



# **Public Phone Survey Measures, Methods, and Results**

## **NCDOT Research Project No. 2020-53**

**Submitted to:**  
North Carolina Department of Transportation  
Integrated Mobility Division  
Raleigh, NC

**Submitted by:**  
University of North Carolina at Chapel Hill  
Highway Safety Research Center  
Chapel Hill, NC

**UNC-HSRC Report Authors:**  
Kari Hancock  
Stephen Heiny  
Taha Saleem  
Seth LaJeunesse  
Kristin Blank  
Robert Agans  
Sarah O'Brien

**September 2020**

## Overview

The overarching goals of the phone survey were to measure impacts of the Watch for Me NC program that are difficult to observe or report, and to compare with a baseline survey conducted in 2015 to discern any trends. The survey, administered to a stratified random sample of 635 adults in 30 of North Carolina's counties measured the following constructs:

- Perceptions of the safety of roadways;
- Perceptions of road users' behavior;
- Beliefs related to actions that should be taken to make walking and bicycling safer; and
- Recognition of the Watch for Me NC program.

HSRC researchers designed the survey questions to assess how these constructs informed respondents' traffic safety-related behavior. Questionnaire items from the 2015 deployment helped acquire a sense of "baseline" social norms related to pedestrian and bicycle safety issues in North Carolina, and with the repeat of the survey in 2020, these results can be compared to obtain a measure of change in behavior. Assessing changes over time helps discern differences between communities active and inactive in Watch for Me NC programming; inform changes made to the program and its messaging; and identify potential "spillover" effects that might occur as program messaging diffuses throughout the state. Such an evaluation can help practitioners and researchers in North Carolina and around the country develop an understanding of how comprehensive education and enforcement campaigns can impact road user safety.

To help determine the effect the Watch for Me NC program has had thus far, HSRC divided North Carolina's counties according to their level of participation in the Watch for Me NC program. Program-related participation was delineated as shown in Table 1. The selected counties were identified in 2015 based on whether they contained one of the 50 most populous cities in North Carolina. In keeping with the 2015 approach, the same 30 counties were surveyed in 2020; however, the fidelity category and therefore strata (or region) assigned to certain counties may have shifted as their participation in the Watch for Me NC program has changed in the last five years. "High" fidelity or "Advanced" counties are those in which one or more communities have participated in the Watch for Me NC program for 2 or more years; "Low" fidelity or "Beginning" counties include communities either new to the program or those yet to administer it consistently; and "No" or "Nonparticipating" fidelity counties mean there are no communities within it participating in Watch for Me NC. Thus, the sample of those surveyed is not intended to be representative of all residents statewide but rather of these three selected strata.

**Table 1. Counties Selected by Level of Participation in Watch for Me NC.**

Strata	County	Fidelity	Total 18+	Population Proportions	Sample Allocation
1	Buncombe	High	214,742	59%	45%
	Craven	High	80,301		
	Durham	High	254,104		
	Guilford	High	422,672		
	Mecklenburg	High	858,796		
	New Hanover	High	193,549		
	Onslow	High	151,187		
	Orange	High	119,118		
	Pitt	High	142,666		
	Wake	High	854,979		
	Watauga	High	49,818		
2	Alamance	Low	132,245	22%	30%
	Cabarrus	Low	162,775		
	Catawba	Low	124,520		
	Cleveland	Low	77,049		
	Cumberland	Low	250,859		
	Forsyth	Low	296,499		
	Gaston	Low	175,530		
	Pasquotank	Low	30,810		
3	Davidson	No	131,955	19%	25%
	Edgecombe	No	39,900		
	Iredell	No	141,601		
	Lee	No	47,056		
	Lenoir	No	43,539		
	Randolph	No	112,195		
	Robeson	No	98,859		
	Rowan	No	111,148		
	Union	No	179,638		
	Wayne	No	94,583		
	Wilson	No	63,219		

**Survey Administration Procedures**

Interviewers with the UNC’s Carolina Survey Research Lab (CSRL) administered a 35-item questionnaire via telephone survey to a sample of 635 randomly selected adults living in one of the 30 counties between February and July 2020. The survey was interrupted in March 2020 by the university’s response to the COVID-19 pandemic while data collection moved from an in-person setting to allow for remote work. The selected counties were identified based on whether they contained one of the 50 most populous cities in North Carolina. Thus, the sample is not intended to be representative of all residents statewide but rather of those selected areas. Survey administrators used the same questionnaire HSRC developed in collaboration with UNH Survey Center for the initial 2015 survey.

A sample of households in each of the strata was selected by a procedure known as random digit dialing (RDD). First, through use of a computer program, the analyst randomly selects cellular and land line phone number exchanges, with the result that each household in the area in which there is a telephone has an equally likely chance of being selected into the sample. A cross-sectional sample of adults (18+) living in the counties listed in Table 1 in North Carolina with telephone access was selected for this project using RDD methodology. Two independent and non-overlapping RDD cellular and landline telephone frames were implemented and covered approximately 98% of the population. The proportion of cellular numbers to landline numbers was 53% and 47%, respectively. The sample was stratified on phone type (landline or cell phone) and fidelity. “Low” and “No” fidelity counties were oversampled to ensure adequate sample sizes for analysis (see Table 1). To be eligible, the telephone number needed to reach a household with an English-speaking adult (age 18+). If more than one eligible person resided in the household, one was randomly selected to participate in the survey. The multiplicative effect of variable weights due to oversampling was negligible (MEFF=1.08) and close to one which was indicative of a simple random sample (Kish, 1965). In other words, little statistical penalty was paid for the amount of oversampling we implemented in this project. CSRL estimated a weighted response rate for the survey at 41.5%. This year the survey was limited to English speakers. In future years, HSRC recommends translating and offering the survey in Spanish as well.

### Demographics of Sample and Demographics

To provide a background the demographic makeup of respondents, the survey administrators asked for age, education attainment, and race.

Among the 635 respondents who reported their education attainment, 45.2% reported to have earned a bachelor’s degree or higher, compared with 27.8% of North Carolina adults (n = 7,466,181) who have earned at least a bachelor’s degree. The statewide demographics are shown here just for comparison but was not the target population.

**Table 3. Phone Survey Respondents’ Reported Age.**

Age Group	Sample (n = 635)	State (n = 7,466,181)
30 to 39	11.3%	17.0%
40 to 49	11.1%	18.3%
50 to 59	12.6%	17.6%
60 to 69	17.9%	13.7%
70 or older	20.8%	11.9%

**Table 4. Phone Survey Respondents’ Reported Race.**

Reported Race	Sample (n = 620)	State (n = 7,466,181)
White	64.5%	69.6%
Black	26.1%	21.5%
Asian	1.5%	2.4%
Native American	1.8%	1.2%
Hispanic	2.3%	8.7%
Other	3.9%	3.4%

All survey results presented here proceeded in two steps:

1. Computing and applying weights, through a process that: adjusted and trimmed base weights for the probability of sample inclusion, nonresponse, and coverage by region; applied a post-stratification adjustment to make the sample a better representative of the target population (e.g. the 30 counties) by using age, race, and gender as post-stratification variables; and normalized the final weights after calibrating to the target population.
2. Calculating likelihood ratio chi-square tests to assess associations among respondents' region and their responses to classes of questions related to perceptions of the safety of roadways and road users' behavior; beliefs related to actions that should be taken to make walking and bicycling safer; and their recognition of the Watch for ME NC program in relation to a “dummy” program.

First, we assessed how respondents across each strata or region typically travel, as differences in primary mode of transportation might influence the way people perceive and respond to questions about road user safety. Likelihood ratio chi-square tests revealed that how respondents residing in Advanced, Beginning, and Nonparticipating communities tended to get around did not differ significantly as shown in Table 5,  $\chi^2(10, N = 635) = 13.656, p = 0.189$ .

**Table 5. Responses to: “When you need to get somewhere, how do you USUALLY get there?”**

Typical Transportation	Advanced (n = 322)	Beginning (n = 137)	Nonparticipant (n = 176)
Drive	92.6%	92.3%	87.0%
Carpool	2.0%	1.3%	6.1%
Take the bus or train	1.5%	1.5%	2.6%
Walk	1.3%	1.0%	1.0%
Ride a bike	1.1%	0.9%	0.0%
Travel by some other way	1.5%	3.1%	3.4%

More respondents living in Beginning communities reported seeing a lot of walking in their communities—65% in Beginning communities vs. 62 and 54% in Advanced and Nonparticipating counties, respectively,  $\chi^2(2, N = 632) = 4.512, p = 0.105$ . On the other hand, a significantly large proportion of respondents in Advanced counties reported seeing a lot of people bicycling in their town—62% of residents in Advanced counties, compared with 49 and 46% of respondents living in Beginning and Nonparticipating counties, respectively,  $\chi^2(2, N = 634) = 13.687, p = 0.001$ .

### Perceptions of the Safety of Roadways

Across regions, the majority of respondents—68 to 73%—reported that conditions in their towns were at least somewhat safe for walking. However, only 50 to 58%—depending on the strata—considered their areas at least somewhat safe for bicycling, with nearly equal proportions thinking that the roads in their towns were at least somewhat unsafe for bicycling. Walking- and bicycling-related perceptions did not vary significantly according to regions' level

of involvement with the Watch for Me NC program (Table 6). The results of the respondents' perceptions to safety of roadways for walking and bicycling are very similar to the 2015 program delivery evaluation.

**Table 6. Respondents' Perceptions of the Safety of Roadways for Walking and Bicycling.**

<i>In your opinion, how safe are the roads in [TOWN] for walking?</i>						
Region	Very Safe	Somewhat Safe	Somewhat Unsafe	Very Unsafe	n	p
Advanced	20.2%	48.1%	20.1%	11.6%	322	0.578
Beginning	15.9%	55.9%	20.7%	7.5%	137	
Nonparticipant	19.9%	53.6%	17.8%	8.7%	175	
<i>In your opinion, how safe are the roads in [TOWN] for bicycling?</i>						
Region	Very Safe	Somewhat Safe	Somewhat Unsafe	Very Unsafe	n	p
Advanced	6.5%	44.0%	34.7%	14.8%	322	0.283
Beginning	8.4%	49.9%	28.3%	13.4%	137	
Nonparticipant	12.6%	42.9%	31.0%	13.5%	174	

### Perceptions of Road Users' Behavior

The majority—about 80%—of respondents in Advanced, Beginning, and Nonparticipating communities reported that drivers stopped to let pedestrians cross the street at least sometimes (Table 7).

Roughly half—55 to 59%—of respondents in Advanced, Beginning, and Nonparticipating communities reported that pedestrians in their communities do dangerous things, like crossing the street without looking for cars, at least sometimes. About 64-72% of the respondents living in Advanced, Beginning, and Nonparticipating communities perceived that pedestrians often used electronic devices like cell phones or music players.

Respondents from Advanced and Beginning counties reported perceiving higher proportions of bicyclists wearing helmets—approximately 80% of respondents across Advanced and Beginning counties agreed bicyclists wore helmets at least sometimes—than did respondents from Nonparticipating counties—57% agreed that bicyclists wore helmets at least sometimes. Majority of respondents also agreed that drivers give extra room when passing bicyclists at least some of the time—88, 86 and 87% from Advanced, Beginning, and Nonparticipating counties, respectively. Further, approximately 40% of respondents reported that bicyclists did dangerous things like going through a stop sign or a red light—44, 37 and 42% from Advanced, Beginning, and Nonparticipating counties, respectively. Majority of respondents – about 57% shared that bicyclists did dangerous things at least sometimes (Table 7).

**Table 7. Respondents' Perceptions of Road users' Behavior in Their Communities.**

<i>In your opinion, how often do drivers in [TOWN] stop to let pedestrians cross the street?</i>						
Region	Most Times	Sometimes	Rarely	Never	n	p
Advanced	45.6%	31.9%	17.6%	4.8%	320	0.975
Beginning	46.0%	31.8%	18.0%	4.3%	134	
Nonparticipant	50.1%	30.1%	15.1%	4.8%	173	
<i>How often do pedestrians in [TOWN] do dangerous things, like crossing the street without looking for cars?</i>						
	Most Times	Sometimes	Rarely	Never	n	p
Advanced	13.5%	43.4%	37.9%	5.3%	319	0.195
Beginning	10.8%	44.1%	36.5%	8.6%	135	
Nonparticipant	19.1%	39.9%	31.8%	9.3%	172	
<i>How often do pedestrians in [TOWN] use electronic devices like cell phones or music players?</i>						
	Most Times	Sometimes	Rarely	Never	n	p
Advanced	71.9%	19.9%	7.2%	1.7%	317	0.107
Beginning	64.4%	31.4%	3.2%	1.0%	134	
Nonparticipant	64.1%	26.0%	7.6%	2.4%	172	
<i>How often do adult bicyclists in [TOWN] wear helmets?</i>						
Region	Most of the Time	Sometimes	Rarely	Never	n	p
Advanced	59.3%	21.9%	13.1%	5.7%	319	0.283
Beginning	49.9%	25.9%	19.3%	4.9%	136	
Nonparticipant	37.0%	20.6%	23.6%	18.7%	173	
<i>How often do drivers in [TOWN] give extra room when passing a bicyclist?</i>						
	Most Times	Sometimes	Rarely	Never	n	p
Advanced	58.5%	29.5%	10.4%	1.7%	319	0.982
Beginning	55.6%	30.7%	10.9%	2.8%	137	
Nonparticipant	57.1%	29.8%	11.5%	1.6%	173	
<i>How often do bicyclists in [TOWN] do dangerous things like going through a stop sign or a red light?</i>						
	Most Times	Sometimes	Rarely	Never	n	p
Advanced	16.1%	27.8%	40.4%	15.6%	314	0.097
Beginning	11.0%	25.7%	47.3%	15.9%	133	
Nonparticipant	10.8%	31.0%	34.9%	23.3%	171	

**Beliefs Related to Actions that Should be Taken to Make Walking and Bicycling Safer**

No matter the region, respondents generally thought that more should be done to make walking and bicycling safer where they live. In general, respondents maintained particularly strong convictions that schools should teach children how to be safe when walking and bicycling. Respondents seemed to feel less strongly about the roles that people who build

Across all regions, survey respondents generally thought that more should be done to make walking and bicycling safer.

roads and municipal police should play in making conditions for walking and bicycling safer in their communities (Table 8). The results of the respondents' beliefs about the actions professionals should take to make walking and bicycling safer are very similar to the 2015 program delivery evaluation

**Table 8. Respondents' Beliefs About the Actions Professionals Should Take to Make Walking and Bicycling Safer.**

<b><i>People who build the roads in [TOWN] should do more to make walking safer.</i></b>						
<b>Region</b>	<b>Strongly Agree</b>	<b>Somewhat Agree</b>	<b>Somewhat Disagree</b>	<b>Strongly Disagree</b>	<b>n</b>	<b>p</b>
Advanced	68.4%	24.2%	5.1%	2.3%	322	0.056
Beginning	70.5%	20.8%	6.7%	1.9%	136	
Nonparticipant	61.2%	32.1%	2.1%	4.6%	175	
<b><i>Police in [TOWN] should do more to make walking safer</i></b>						
	<b>Strongly Agree</b>	<b>Somewhat Agree</b>	<b>Somewhat Disagree</b>	<b>Strongly Disagree</b>	<b>n</b>	<b>p</b>
Advanced	40.8%	43.5%	12.0%	3.7%	320	0.339
Beginning	45.0%	41.0%	12.8%	1.1%	134	
Nonparticipant	46.4%	41.8%	7.3%	4.5%	175	
<b><i>Schools in [TOWN] should teach children how to be safe when walking</i></b>						
	<b>Strongly Agree</b>	<b>Somewhat Agree</b>	<b>Somewhat Disagree</b>	<b>Strongly Disagree</b>	<b>n</b>	<b>p</b>
Advanced	83.8%	14.4%	1.0%	0.8%	322	0.326
Beginning	88.9%	8.3%	1.8%	1.0%	134	
Nonparticipant	84.7%	11.8%	0.8%	2.6%	176	
<b><i>People who build the roads in [TOWN] should do more to make bicycling safer</i></b>						
	<b>Strongly Agree</b>	<b>Somewhat Agree</b>	<b>Somewhat Disagree</b>	<b>Strongly Disagree</b>	<b>n</b>	<b>p</b>
Advanced	70.7%	22.9%	4.8%	1.6%	322	0.212
Beginning	65.0%	27.1%	6.5%	1.4%	136	
Nonparticipant	64.0%	26.5%	4.6%	4.9%	175	
<b><i>Police in [TOWN] should do more to make bicycling safer</i></b>						
	<b>Strongly Agree</b>	<b>Somewhat Agree</b>	<b>Somewhat Disagree</b>	<b>Strongly Disagree</b>	<b>n</b>	<b>p</b>
Advanced	49.2%	40.6%	7.3%	2.9%	320	0.200
Beginning	54.4%	33.2%	10.6%	1.8%	136	
Nonparticipant	57.7%	30.1%	7.8%	4.4%	175	
<b><i>**Schools in [TOWN] should teach children how to be safe when bicycling</i></b>						
	<b>Strongly Agree</b>	<b>Somewhat Agree</b>	<b>Somewhat Disagree</b>	<b>Strongly Disagree</b>	<b>n</b>	<b>p</b>
Advanced	72.0%	21.8%	4.5%	1.7%	322	0.005
Beginning	83.4%	10.9%	4.0%	1.7%	135	
Nonparticipant	82.7%	11.7%	1.7%	3.9%	175	

Note. \*\*indicates statistically significant differences among regions at  $p < 0.05$



### Recognition of Watch for Me NC and Program-Relevant Perceptions

Across regions, roughly the same percentage of respondents claimed to have heard about a campaign called Watch for Me NC. Also across regions, a roughly equal proportion of respondents reported to have heard of a (dummy) program called Heads Up for Safety (Table 9), a finding that might be attributable to the proliferation of programs with a “Heads Up for Safety” tag line. The results of the respondents’ recognition of Watch for Me NC program are very similar to the 2015 program delivery evaluation.

**Table 9. Respondents’ Recognition of Watch for Me NC vis a vis Another Campaign by Region.**

<i>In the past few months, have you heard anything about a safety campaign in [TOWN] called Heads Up for Safety?</i>					
Region	No	Yes	Don't know	n	p
Advanced	89.4%	10.5%	0.1%	322	0.859
Beginning	87.7%	12.3%	0%	137	
Nonparticipant	86.6%	13.4%	0%	176	
<i>In the past few months, have you heard anything about a safety campaign in [TOWN] called Watch for Me NC?</i>					
	No	Yes	Don't know	n	p
Advanced	89.8%	10.2%	0.1%	322	0.718
Beginning	88.1%	11.9%	0%	137	
Nonparticipant	88.4%	11.6%	0.7%	175	

Slightly higher proportion of respondents from Nonparticipating counties relative to those in other counties reported recalling police activity related to enforcing laws to make walking safer. Still, recall of police activity was quite low across regions (range: 4.5% in Advanced counties to 7.8% in Nonparticipating counties). Also, significantly more respondents from Nonparticipating counties perceived a greater likelihood of getting a ticket for failing to yield to a pedestrian in a crosswalk than respondents from either Advanced or Beginning counties (Table 10). It is unclear what implications this may have for the Watch for Me NC program given the cross-sectional nature of this baseline survey.

**Table 10. Recall of Police Activity and Perceptions of Likelihood of Getting a Ticket for Failing to Yield.**

<i>In the past few months, have you heard anything about police in [TOWN] enforcing laws to make walking safer?</i>						
Region	No	Yes	Don't know	n	<i>p</i>	
Advanced	95.5%	4.5%	0%	322	0.149	
Beginning	92.7%	5.8%	1.5%	137		
Nonparticipant	91.2%	7.8%	1.0%	176		
<i>**In your opinion, if a driver in [TOWN] didn't stop for someone in a crosswalk who is waiting to cross the street, how likely is it that the driver would get a ticket?</i>						
	Very Likely	Somewhat Likely	Not Very Likely	Don't know	n	<i>p</i>
Advanced	19.7%	17.6%	59.6%	3.1%	322	0.016
Beginning	26.0%	17.4%	55.5%	1.1%	137	
Nonparticipant	25.1%	27.7%	44.0%	3.2%	176	
<i>Note. **indicates statistically significant differences among regions at <math>p &lt; 0.05</math></i>						

### **Knowledge of Traffic Laws in North Carolina**

Across Advanced, Beginning, and Nonparticipating regions, most respondents correctly thought that bicyclists are required to use a front light when riding at night, and that they are not allowed to proceed through stop signs without stopping as long as no cars are present. Significantly more respondents from Advanced and Beginning counties correctly answered this question. By and large, respondents correctly thought that pedestrians are required to walk facing traffic when no sidewalk is present. However, most survey respondents incorrectly thought that bicyclists are required to ride in the far-right side of the road at all times (Table 11).

**Table 11. Respondents' Knowledge of Pedestrian- and Bicycle-Related Traffic Laws in North Carolina.**

<b>To the best of your knowledge, are drivers in North Carolina required to stop for pedestrians in crosswalks?</b>					
<b>Region</b>	<b>No</b>	<b>Yes</b>	<b>Don't know</b>	<b>n</b>	<b>p</b>
Advanced	1.5%	98.5%	0%	322	0.448
Beginning	3.3%	96.7%	0%	137	
Nonparticipant	3.5%	96.2%	0.3%	176	
<b>Are pedestrians walking along roads with no sidewalk required to walk facing traffic?</b>					
	<b>No</b>	<b>Yes</b>	<b>Don't know</b>	<b>n</b>	<b>p</b>
Advanced	22.4%	74.4%	3.1%	322	0.445
Beginning	19.1%	77.0%	3.9%	137	
Nonparticipant	17.4%	80.9%	1.6%	176	
<b>**By law, are bicyclists allowed to go through stop signs without stopping as long as no cars are present?</b>					
	<b>No</b>	<b>Yes</b>	<b>Don't know</b>	<b>n</b>	<b>p</b>
Advanced	88.7%	9.2%	2.1%	322	0.016
Beginning	84.7%	11.8%	3.4%	137	
Nonparticipant	80.3%	18.8%	0.8%	176	
<b>**Are bicyclists required to use a front light when riding at night?</b>					
	<b>No</b>	<b>Yes</b>	<b>Don't know</b>	<b>n</b>	<b>p</b>
Advanced	14.0%	85.1%	0.9%	318	0.011
Beginning	6.8%	88.5%	4.7%	137	
Nonparticipant	12.1%	86.9%	1.0%	176	
<b>Are bicyclists required to ride in the far right side of the road at all times?</b>					
	<b>No</b>	<b>Yes</b>	<b>Don't know</b>	<b>n</b>	<b>p</b>
Advanced	19.1%	76.4%	4.5%	322	0.983
Beginning	20.1%	76.6%	3.3%	137	
Nonparticipant	19.3%	76.7%	4.0%	176	

Note. \*\*indicates statistically significant differences among regions at  $p < 0.05$

While the results of the knowledge of traffic laws in North Carolina are similar to the 2015 program delivery evaluation in that most people tend to know the laws, there were statistical differences noted when comparing the 2015 responses to the 2020 responses (Table 12.) In general, more people correctly know that drivers are required to stop for pedestrians in crosswalks, bicyclists must stop at stop signs, and bicyclists must use a front light at night compared to five years ago. Interestingly, in 2020, fewer respondents reported not knowing many of the laws – less than 5% responded “Don’t know” in most cases, compared to 20% with the same response to three of the laws in 2015. Confidence in knowing the laws by responding “yes” or “no” did not always translate into an increase in correct responses. For example, the majority of respondents still think that bicyclists are required to ride in the far right side of the road at all times, and while the correct response of “no” increased by 6.5 points from 2015 to 2020, the incorrect response of “yes” increased by 9.3 points.

**Table 12. Comparison of 2015 and 2020 Responses of Knowledge of Pedestrian- and Bicycle-Related Traffic Laws in North Carolina.**

<b>**To the best of your knowledge, are drivers in North Carolina required to stop for pedestrians in crosswalks?</b>					
<b>Survey Year</b>	<b>No</b>	<b>Yes</b>	<b>Don't know</b>	<b>n</b>	<b>p</b>
2015	2.1%	90.6%	7.3%	1023	<0.001
2020	2.4%	97.5%	0.1%	635	
<b>**Are pedestrians walking along roads with no sidewalk required to walk facing traffic?</b>					
<b>Survey Year</b>	<b>No</b>	<b>Yes</b>	<b>Don't know</b>	<b>n</b>	<b>p</b>
2015	15.0%	64.3%	20.6%	1023	<0.001
2020	20.3%	76.8%	2.9%	635	
<b>**By law, are bicyclists allowed to go through stop signs without stopping as long as no cars are present?</b>					
	<b>No</b>	<b>Yes</b>	<b>Don't know</b>	<b>n</b>	<b>p</b>
2015	73.7%	10.9%	15.4%	1023	<0.001
2020	85.5%	12.4%	2.0%	635	
<b>**Are bicyclists required to use a front light when riding at night?</b>					
	<b>No</b>	<b>Yes</b>	<b>Don't know</b>	<b>n</b>	<b>p</b>
2015	5.4%	72.8%	21.8%	1023	<0.001
2020	11.9%	86.3%	1.8%	631	
<b>**Are bicyclists required to ride in the far right side of the road at all times?</b>					
	<b>No</b>	<b>Yes</b>	<b>Don't know</b>	<b>n</b>	<b>p</b>
2015	12.9%	67.2%	20.0%	1023	<0.001
2020	19.4%	76.5%	4.1%	635	

Note. \*\*indicates statistically significant differences among regions at  $p < 0.05$

### Conclusions

Comparing the 2015 survey with 2020, the results show little change over the five-year period. Respondents' perception of safety, beliefs about how to make biking and walking safer, recognition of the program, and knowledge of traffic laws all remain similar to responses in 2015. While results were mostly similar, some small changes are worth noting. In beginning and nonparticipant communities, reported helmet use has increased, with helmet use at the same rate in advanced communities. Additionally, the 2020 survey saw fewer reports of dangerous behavior by bicyclists.

Though participation has remained steady in the program since 2015, one explanation for the similarity in survey responses may be reduced engagement between WFM partners and their communities in 2018, 2019, and 2020. Engagement was down in some years because of the changing availability of training materials (e.g. rack cards, safety posters, bike lights, etc.) as well as moving away from using more noticeable media placements such as bus wraps. More recently, the COVID-19 pandemic has led to less direct involvement between WFM partners

and community members, and given that the survey was delivered in the beginning stages of the pandemic response, current events may have impacted survey responses.

Looking forward, these survey results point to the need for more engagement between WFM partners and the community. Coordination between different agencies in WFM communities may facilitate such engagement. For example, when announcing projects in the community, municipal staff could include WFM language that both recognizes the role of program in the town and speaks to the efforts to inform the public more of specific safety messages, laws, and expectations related to walking and biking. Engagement of the public around these messages may form an integral part of the process of planning and implementing infrastructure projects.

Efforts in public health also provide an example of how to make the public better aware of the WFM program and its goals. With a public health model, the coalition involved in activities related to WFM widens to include partners across different sectors in the community. This provides a better idea of who the project may be missing in its traditional activities and also how to engage a wider, more inclusive population.