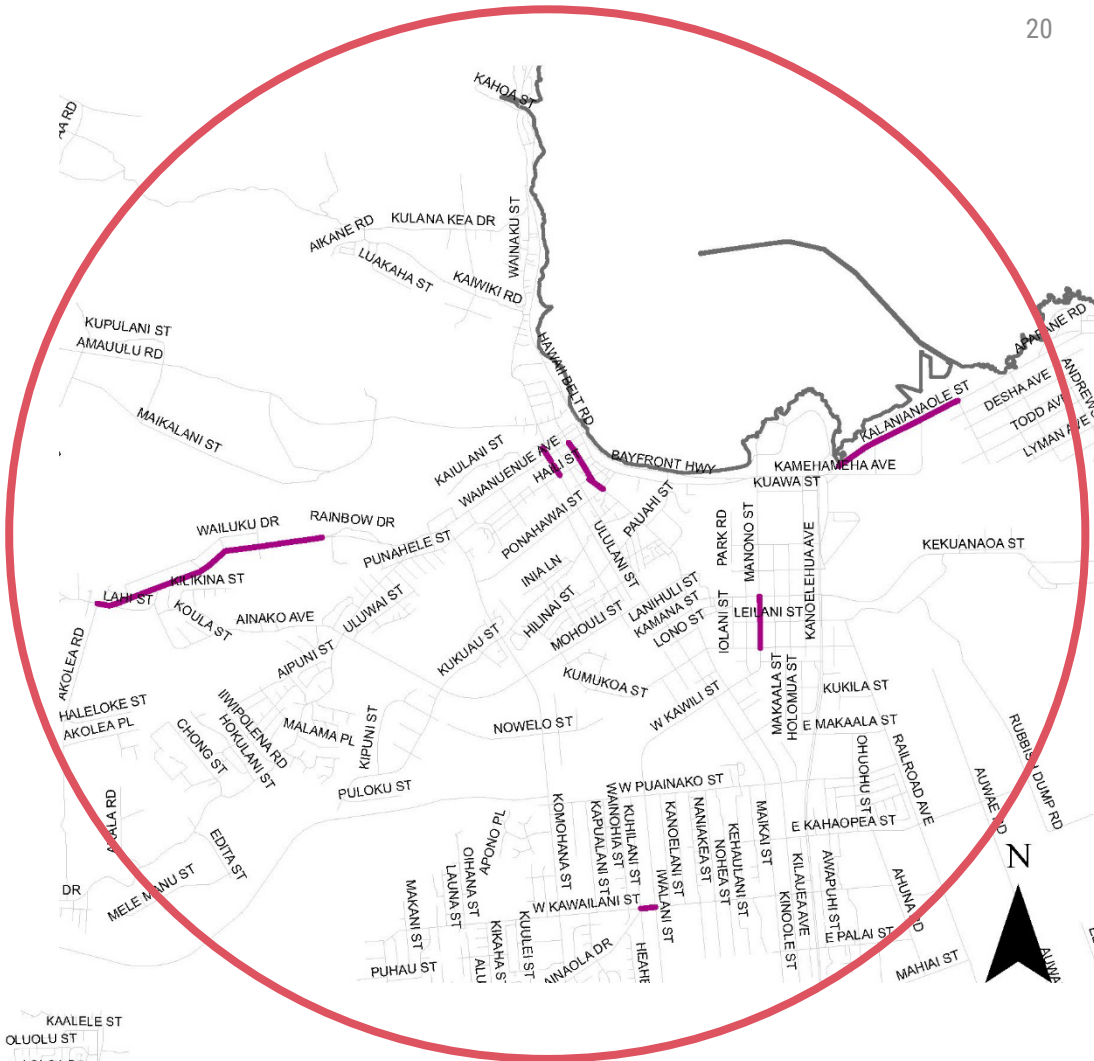
# Are streets supportive of active transportation?

We observed a total of 59 street segments in Hilo and Kona around areas where there are planned Complete Streets implementation projects. These segments are not indicative of all the streets in Hawai'i County.

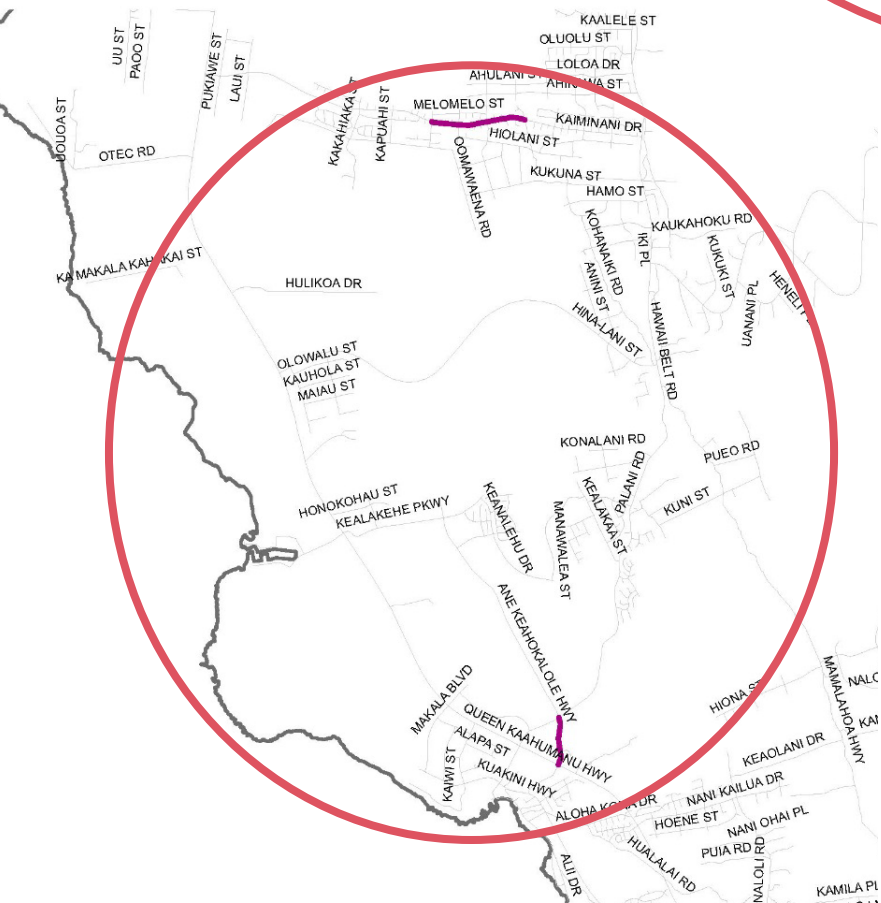


# Observed street segments

## Hilo Segments



## Kona Segments



# What multimodal features are present on streets?

Most of the observed street segments appeared well maintained. Bus stops tended to lack shelters and benches. There was a lack of visible bicycle parking facilities. One-fifth of street segments lacked any type of pedestrian facility, requiring pedestrians to walk in the roadway.

	Hawai'i County	Statewide
<b>GENERAL CHARACTERISTICS</b>		
% of street segments with mixed residential, commercial, and recreation uses (at least 2 uses)	10.2%	20.3%
% of street segments with good overall cleanliness and building maintenance (no litter/graffiti/broken facilities)	78.0%	67.6%
<b>TRANSIT – PRESENCE OF BUS STOPS</b>		
% of street segments with bus stops with shelters	1.7%	5.3%
% of street segments with bus stops with benches	1.7%	9.9%
% of street segments with bus stops with only signage	3.4%	5.3%
<b>BICYCLING FACILITIES</b>		
% of street segments with striped bicycle lane designation	6.8%	4.3%
% of street segments with bicycle route signs	5.1%	1.5%
% of street segments with visible bicycle parking facilities	0.0%	7.3%
<b>PEDESTRIAN FACILITIES*</b>		
% of street segments with sidewalks	45.8%	69.1%
% of street segments with paved shoulders with stripes	28.8%	5.6%
% of street segments with unpaved shoulders	32.2%	13.4%
% of street segments with no pedestrian facility (must walk in roadway)	20.3%	21.0%

\*assessed both sides of the street, so total percentage exceeds 100%

# Do streets have features that support walking?

Where sidewalks were present, they tended to be in good condition and complete within the segment. A lack of landscape (e.g., trees or grass) buffers the pedestrian path from the roadway. Few street segments contained trees that provide shade for pedestrians.

	Hawai'i County	Statewide
<b>WALKABILITY FEATURES</b>		
% of sidewalks that are in good condition	60.0%	71.6%
% of sidewalks that are complete within segment	100.0%	93.9%
% of street segments that have poles or signs blocking the pedestrian path	3.4%	4.3%
% of street segments that have parked cars blocking the pedestrian path	1.7%	5.1%
% of street segments with at least one crosswalk present	33.9%	51.6%
% of street segments with a pedestrian signal	20.3%	24.8%
% of street segments with landscape buffering the pedestrian path (trees, hedges, grass, and/or other landscape)	0.0%	17.7%
% of street segments with pedestrian-scale lighting	5.1%	10.9%
% of street segments with garbage cans	10.2%	14.9%
% of street segments with benches	1.7%	12.2%
% of street segments with some or dense tree coverage shading pedestrian path	10.2%	14.9%