Bicycle and Pedestrian Safety, Education, and Enforcement Program: 2018 Summary

NCDOT Research Project No. RP 2018-37

FINAL REPORT

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Executive Summary

Overview

The Watch for Me NC program aims to empower communities to address pedestrian and bicycle crashes by supporting: (1) dissemination of safety messages through various outreach and education strategies; and (2) high-visibility enforcement of pedestrian, bicyclist, and motorist laws. The program began as a regional pilot test in 2012 and now has partner-driven efforts across the state. To learn more about the program and its history, visit: http://watchformenc.org/. In 2018, 29 prior communities and seven new communities were selected to participate. East Carolina University continued as the only returning universty partner implementing Watch for Me NC, while several other partner communities included one or more universities within their program. The UNC Highway Safety Research Center (HSRC) supported NCDOT in program development, delivery, and evaluation. HSRC monitored program delivery by participating communities by collecting information through (1) web-based reporting forms, (2) community status reports and an end-of-year survey, and (3) interviews with program staff.

Technical Assistance and Training

Participating communities received support and assistance from HSRC to implement their local programs. Support services included access to a partner listserv and contact list, direct technical assistance, a website of partner-specific resources, a facilitated web meeting, and four action planning workshops offered to discuss how to effectively implement educational and enforcement components of the program. These new workshops facilitated discussion among coalition members and across Watch for Me partner communities to share strategies that make an impact, member roles and tactics for coordination, and resources to consider while developing a road map for implementing a local Watch for Me NC program. In total, 64 people across 25 communities attended these new workshops.

Additionally, HSRC offered six full or half-day training courses to participating law enforcement agencies in summer 2018. Brian Massengill, a sergeant with the Durham Police Department, served as lead course instructor. The courses prepared officers to perform pedestrian and bicycle safety operations as part of the Watch for Me NC program. They involved classroom education on relevant laws and best practices in conducting enforcement, as well as field exercises in conducting targeted operations aimed at improving driver yielding at crosswalks. In total, 71 officers from 26 agencies participated in the trainings.

Program Delivery

Paid Media

Media was a key element in distributing pedestrian and bicycle safety messages to the general public. NCDOT spent about $140,000 on media in at least 11 coverage areas across the state via a media purchasing contractor. Purchased media included 65 sidewalk stencils, Pandora audio banners, and external/internal bus ads placed in seven bus systems across the state. The media contactor estimated that at least 11.6 million people were reached via purchased media. Additional funds were used to purchase print and safety materials, with tens of thousands of rack cards, posters, banners, bumper stickers, bike lights, and reflective bracelets delivered to community partners for dissemination through local events, public engagement, and operations events.

Local Outreach and Earned Media

Participating communities performed extensive outreach, including distributing print materials and engaging with students, local businesses, community groups, and the general public at more than 90

local events or meetings. These included events such as 1) student orientation, walk/bike to school celebrations or drivers education classes, 2) National Night Out, 3) community meetings, and 4) festivals, food truck rodeos, and flea markets. Partner communities also engaged with the media as a key strategy to help amplify the message to a broader audience. At least three statewide press releases were distributed by NCDOT, and more than 30 news stories (print, TV, and radio) covered local pedestrian and bicycle safety efforts related to Watch for Me NC.

Law Enforcement Operations

From January 2018 to December 2018, six municipal police agencies reported conducting at least 35 operations targeting enforcement of pedestrian and/or bicycle-related laws. These operations resulted in 156 warnings, 215 citations, and other types of contacts made with the public for a total of 839 interactions. Over 60% of the operations conducted involved no more than three officers, and while many of the same officers participated in more than one operation, the total effort equated to the deployment of 132 officers. These operations total more than 45 hours in duration of enforcement, with 74% of them taking between one to two hours per operations event. This duration did not include time spent doing routine enforcement patrols that incorporated pedestrian and bicycle safety surveillance. In large part, officers focused on issuing warnings to try to engage the public and raise awareness of the laws. Partners reported many positive outcomes, including positive community response to enforcement efforts, perceived changes in sentiment toward traffic safety and quality of life, and improvements in infrastructure forged from critical relationships established between officers seeing unsafe conditions and engineers working to solve the problems.

Program Outcomes

HSRC conducted interviews with a subset of the 36 Watch for Me NC community partners in February 2019. From this interview process, five key lessons learned emerged regarding the communities' experiences with participating in the Watch for Me NC program: (1) Area schools and school-related partners can be key to implementation for both education and enforcement activities. (2) Law enforcement officers plus engineers or public works staff equals upgrades to pedestrian crossings. Many communities installed signage or improved markings at several crosswalks after officers brought them to the engineers' attention. (3) Build your coalition of stakeholders before you begin outreach events and meetings with the public at-large. This lesson echoes a constant theme across Watch for Me NC program years, in which the partnerships established across departments, agencies, organizations and advocacy groups are crucial to the success of any local program. (4) Leverage the media whenever possible – invite local outlets and businesses to enforcement events, but also consider marketing police department attendance at the law enforcement training as a means to highlight the community's focus on improving pedestrian and bicycle safety.

Conclusion

Overall, the 2018 program involved significant participation by partners in diverse communities across NC. The measures used to evaluate the program provided evidence of opportunities and barriers to program delivery. Overall, while the total number of communities increased in 2018, the total number of community events, law enforcement operations, and attendees to the law enforcement trainings were down. It was also difficult to collect reporting information from partners as response rates for all reporting opportunities were lower than in years past. One issue that may have impacted the overall footprint of implementation across the program statewide was the significant delay in communities receiving the print and safety materials from NCDOT. These distributions did not occur until late October – well past when communities planned to deploy and use the anticipated items.

As the program continues to add communities across the state, it may be necessary to continue evolving both the content and the format of the technical assistance delivery and the law enforcement training program. Further investigation is needed to determine why almost 30% of the communities did not attend the officer training. Similarly, the program evaluation approach may need to be adapted to accommodate the "scaling up" of the program across the state. It is recommended that future evaluations make use of a combination of measures—including qualitative data, survey data, field observations, and crash data, if possible—and use sophisticated techniques to account for additional factors in order to provide valid estimates of both short and longer-term program impacts.

Background and Project Goals

According to the latest data available from the National Highway Traffic Safety Administration,[1,2] in 2016, 5,987 pedestrians and 840 bicyclists were killed in motor vehicle crashes in the US. Injury estimates for 2016 were not available at the time of publication due to a change in NHTSA's sampling system to estimate the number of injuries from a representative sample of police reported traffic crashes.

Pedestrian and bicycle safety is an important issue for the health, safety, and mobility of North Carolinians. Statewide, in 2016 approximately 2,200 pedestrians and 590 bicyclists were hit by cars, with a large majority of these people sustaining injuries.[3] In North Carolina, pedestrians and bicyclists represent approximately 12% of all motor vehicle crash fatalities, which is very similar to national proportions. These modes are overrepresented in crash data compared to the percentage of walking and cycling trips made in the state, based on the 2009 National Household Travel Survey.

Watch for Me NC was developed and subsequently pilot tested in the Triangle area starting in 2012. The program opened up to the entire state in 2014 and has been expanding geographically each year since. In 2018, the goal of this effort was to assist partner communities across North Carolina in successfully implementing the Watch for Me NC program, and to monitor program delivery and measure outcomes to develop recommendations for future program expansion or improvements. To accomplish this goal, the project team from the University of North Carolina (UNC) Highway Safety Research Center (HSRC) sought to:

1. Recruit local partners with interest and ability to participate in the Watch for Me NC program
2. Provide technical assistance and training to support local and statewide program implementation
3. Coordinate with local agencies and NCDOT to collect, manage, and analyze data related to the program delivery
4. Evaluate the program delivery and present findings and lessons learned

This report documents methods and results related to the above activities.

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[1] National Highway Traffic Safety Administration. (2018). *Traffic Safety Facts 2016 Data, Pedestrians* (Publication No. DOT HS 812493). National Center for Statistics and Analysis, National Highway Traffic Safety Administration, Washington, DC, 2018. Retrieved from https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812493.

[2] National Highway Traffic Safety Administration. (2018a). *Traffic Safety Facts 2016 Data, Bicyclists and Other Cyclists* (Publication No. DOT HS 812507). National Center for Statistics and Analysis, National Highway Traffic Safety Administration, Washington, DC, 2017. Retrieved from https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812507.

[3] Highway Safety Research Center at University of North Carolina at Chapel Hill. (n.d.). *North Carolina Crash Data Query Web Site.* Retrieved from http://nccrashdata.hsrc.unc.edu/index.cfm.

2018 Partner Communities

HSRC coordinated with NCDOT to implement an applicant selection process, which began in early 2018 with a call for applicants and an informational webinar to describe the process, benefits, and requirements of participation. Applicants were screened to ensure they met basic eligibility requirements, and then applications were reviewed by a selection committee made up of representatives from HSRC, and the Watch for Me NC Steering Committee members (NCDOT, GHSP, DHHS, and SHP). Applications were rated based on:

- Understanding: Does the agency demonstrate a clear understanding of the Watch for Me NC program, including goals, partner responsibilities, timeline, and expected activities?
- Capacity: Does the agency demonstrate the capacity to participate in the program (including supporting both education/outreach and enforcement activities)?
- Focus/Approach: Does the agency have a clear focus on reaching the K-8 school population and a realistic and effective approach?

The selection committee also took crash history and geographic representation of applicants into consideration. A total of 36 communities were selected, including seven new communities and 29 returning partners (see Table 1 and Figure 1). Many communities included one or more universities that implemented the Watch for Me NC program at the campus level. Overall, there was considerable variation in community size, region, and lead agency (Table 1).
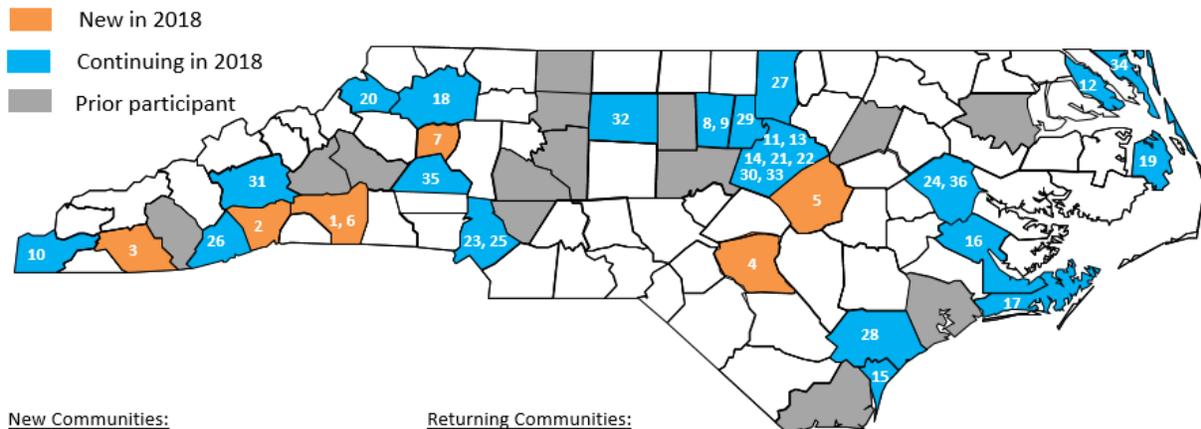
New Communities:

Number	Agency City	County
1	Forest City	Rutherford
2	Hendersonville	Henderson
3	Franklin	Macon
4	Fayetteville	Cumberland
5	Clayton	Johnston
6	Spindale	Rutherford
7	Alexander County	Alexander

Returning Communities:

Number	Agency City	County
8	Chapel Hill	Orange
9	Carrboro	Orange
10	Murphy	Cherokee
11	Fuquay-Varina	Wake
12	Elizabeth City	Pasquotank
13	Apex	Wake
14	Morrisville	Wake
15	Kure Beach	New Hanover
16	New Bern	Craven
17	Pine Knoll Shores	Carteret
18	North Wilkesboro	Wilkes
19	Kill Devil Hills	Dare
20	Boone	Watauga
21	Raleigh	Wake
22	Cary	Wake
23	Charlotte	Mecklenburg
24	Greenville	Pitt
25	Cornelius	Mecklenburg
26	Brevard	Transylvania
27	Creedmoor	Granville
28	Burgaw	Pender
29	Durham	Durham
30	Garner	Wake
31	Asheville	Buncombe
32	Greensboro	Guilford
33	Knightdale	Wake
34	Corolla	Currituck
35	Newton	Catawba
36	East Carolina University	Pitt

Figure 1. 2018 Watch for Me NC Partner Communities.

Table 1. 2018 Partner Communities and Lead Agency.

Community (County)	County Population	Primary Point of Contact
Alexander County	37,286	Alexander County Sheriff's Office
Apex (Wake)	974,289	Apex Police Dept
Asheville (Buncombe)	250,539	Asheville Police Dept
Boone (Watauga)	52,372	Boone Police Dept
Burgaw (Pender)	55,166	Burgaw Police Dept
Carrboro (Orange)	140,352	Carrboro Police Dept
Cary (Wake)	974,289	Cary Police Dept
Chapel Hill (Orange)	140,352	Chapel Hill Police Dept
Charlotte (Mecklenburg)	1,012,539	Charlotte Police Dept
Clayton (Johnston)	196,708	Clayton Police Dept
Corolla (Currituck)	26,331	Currituck Police Dept
Cornelius (Mecklenburg)	990,228	Cornelius Police Dept
Creedmoor (Granville)	58,500	Creedmoor Police Dept
Durham (Durham)	288,133	Durham Planning Dept
East Carolina University (Pitt)	174,263	East Carolina University Campus Police Dept
Elizabeth City (Pasquotank)	40,018	Elizabeth City Police Dept
Fayetteville (Cumberland)	332,546	Fayetteville Police Dept
Forest City (Rutherford)	66,551	Forest City Police Dept
Franklin (Macon)	34,732	Franklin Police Dept
Fuquay-Varina (Wake)	974,289	Fuquay-Varina Police Dept
Garner (Wake)	974,289	Garner Police Dept
Greensboro (Guilford)	506,610	Greensboro Planning Dept
Greenville (Pitt)	174,263	Greenville Police Dept
Hendersonville (Henderson)	115,708	Hendersonville Police Dept
Kill Devil Hills (Dare)	35,019	Kill Devil Hills Police Dept
Knightdale (Wake)	974,289	Knightdale Police Dept
Kure Beach (New Hanover)	227,198	Kure Beach Police Dept
Morrisville (Wake)	974,289	Morrisville Police Dept
Murphy (Cherokee)	27,444	Murphy Police Dept
New Bern (Craven)	102,578	New Bern Police Dept.
Newton (Catawba)	154,610	Newton Police Dept
North Wilkesboro (Wilkes)	68,946	North Wilkesboro Police Dept
Pine Knoll Shores (Carteret)	68,228	Pine Knoll Shores Police Dept
Raleigh (Wake)	974,289	Raleigh Police Dept
Spindale (Rutherford)	66,551	Spindale Police Dept
Transylvania County	33,045	Transylvania County Planning Dept

2018 Technical Assistance and Partner Training

Technical Assistance

HSRC provided technical assistance to Watch for Me NC partners and NCDOT. To guide and support the partners' campaign implementation, HSRC maintained a listserv just for partners, responded to questions from individual agencies, planned and facilitated web/phone meetings, and maintained a web page for partner-specific resources. The intent of the listserv was to foster information sharing among partners and provide an efficient way for HSRC to answer questions and share announcements and information.

HSRC also maintained a resource page for partners that included archived recordings and notes of all meetings as well as contact lists, example enforcement operations plans, law enforcement data collection forms, public education resources (with an emphasis on supporting inclusion of K – 8 schools in Watch for Me NC), and a media toolkit.

In lieu of conference calls or webinars, much of HSRC's technical assistance for Watch for Me NC partners was provided through a new action planning workshop offered as an in-person training. This format was selected based on feedback received through interviews with past partners in these interviews, most partners reinforced a desire to meet program colleagues in person. They shared how they were likely to seek the assistance from people they have met in person, and that being in others' physical company was likely to inspire more creative thinking in terms of Watch for Me NC program design and delivery.

In addition to the action planning workshops, HSRC held one teleconference meeting in October 2018 to provide administrative updates to all partners, remind them of reporting responsibilities and upcoming evaluations planned, and to provide a time for peer exchange across partners statewide about their current activities, successes, and challenges.

Law Enforcement Training and Support

Training was provided to 71 officers from 26 agencies from May to August 2018 to prepare them for performing pedestrian and bicycle safety operations as part of the Watch for Me NC program. Brian Massengill, a sergeant with the Durham Police Department, was sub-contracted to lead one-day and half-day courses. The courses involved classroom education regarding relevant North Carolina laws and best practices in conducting enforcement, as well as field exercises in conducting targeted operations aimed at improving driver yielding at crosswalks. Trainings also included tips on distributing materials, hosting events, making presentations, engaging the media, and working with schools and universities. The half-day refresher course provided a deeper dive for officers already familiar with the program and allowed time for them to share their own experiences conducting pedestrian and bicycle safety-related operations and events.

In addition to receiving training, officers specifically received sandwich boards, warning ticket booklets, and sets of bike lights and reflective bracelets to support enforcement operations (see Table 4 for resource descriptions). Officers issued the lights and bracelets to people when observed walking or bicycling at night without a light as a means of positive reinforcement or in lieu of a citation.

Figure 2. Watch for Me NC law enforcement training.

2018 Program Delivery

Action Planning Workshops

New in 2018, HSRC held four half-day workshops across the state in May and June. The objective of these workshops were to bring new and ongoing communities together to discuss big-picture bicycle and pedestrian safety issues and the Watch for Me NC approach, foster networking and peer exchange among participating communities, and offer support and resources for communities to develop action plans to guide effective participation in the program. Additionally, the workshops served to address common concerns identified by past partners' exit interviews, such as how to develop diverse coalitions to support program delivery; a timeline for program management, events, and operations schedules; and techniques to better coordinate program-related communications and law enforcement efforts, with the ultimate goal of aiding communities in institutionalizing plans and local program resources.

The format for the workshop alternated between instructor delivery and small group work which was guided as structured collaboration so that coalitions could work on each section of the action plan template, which was provided in advance. The template, and thus the workshop, focused on the following modules:
- Problem Identification and Goal Setting
- Coalition/Partnership Development
- Key Event(s) / Program Roll Out
- Public Engagement, Outreach, Education
- Enforcement Operations
- Planning/Policy Coordination
- Sustaining the Effort

Approximately 70% of the 36 communities attended an action planning workshop for a total of 64 attendees for an average of 2-3 people per community represented. A wide variety of professions were represented, as each community was encouraged to invite two to 6 members of their coalition with

varied roles to participate. Law enforcement officers, planners, engineers, public health officials, and others were at the table.

Effectiveness of the workshops were measured in several ways. Participant feedback was obtained at the end of the workshop by those in attendance, as well as through the end-of-year progress survey. HSRC also solicited communities to share draft plans for us to review and compare for similar themes. These plans were also compared to community responses on the progress survey to attempt to guage the extent to which action plans were implemented. Through the participant feedback form at the workshop, attendees indicated that it was effective in emphasizing the importance of building local partnerships and engaging the community through outreach, in communicating key strategies for implementing the Watch for Me NC program, and encouraging partners to think about bicyclist and pedestrian safety as a complex problem which requires more than a simple, one-time silver bullet solution. Connection and interaction with other Watch for Me NC partners was a further valuable takeaway from the Action Planning Workshops.

Through the progress survey, 81.3% of 16 survey respondents reported attending the Watch for Me action planning workshop. Two communities that did not attend the workshops reported there was a schedule conflict, while the third community developed a plan in spite of not attending. Therefore, 56.3% of communities reported their coalition has a Watch for Me action plan. Based on survey responses, the workshops generally viewed as helpful in developing their action plan across each element. While there was some variation on the degree of helpfulness of each element (on a scale of Very Helpful, Helpful, Not Helpful), the sample size for each is too low to draw any clear comparisons for which parts of the action plan development process may have been most or least helpful.

Finally, 12 communities indicated either via response to the progress survey or by sending it to HSRC that they had developed an action plan. Ten community action plans were submitted to HSRC for review and comparison to what was implemented. Of those, only six of them could reviewed as Cary, Corolla (Currituck County), Pine Knoll Shores, Forest City, Fuquay-Varina, and Boone also responded to the end-of-year progress survey. While it is difficult to draw a direct line from attendance at the workshop, to developing at least a draft action plan, to implementation, those six communities held approximately 49% of all the community events and meetings reported by all 15 responding communities. Long-time Watch for Me NC communities Charlotte, Durham, and Kill Devil Hills (who either did not develop an action plan or did not supply it for review) reported a combined total of 36 engagement and outreach events and meetings, equating to another 39% of the total activities reported across communities. Garner was the only community who indicated that they prepared an action plan who did not report conducting an events or holding any meetings; however a copy of the plan could not be reviewed for implementation comparison as none was submitted.

Program Delivery Metrics

To comprehensively evaluate the delivery of the Watch for Me NC program across the state, the project team examined multiple measures: media impact measures, website usage statistics, program implementation records, and self-reports by program partners. To collect the latter two, HSRC used online forms and developed a web-based survey provided to community partners to help track and document activities. Given the delay in distribution of materials to the communities, data were requested from partner groups primarily at the end of the year through direct emails and calls. To supplement data collected through 2018 Progress Survey and web-based enforcement reporting forms, HSRC conducted semi-structured interviews with the Watch for Me NC community partners between

January and March 2019. See Table 2 for a summary of the program delivery measures and data sources used.

Table 2. Key 2018 Watch for Me NC Program Delivery Measures.

Domain	Program Delivery Measure	Data Source and Timeline
Purchased Media	• Materials and advertising produced and disseminated by NCDOT and duration of exposure time • Total cost of all printed materials and advertising space • Media reach, frequency, and number of impressions	NCDOT, French West Vaughan (FWV) report provided in 2018
Earned Media	• Press release dates • Media coverage source and publication date • Media coverage type and slant • Number of stories generated	LexisNexis and GoogleAlerts; end-of-year progress survey sent in December 2018; other sources regularly monitored
Website Usage	• Website visits • Page views	Google Analytics; data collected continuously
Law Enforcement Activities	• Count and total cost of all safety materials • Count of safety operations run by agency • Count and type of warnings and citations administered per operation • Count of enforcement officer hours spent per operation, by agency • Count of safety materials disseminated, by agency	NCDOT; partner agencies; requests made via listserv and Fall share meeting, and officer trainings
Community Engagement Activities	• List of partner agencies and key coalition members • Brief description of community engagement strategies used by partner agencies • Count of engagement events by agency, including type of event, population reached, staff involvement, etc.	Progress survey sent in December 2018

The findings regarding the program delivery are presented in the sections below.

Program Delivery Summary

Purchased Media

NCDOT contracted French West Vaughan (FWV) to purchase media for the WFM 2018 program year. A total of $140,025 was spent on purchased media for placements generally between July 2 to October 7, 2018. Additional funds were spent to cover the costs of print and safety materials (see details in Table 4).

Media buys and advertisements included transit (bus) displays, clean graffiti sidewalk stencils, and radio PSAs with banners on Pandora. Additional details on each of these formats is discussed below. The marketing firm also coordinated specific outreach efforts in Boone, NC, to encourage local organizations and businesses to distribute messaging via social media, bumper stickers, posters, and flyers. The purpose of the media buys and placements was to deliver specific behavioral messages regarding pedestrian and bicycle safety to the general public in order to raise awareness of safety concerns and encourage road users to drive, bike, and walk more safely. Media was focused in beach and metro areas across the state.

> It was estimated that Watch for Me NC ads were seen more than 11.6 million times across the state in the peak three months of the campaign.

FWV estimated that at least 11,640,000 people were reached via the paid advertisements per month. This figure does not include potential impressions from the print materials or the Boone outreach effort. A summary of media purchased, including the amounts, locations distributed, and timeframes of the ad placement is provided in the sections below. and ordered or produced promotional print material like bumper stickers and handouts.

Sidewalk Stencils

The program deployed clean graffiti sidewalk stencils (See Figure 3), which use a pressure washer to imprint safety messages onto sidewalks and were first introduced in the 2015 program year. The stencils, which can last up to one year, were strategically placed at key intersections and high traffic areas. A total of 65 stencils were installed in six regions, primarily focusing on beach communities – Elizabeth City, Dare County, Carteret County (Morehead City and Atlantic Beach), Burgaw, Wilmington, and Greenville and were located near high pedestrian or bicyclist crash locations. The stencils provided an estimated total of 3.5 million impressions. The estimate of impressions from stencils significantly jumped from previous years, likely due to a change in method for calculating the estimate resulting from the change in media firms used this year compared to last. This year's estimate is based on FWV's formula that estimates that each of the 65 spots may have been seen by 25% of the target city's population, which was then multipled by the number of spots within that city. This is likely an overestimation of impressions; however, most municipalities in North Carolina do not collect pedestrian volume data to more accurately estimate the number of people on a given sidewalk.

Figure 3. Sidewalk stencils offered safety reminders to pedestrians.

Transit Ads

Transit ads (see Figure 4 and Figure 5) were placed on the interiors and exteriors of buses in seven different transit systems in Boone, Greensboro, Asheville, Raleigh, Durham, Chapel Hill, and Charlotte. Table 3 lists the number of both interior and exterior placements for each agency.

Table 3. Quantity of and Placements for Transit Ads

Transit Agency	No. Interior Placements	No. Exterior Placements
Asheville	22	0
Chapel Hill	98	10
Durham	54	0
Raleigh	12	2
Greensboro	42	20
Charlotte	100	13
Boone	0	8

Transit advertisements resulted in more than 5.3 million impressions per month. This strategy to educate a "captive audience" continues from the pilot program, where a pedestrian crash analysis identified a strong spatial association between high pedestrian crash areas and high-use transit routes. Most ads ran from August through October, November, or December depending on the agency and placement type.

Figure 4. Internal transit ads focused on pedestrian and bicycle safety tips.

Figure 5. External transit ads.

Pandora Mobile Audio Banners

Pandora mobile audio banners were served through mobile and connected car to reach commuters. Custom audience segments included listeners who enjoy bicycling and those who tune in during peak morning and evening commute time periods. The campaign was held from July through September to delivered 2.8 million impressions per month (1.6 million per month for the audio alone) and engaged 1,189 listeners who clicked on the advertisement to learn more.
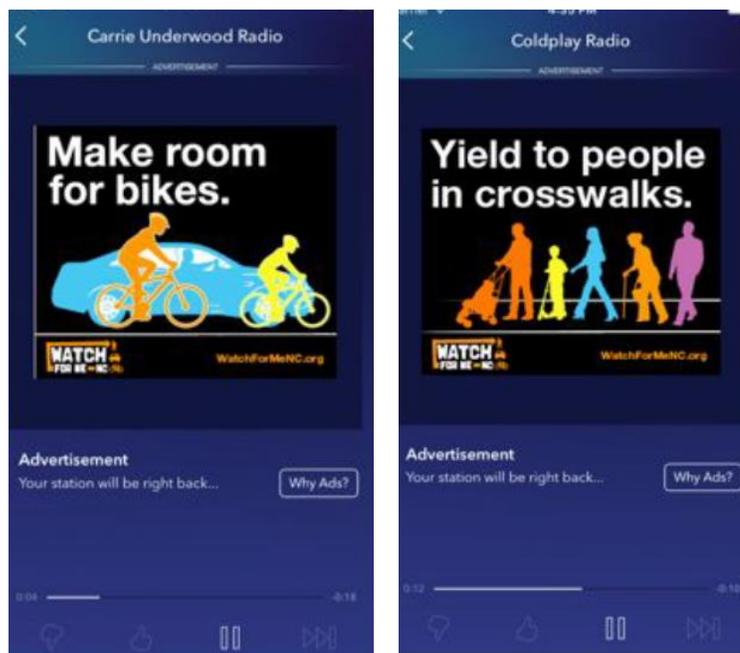
Figure 6. Pandora Mobile Audio Banners.

Print and Safety Materials

Print materials and other safety or training items were provided to partner communities for local distribution (see Table 4). Table 4 provides the quantities of each type of material distributed statewide in 2018. Due to several issues, the materials distribution to the communities was extremely delayed – they were not shipped until October. Additionally the number of bike light sets and reflective bracelet sets given to each community were significantly reduced from what was forecast. More on how

communities distributed Watch for Me NC safety messages and materials is described in the "Community Engagement Efforts" section.

Table 4. Summary of Purchased Print and Safety Materials.

Item Description	Distribution	Example
Bumper Stickers Two standard-size bumper stickers with pedestrian and bicycle safety messages aimed at drivers.	36,000 of each pedestrian and bicycle bumper sticker were provided to the partner communities.	
Brochure/Rack Card – General Rules Two-sided 3.75 inch by 8.5 inch document with laws and safety tips aimed at drivers, pedestrians, and bicyclists.	18,000 rack cards in English and 9,000 in Spanish were provided to all partners and law enforcement agencies for distribution through libraries, community centers, local businesses, and direct contact.	

Item Description	Distribution	Example
Brochure/Rack Card - Tips Two-sided 3.75 inch by 8.5 inch document with tips for being a safe cyclist or safe pedestrian.	18,000 were provided to all partners and law enforcement agencies for distribution through libraries, community centers, local businesses, and direct contact.	
Banners 3 ft by 6 ft or 3 ft by 8 ft outdoor banners with messages aimed at drivers.	8 of each pedestrian and bicycle safety banners were distributed to the new community partners.	

Item Description	Distribution	Example
Posters (4 types) **-Pedestrian Tips** **-Bicycle Tips** **-Make Room for Bikes** **-Yield to People** 11 by 17 inch posters with a series of four messages aimed at pedestrians, bicyclists, and motorists.	900 English language posters and 900 Spanish language posters of each of the four messages were sent to the communities for distribution in businesses, community centers, libraries, campuses, and other public locations throughout participating communities.	
Bike Lights Front and tail lights with the Watch for Me NC logo, intended for bicyclists.	972 bike light sets were distributed to law enforcement partners to be given to bicyclists observed riding without lights.	
Bracelets Reflective arm and leg straps with LED lights and the Watch for Me NC logo.	3,240 sets of arm and leg straps were distributed to law enforcement partners to be distributed at operations or community events.	
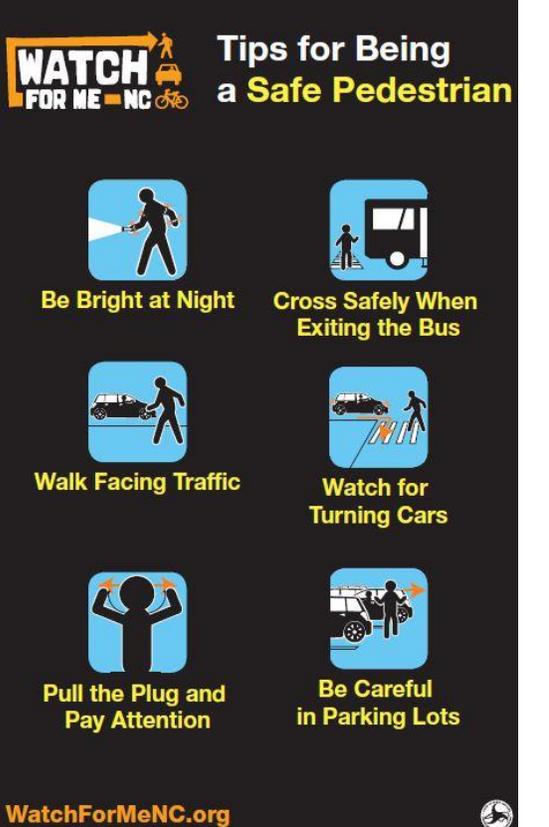
Earned Media

Earned media consisted of TV, radio, and print news coverage of the program that was not purchased. The project team began tracking news articles in January 2018 and routinely searched Lexis-Nexis archives and Google News alerts throughout the year. The team also gathered information on media engagement through partner surveys and interviews. During the time period, NCDOT and program partners released several press releases and safety announcements. The releases ranged from

announcing a community's participation in the campaign, to safety announcements, to warnings about upcoming enforcement efforts. At least ten communities used social media, such as Facebook and Twitter, to share campaign message or event information. Moreover, partners in Greenville, Charlotte, Greensboro, Chapel Hill, and Morrisville, frequently used the hashtag #WatchForMeNC to promote campaign events and messaging.

The program saw continued news coverage throughout the year. In 2018, the campaign generated at least 43 stories in media outlets across the state. While several news stories focused on areas that joined the campaign in 2018, the majority of coverage came from returning partner communities. As in previous years, news and editorial coverage remained largely positive toward the effort, but were attached to crash events that took place in partner communities. Newspaper articles and television reports primarily focused on crash statistics and road fatalities and how the program is working to reduce those figures through better education of drivers,

> In 2018, the Watch for Me NC campaign generated at least 43 stories in local news outlets, and its website was viewed nearly 17,000 times.

pedestrians, and bicyclists, as well as through enhanced enforcement of existing pedestrian and bicycle safety laws.

Website Usage

To distribute information to partner communities, the public, and the media, the team continued to develop and maintain the Watch for Me NC website, http://www.watchformenc.org (see Figure 7). The site serves as a central information point for the program and a repository for campaign materials and media coverage.
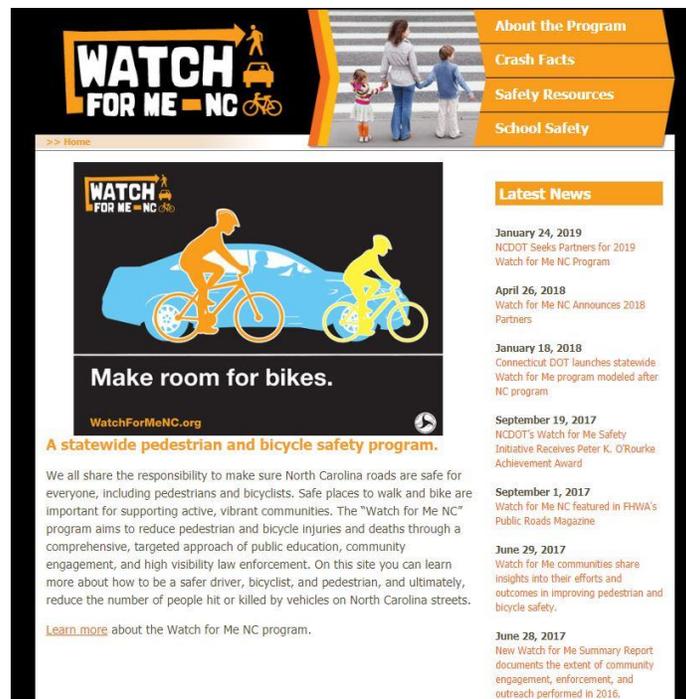

Figure 7. Watch for Me NC project website homepage.

Data regarding the Watch for Me NC website usage during the 2018 program year were extracted from Google Analytics. From January 1, 2018 to December 31, 2018, 5,685 visitors had 7,335 sessions and viewed 16,793 pages. Most of the site's web traffic (59%) came from individuals typing www.watchformenc.org into their web browser or direct links to the website address. The most commonly visited sub-pages were the About (1,425 page views), Safety Resources (1,303 page views), Crash Facts (807 page views), and Participate (636 page views) pages.

Figure 8 shows the daily trends in web traffic monitored in 2018. Clearly, the bulk of the traffic to the site came when the program call for partners was announced February 1, and then again as law enforcement training occurred over the summer and communities held events, which suggests that individuals and members of the media were turning to the website to learn more about the program and pedestrian and bicycle safety. Site usage in 2018 peaked in June, July, and August, when paid ads began rolling out across many communities and several news stories covered the program as part of back to school efforts.
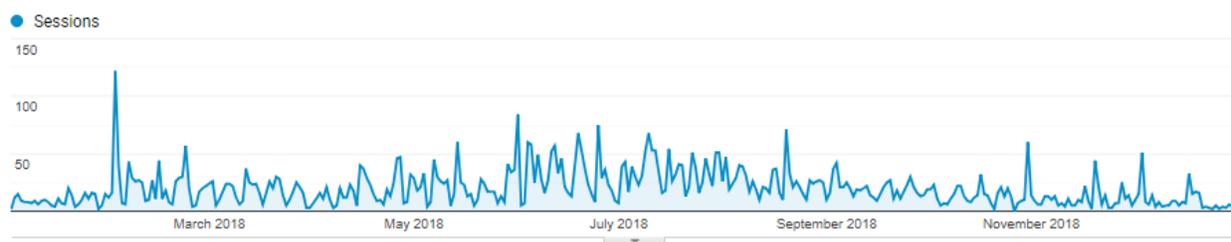
Figure 8. Web use statistics in 2018.

Community Engagement Efforts

The Watch for Me NC community partners who responded (n=18) to the December 2018 end-of-progres survey indicated that the primary points of contact for each local program tended to be within law enforcement (73.7%); however, some community leads were in other units, as shown by the following proportions: 10.5% town planning departments, 5.3% public works departments, 5.3% bicycle/pedestrian coordinators, and 5.3% administration assistants. The average reported hourly rate for the lead program manager was approximately $30/hour. Additionally, one community reported an in-kind financial contribution of $2,500.

Time devoted to the program and community engagement effort reported by lead managers were less variable than in years prior. The average number of hours devoted to Watch for Me NC per month by the lead program manager was 12, the minimum was four, and the maximum was 22 hours. This tighter consistency could be due to low survey responses (i.e. small sample), or it could indicate that returning communities are reaching some stability in program management and implementation due to reliance on continued long-term relationships with coalition members and having more streamlined processes in place. Given the compressed phase for implementation due to the materials distribution delay, it is unclear how time and effort may have fluctuated across months or seasons in 2018. This suggests that, on the whole, local programs contribute between $46,800 to $336,960 annually to the state's Watch for Me NC efforts through the in-kind time and effort of their program leads. This does not account for the additional value contributed by the time and effort supplied through other members of their coalition, nor costs for additional safety or print materials procured locally for distribution.

Of 12 respondents who indicated they conducted community engagement efforts, most partners reported doing so directly with community members as well as with larger organizations on a total of at

least 92 occasions. This averaged to a little more than one outreach event or meeting every other month to share Watch for Me NC messaging, which is a significant drop in outreach from previous years. Three partners reported no engagements with individuals or organization; however one of those communities still met quarterly with their coalition. In fact, of the seven communities that responded they held regular coalition meetings to progress Watch for Me locally, 85% of them met monthly. At least five partners (Boone, Charlotte, Durham, Forest City, and Kill Devil Hills) engaged individuals and organizations on 10 or more occasions through community events and meetings. Communities that did not respond to the survey or that reported low numbers of enagagements may have been affected by events unique to this year's program cycle including Hurricane Florence and delay of distributed materials.

Sixteen of the 18 survey respondents distributed messages and materials as part of their engagement efforts in 2018. Table 5 and Table 6 present a summary of theses engagement activities performed by Watch for Me NC partners and what types of materials were distributed based on responses to the end-of-year progress survey. In addition, Forest City – a new partner this year - reported that their local Watch for Me NC PSA accumulated 3.3 thousand views on their Facebook page.

Table 5. Reported Community Outreach Efforts.

Community outreach efforts conducted in 2018	Percent	No. of Communities	Total No. of Outreach Efforts
Held regularly scheduled coalition meetings (n = 18 responses)	39%	7	70
Attended or held community meetings to directly engage individuals and organizations (n=16 responses)	69%	11	46
Attended or held community event to engage with public at-large (n = 15 responses)	80%	12	46
Used the hashtag #WatchForMeNC to communicate through social media (n = 16 responses)	19%	3	Not explicit in survey
Generated or shared press releases regarding Watch for Me NC (n = 16 responses)	19%	3	Not explicit in survey

Table 6. Material Distribution and Use.

What type of materials did you distribute or use? (N = 16 responses)	Percent	Number of Communities
Bumper stickers	81.3%	13
Rack Cards/Brochures	75.0%	12
Bike lights	62.5%	10
Posters	62.5%	10
Banners	62.5%	10
Bracelets	56.3%	9
Citation Booklets	50.0%	8

Based on survey responses, at least 92 local events or meetings were attended or hosted by Watch for Me NC partners in their communities, which represents an average of seven events or meetings per reporting community – somewhat fewer than in 2017. These events and meetings were attended by as few as six to as many as 2,530 people per engagement, for a total reach to more than 11,300 people across the 16 reporting communities. Many communities worked to engage the media at these events, as described in the earned media section above. Events that presented opportunities to distribute safety messages typically included:

- New employee orientations
- Driver's education classes
- National Night Out
- Vision Zero Task Force
- Bicycle/Pedestrian Advisory or Advocacy Group meetings
- Transportation planning or project public meetings
- School events ("Back to School" nights; Walk or Bike to School Day events)
- Bicycle safety clinics
- Halloween-themed events
- Festivals
- Neighborhood presentations

Figure 9. Duck, NC uses the sandwich board at a popular crosswalk to reinforce the "Yield to Pedestrians" message during the busy tourist season.

Law Enforcement Operations

Of those reporting to the survey, most communities attended a Watch for Me Law Enforcement Training where information is provided on how to conduct pedestrian safety operations, with 44.% attending the full-day introductory course, 38.8% attending the half-day refresher, and 16.7% not attending any course. 2018 was the first year that almost 40% of the communities did not attend either training. The 14 communities who did not attend were all returning Watch for Me NC partners. Of the three respondents who indicated they did not attend a training through the end-of-year progress survey, when asked why not, the primary reason they gave was that, as a returning partner, they attended previous sessions and did not have any new staff to be trained. Given the low response to this question, it is possible that other partners did not attend a training due to schedule conflicts or insufficient resources/personnel to accommodate the time commitment.

Beyond the training, NCDOT also provided warning ticket books and sandwich boards to specifically aid officers in conducting enforcement operations. Each new partner community received two sandwich boards (see **Error! Reference source not found.** for an example image) , and all 36 partners received 15 warning ticket books with 100 tickets per book (see Figure 10 for example warning ticket).
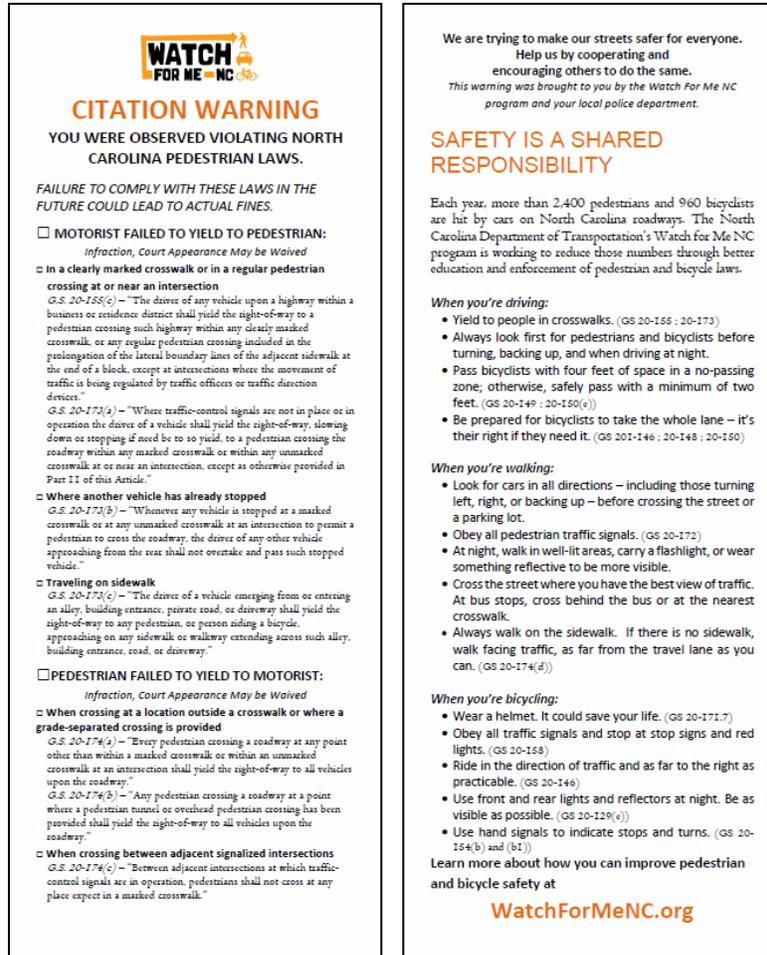
Figure 10. Front and back of pre-written warning notepad.

Law enforcement operations activities were tracked through an online form completed by law enforcement agency staff (form available at www.watchformenc.org/reporting) separately from the community engagement efforts. From January to December 2018, six municipal police agencies reported conducting 35 operations targeting enforcement of pedestrian and/ or bicycle-related laws. Roughly half of the reported operations involved only one officer. Of the 35 events reported, these efforts involved the equivalent of more than 130 officers spending more than 208 manhours, not including time spent doing routine enforcement patrols that incorporated pedestrian and bicycle safety surveillance. All efforts were performed without receiving any additional compensation from the Watch for Me NC program sponsor. The operations resulted in 156 warnings, 215 citations, and more than 460

direct
contacts
made
with the
public (
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Watch for Me NC communities held more than 90 engagement events and 35 enforcement operations, directly reaching thousands of community members with safety messages in 2018.
Watch for Me NC communities held more than 90 engagement events and 35 enforcement operations, directly reaching thousands of community members with safety messages in 2018.

Additionally, thousands of Watch for Me NC materials were distributed during these operations including rack cards, bumper stickers, bike lights, and other materials.

Reported enforcement operations took place steadily throughout the year. From January through August 2018, Boone conducted roughly two operations events each month. In large part, officers focused on issuing warnings or otherwise raise awareness of the laws when engaging with the public. In addition, several communities indicated that their reported enforcement activity was actually an educational event, such as presenting bicycle and pedestrian safety to a high school driver education class or conducting a bicycle rodeo. From the End-of-Year Progress survey, partners reported many positive outcomes, including improved road user awareness and behaviors and positive community response. Fuquay-Varina adapted a "good ticket" approach to reward children observed wearing helmets while bicycling. The "ticket" served as positive reinforcement of safe behaviors and could be exchanged for ice cream at a local business. Charlotte also coordinated with IKEA and AAA of the Carolinas to hand out safety vests and reflective arm bands as part of their enforcement operation in February, which served as a big media event, too.

 provides a breakdown of the enforcement warnings and citations by partner agency. The citations and warnings covered a range of violations for all road users, including: failure to yield to pedestrians (when turning or going straight through a crossing), failure to abide by signal/stop controls, speeding, unsafe passing, agressive/reckless driving, alcohol-related offenses, failure to use crosswalk, and failure to use lights/reflectors at night. Eight of the 16 agencies responding to the community engagement survey indicated that they also used the Governor's Highway Safety Program STEP (Statewide Traffic Enforcement Program) Reporting System to get credit for their Watch for Me NC enforcement activities including Cary, Charlotte, and Forest City. It is unclear if the same activities were reported through both the STEP and Watch for Me NC evaluation systems. One community specifically noted that the STEP system requires a minimum of two hours for these operations to count, which was seen as an obstacle to reporting through that system.

Table 7. Enforcement Efforts by Partner Agency.

Agency	Number of Events	Driver Warnings	Driver Citations	Ped Warnings	Ped Citations	Bicyclist Warnings	Bicyclist Citations	Other/ Total Contacts
Municipalities								
Boone	17	42	17	0	0	3	0	73
Cary	2	9	15	0	0	0	0	24
Charlotte-Mecklenburg	4	1	169	63	0	0	0	319
Forest City	1	7	0	8	0	0	0	15
Kill Devil Hills	1	3	0	5	0	1	0	9
Knightdale	10	14	14	0	0	0	0	28
Event Total	35	76	215	76	0	4	0	468
Grand Total	**839**							

Only 16% of the 2018 Watch for Me NC communities reported law enforcement operations. An additional 11 partners reported other community outreach through meetings and educational engagements and events. Unfortunately, 47% of the 2018 communities did not respond to either the end-of-year progress survey nor self-report any enforcement operations, so it is unclear if any activities occurred in those communities and, if not, what obstacles they faced.

2018 Program Outcomes

In 2018, evaluation resources did not allow for a quantitative evaluation (e.g., of observed behavior changes or self reported attitudes or behaviors from the public) using primary data collection, such as has been performed in prior years. Therefore, the emphasis of the evaluation this year was on qualitative outcomes. Table 8 provides a summary of the method used, and the following sections detail the method and results gleaned from partner interviews.

Table 8. 2017 Watch for Me NC Program Outcome Measures.

Qualitative Outcome Measure	Data Source and Timeframe
• Input on especially helpful partners • Change in policies, ordinances, or resolutions attributable to program • Change in enforcement agency's approach to ped/bike law enforcement • Coordination with public works or engineering departments to discuss safety issues with the physical environment • Partner's approach to working with schools	Phone interview with agency points of contact in February 2019
• Barriers and obstacles encountered • Additional training or technical assistance needs identified	End-of-Year Progress Survey sent in December 2018

New this year, the end-of-year progress survey asked questions to better understand the barriers and obstacles that communities may face in implementing their Watch for Me plans, as well as what needs

they have that could be better served through training or technical assistance. Emerging themes of main barriers, obstacles, and challenges reported by the 15 communities who responded consisted of delayed arrival of supplies (4 responses); lack of staffing, resources or time constraints (7 responses); low public turn out to education programs (1 response); delays in infrastructure projects that impacted coordination (1 response); and Hurricane Florence (1 response). Four of the nine respondents indicated no additional training or technical assistance was needed; however those needs identified by the remaing 5 included beginning the training and planning earlier in the year or offering it in the "off-season", offering the training locally to minimize travel, providing a role call video for patrol, and increasing the mass media.

To gather additional qualitative outcome data, in February 2019, HSRC conducted interviews with eight of the 23 Watch for Me NC partners who had not provided input via the end-of-year progress survey administered in the fall 2018. Three attempts were made to interview each partner within the evaluation period. Two partners responded to our interview requests, yet declined to participate in the interview. One cited changes in staffing that would have precluded a sufficient report of Watch for Me NC program activities, and the other stated that the late arrival of program materials prevented them from conducting any community outreach. All interviews were semi-structured, which involved asking all partners the same set of questions, while allowing room to probe partners' responses to learn more about specific perspectives or Watch for Me NC program elements. Once HSRC staff transcribed interview notes, we carried out a *grounded theory* analysis to draw out narrative themes in Watch for Me NC partners' responses and to develop a theory for how Watch for Me NC tends to unfold in diverse NC communities.

The Central Role of Partnerships in Watch for Me NC Programs

Several of the themes that emerged related to various aspects of partnering. ***Area schools were featured as significant partners among the eight interviewed Watch for Me NC contacts***. In communities that included Carrboro, Greenville, Hendersonville, and Knightdale, Watch for Me NC partners working with Safe Kids, the Active Routes to School Regional Coordinators, and school officials to: demonstrate safe biking and walking skills at elementary schools; help with bike helmet fittings; conduct speed enforcement in school zones; and control traffic when serving as crossing guards during Walk and Bike to School Day events, and throughout the first few weeks of the school year. In fact, school zones represented a common place for nearly all Watch for Me NC partner communities to conduct program outreach and enforce driver speeding and yielding laws. Moreover, in Knightdale, law enforcement officers coordinated with Parks & Recreation staff to upgrade two crosswalks in school zones with signage and flashing beacons.

Improving Pedestrian Crossings: A 2018 Watch for Me NC Program Theme

Improving crossings for pedestrians constituted a common theme among several Watch for Me NC partners in 2018. In Asheville, officers worked with the city's public works department to restripe a fading crosswalk in the downtown area, as well as to install three RRFBs where driver yielding was observed to be low. Officers with East Carolina University (ECU) joined with Greenville's police department, city engineering department, and NCDOT to form a Traffic Safety Action Committee, one that within the span of two years has guided the installment of several downtown crosswalks and accompanying pedestrian signage. Simiarly, law enforcement officers in Knightdale recently collaborated with the town's engineer to install LED crosswalk signs in locations near public parks and in locations throughout downtown. The police department and engineers have also developed a schedule to enhance more crosswalks over next two years. And in Carrboro and New Bern, law enforcement officers

liaised with their jurisdictions' public works department to incorporate signage where speeding poses a safety problem (New Bern), and bicyclists struggle to safely merge with car traffic while approaching intersections (Carrboro).

In selecting places in which to carry out yielding and speed enforcement, only law enforcement officers in Asheville focused their enforcement efforts based on intersections' and corridors' crash histories. The most common method for prioritizing places to intervene—carried out in places like Carrboro, ECU's campus, Morrisville, and New Bern— *involved a blend of following police chief directive and responding to residents' complaints about feeling unsafe while walking*. Other popular, though less common methods included concentrating efforts on places where officers observed speeding to pose a safety issue (New Bern), such as in school zones (Hendersonville and Morrisville); and to privilege those areas with high amounts of foot traffic, such as downtowns and near parks and playgrounds (Knightdale).

Departmental and Public Reactions to Watch for Me NC

In response to partners' Watch for Me NC enforcement and engagement activities, *they have largely received overwhelmingly positive feedback from their communities*. In places like Asheville and Knightdale, partners report receiving positive feedback on officers' distribution of bike lights and helmets. And in Greenville, Knightdale, Morrisville, and New Bern, officers report that residents have frequently approached them at community events to express their appreciation for seeing law enforcement officers out in the community sharing helpful safety information with road users. In Carrboro, several officers patrol on bicycles, believing that using this mode to engage with community members is a positive way to build rapport with the public. Further, officers in Hendersonville report receiving appreciation from school officials and school crossing guards about the speed enforcement the department conducts in the school zones.

For most Watch for Me NC partners, including those in Asheville, Carrboro, and New Bern, 2018 was a year when *their police chiefs and departments maintained a steady focus on improving pedestrian safety*. On the other hand, at ECU, Greenville, Hendersonville, and Morrisville, where patrol captains were relatively new to their positions in the department, Watch for Me NC *more recently became a departmental priority*. Officers in Knightdale perceived a shift in public sentiment about traffic safety, referencing a resident survey which revealed that, for 60% of respondents, traffic safety directly impacted their quality of life.

Recommendations for Prospective Partners

When asked to share advice with newcomers to the Watch for Me NC programs, several partners recommended *building communities' coalitions of stakeholders prior to conducting program activities*. Officers at ECU and in Knightdale and Morrisville recommended engaging with injury prevention professionals, city and state DOT engineers, as well as public works staff to establish an implementation timeline toward making it easier to launch Watch for Me NC in earnest. Asheville law enforcement partners suggested reaching out to local news media outlets and businesses prior to conducting enforcement events. And Carrboro officers proposed using the Watch for Me NC law enforcement training as a program marketing tool to show the community that the department and its partners are focused on improving bicycle and pedestrian safety. Across all communities, yet expressed most directly by officers in Knightdale, interested Watch for Me NC partners should attempt to find the right balance between public outreach and engagement and enforcement.

Continuing a Narrative Theory of Watch for Me NC Program Development

Throughout their development, Watch for Me NC programs tend to follow a "stages of change" pattern of development. When new communities apply to participate in Watch for Me NC, most of them are situated somewhere between the "contemplation" and "preparation" stages of change. That is, new partners seem to weigh the many pros and cons of committing to program expectations, while making commitments to carry out some or all aspects of a normative Watch for Me NC program (i.e., one that includes robust, coordinated community engagement with consistent, high-visibility enforcement that is aligned with known safety issues). As these communities roll out their Watch for Me NC engagement and enforcement tactics, they enter the "action" stage of change. While here, they generally assume an "act and see" approach of experimentation. This tends to involve participating in community events, visiting area schools, and in some cases, conducting enforcement operations. Those who reach the "maintenance" stage—loosely defined as Watch for Me NC partners who actively participate in the program for two or more consecutive years—typically receive overwhelmingly positive feedback from elected officials and the public and have integrated Watch for Me NC into broader community initiatives, such as transportation plans, Vision Zero programs, and agency procedures.

Conclusions and Recommendations

A growing body of literature suggests that multi-pronged education and enforcement initiatives such as Watch for Me NC have potential to improve pedestrian and bicycle safety. Overall, the 2018 program involved partners in diverse communities across NC. Participants reported strong collaborations between police, schools, planning, engineering, public works, hospitals, local businesses, and others. They noted that committed partnerships, utilizing local media, and maintaining a balance between public outreach, engagement, and enforcement in general were keys to effectively implementing the Watch for Me NC program.

Following are some key takeaways and recommendations for enhancing the program delivery at the state and local level in future years.

Partner Recruitment and Training/Capacity-Building

Consistent with the lessons from prior years, having stable, strong, and committed coalitions are essential for success as the Watch for Me NC program continues to expand to new communities across the state. Municipal partners devoted significant in-kind support in the form of labor hours for project coordination meetings, enforcement operations, and community outreach. Unlike other programs, no funds were used to provide overtime pay or additional enforcement support. As has been seen in previous years, though, limited staff time and resources continued to hinder several communities' progress in 2018. Many communities without an inventory of Watch for Me materials from past years relied on resources from other their coalition stakeolders, such as Safe Kids, to distribute print or safety materials at events, given the significant delay in distribution of materials to the 2018 partner communities.

Continuing to use a competitive process to select high-interest partners with a demonstrated capacity to commit to the requirements of the program and a contingency plan for staff turnover may help mitigate these issues in future years. Additionally, as funds to administer the Watch for Me NC program statewide are not expected to increase, it will become more difficult to sustain annual increases in the number of communities supported, meaning this competitive process will become even more selective. One recommendation to explore in 2019 is whether different selection criteria should be instituted for

new partners versus returning partners, and if so, whether returning partners' past participation should influence decisions about providing them additional support in the future.

At the state level, it is recommended that state program managers continue to form partnerships across state-level agencies and organizations—such as GHSP, DMV, Safe Kids, DPI, and others—that can support the program in various ways, including providing complementary funding or resources (e.g., supporting localized program evaluations, providing bicycle lights or bicycle helmets) to the local communities, and enhance message delivery or enforcement activities. Reinstituting regular meetings of the Steering and Implementation Committee can provide a structure for communications, ensure accountability, and provide continuity to program activities.

In terms of the content or focus of the law enforcement training provided, agencies continue to request information on how to improve partnerships, communications, and long-term program sustainability. To this end, future training emphasis areas could include ways to integrate the Watch for Me NC program with other initiatives, such as SRTS programs, Safe Communities and Safe Kids programs, and broader transportation and/or highway safety programs, activities, or policies. Another continuing topic of interest is in how to equitably deliver Watch for Me NC resources and law enforcement operations as well as engage traditionally underserved communities through program outreach and partnership.

Local and Statewide Outreach, Education, and Enforcement

The Watch for Me NC program should continue to employ safety messages consistent with frequently occurring pedestrian and bicycle crash types in step with best practices. Regarding the Watch for Me NC's outreach and education components in 2018, overall engagement was down for a variety of reasons; however, despite the delay in print and safety materials, some partners were able to successfully hold meetings, educational activities, and awareness events. Of all the materials provided, the bike lights and bumper stickers remain the most popular material items, but those partners with them made use of banners, rack cards, sandwich boards, and the "warning ticket books" for law enforcement.

To complement the existing messages regarding safe behaviors, future iterations of Watch for Me NC should incorporate norms-based messaging, such as has been done in Gainesville, Florida and St. Paul, Minnesota. Should driver yielding rates continue to improve over the years, and yielding to pedestrians becomes a more normative behavior, HSRC recommends that future Watch for Me NC campaigns feature more perceived social norms-informed interventions. More specifically, such interventions could be delivered through a narrative communication framework, whereby stories feature incidents of positive behavior change (e.g., a driver becoming aware of pedestrian safety after nearly getting hit while walking). Narrative communication approaches would likely enhance the believability of Watch for Me NC's messages, suppress counter arguing among people receiving the messages, and improve road user behavior.[4] More broadly, many communities requested more mass media coverage through ad buys by NCDOT to aid in distributing the message.

Together with pedestrian and bicycle safety education, targeted, high-visibility enforcement can significantly enhance safety. In 2018, officers reported 68% drop in operations targeting enforcement of pedestrian and/or bicycle-related laws, resulting in a low 35 operations reported. As in years past,

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[4] See: Moran, M. B., Murphy, S. T., Frank, L., & Baezconde-Garbanati, L. (2013). The Ability of Narrative Communication to Address Health-related Social Norms. *International Review of Social Research, 3*(2), 131–149.

getting all agencies to report activities consistently and in a timely manner remained a challenge and may have contributed to under-reporting of actual law enforcement efforts. Further, of those who reported operations events, only two communities indicated that they engaged the media as part of a high-visibility strategy to amplify the message to a broader audience. Thus, while the officer resource investment in conducting enforcement was large given the number of operations reported, the estimate of total persons impacted by the operations was likely low. In future years, consideration should be made for possibly requrining agencies to always invite media to their Watch for Me NC activities in order to receive credit for the event or meeting, which could be incorporated in to future assessment of returning partner applicants. Further exploration is additionally needed to understand why the general drop in involvement from law enforcement agencies from the training through to operations to determine if state-level programmatic changes are appropriate to better serve officer needs.

Finally, without losing sight of the general focus that local agencies appear to have toward improving pedestrian safety, more should be done to encourage communities to step up education and enforcement activites to improve bicycle safety. The recently released crash-based evaluation of the Watch for Me NC program from 2012-2017 suggests that the program has been effective at reducing pedestrian crashes county-wide for those counties who participate in the program; however, results were mixed for bicycle crashes. This may be due to a lack of emphasis on behaviors that affect bicycle safety, including fewer operational enforcement techniques or resource provided to specifically target that mode. As bicycling becomes more popular across the state, it is important that communities engage with the public who may new to cycling or unused to seeing bicyclists on the road to ensure an increase in numbers of bicyclists does not lead to an increase in crash rates.

Program Evaluation

To supplement crash-based studies of Watch for Me NC's safety-related impacts, we recommend continued monitoring of public knowledge and perceptions through the use of randomized phone surveys. If repeated in the future using the same methodology, the survey data gathered back in 2015 can serve as a baseline from which we can continue measurement of the impact of Watch for Me NC on communities' knowledge of laws and perceptions of road user behaviors. In isolation, the 2015 results are limited in their ability to estimate the program's effectiveness and whether it has produced differential effects among Watch for Me-participating communities. Further, as the funds for media purchases, print materials, and safety materials decrease annually while the program continues to stretch those items across wider geographic coverage and more partner communities, it is unclear whether the educational messages and ad buys are sufficiently saturating targeted populations. Ideally, we would use the 2015 survey results as a baseline from which to examine trends both within and between Watch for Me-engaged and non-participating regions over time. Further, if additional resources exist, we recommend estimating mixed effects regression models to predict various outcomes of interest while accounting for other potential factors affecting responses. These mixed effects models would examine so-called "fixed effects," such as respondents' age and income, as well as the "random effects" of the towns that respondents live in to control for differences among respondents based upon where they live—e.g., town-based "cultural effects."

Field observations of key behaviors, such as driver yielding, remain an important complement to crash-based and survey-based evaluation measures to see if behaviors are changing. However, as more communities participate year round, the opportunities for before-after study designs diminish and more sophisticated approaches may be needed. Further, as the program grows, HSRC's central management of the data collection process to monitor driver yielding changes becomes more challenging and resource-intensive. Additional technical support, such as training and the provision of brief surveys that

could be used locally, might motivate communities to take a more active role in local program evaluation. Having more data at the local level could also be helpful in evaluating the program statewide and in providing evidence to support decision-making regarding future Watch for Me NC program needs, such as message development or refinement.

As more communities incorporate elements of the Watch for Me NC program into their suite of interventions, it would benefit everyone to understand what works, why it works, and under what conditions it is most likely to work. Evaluations like these, which consider people's travel-related behaviors, attitudes, beliefs, and perceptions will get us closer to such an understanding.