



Innovative Partnerships: Public Health

August 26, 2025

Elyse Keefe, UNC Injury Prevention Research Center



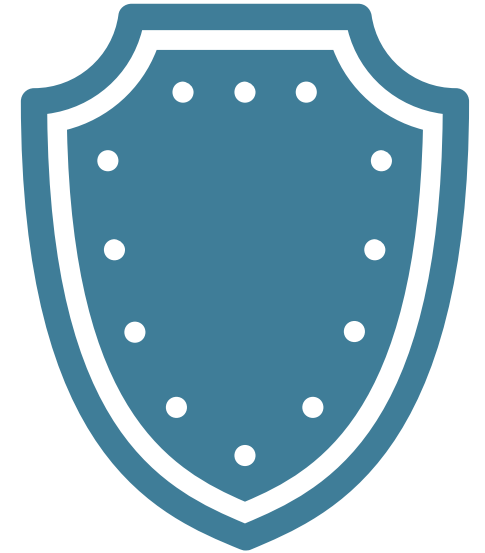
INJURY PREVENTION
RESEARCH CENTER



Public health and transportation safety

What is public health?

- “the science of protecting and improving the health of people and their communities. This work is achieved by promoting healthy lifestyles, researching disease and injury prevention, and detecting, preventing and responding to infectious diseases. Overall, public health is concerned with protecting the health of entire populations. These populations can be as small as a local neighborhood, or as big as an entire country or region of the world.”



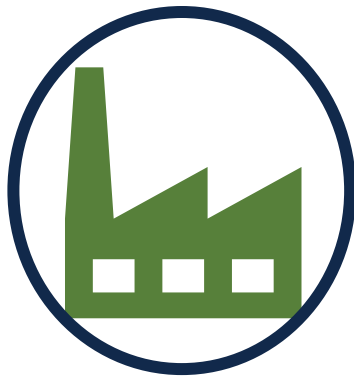
Overlapping goals



**Improving
access to
opportunities
and services**



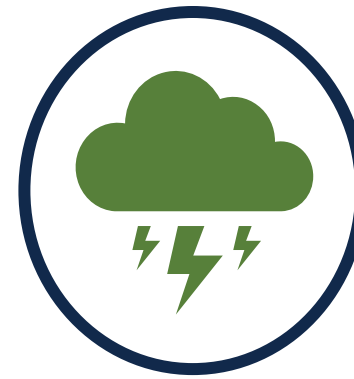
**Providing
opportunities
for physical
activity**



**Mitigating
human
exposure to
environmental
risks (air and
noise
pollution)**



**Preventing
injuries and
improving
safety**



**Supporting
resiliency to
disaster and
extreme
weather events**



**Promoting
community
connectedness
and vitality**

10 Leading Causes of Death, United States 2020, All Races, Both Sexes

Rank	Age Groups										All Ages
	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	
1	Congenital Anomalies 4,043	Unintentional Injury 1,153	Unintentional Injury 685	Unintentional Injury 881	Unintentional Injury 15,117	Unintentional Injury 31,315	Unintentional Injury 31,057	Malignant Neoplasms 34,589	Malignant Neoplasms 110,243	Heart Disease 556,665	Heart Disease 696,962
2	Short Gestation 3,141	Congenital Anomalies 382	Malignant Neoplasms 382	Suicide 581	Homicide 6,466	Suicide 8,454	Heart Disease 12,177	Heart Disease 34,169	Heart Disease 88,551	Malignant Neoplasms 440,753	Malignant Neoplasms 602,350
3	SIDS 1,389	Homicide 311	Congenital Anomalies 171	Malignant Neoplasms 410	Suicide 6,062	Homicide 7,125	Malignant Neoplasms 10,730	Unintentional Injury 27,819	COVID-19 42,090	COVID-19 282,836	COVID-19 350,831
4	Unintentional Injury 1,194	Malignant Neoplasms 307	Homicide 169	Homicide 285	Malignant Neoplasms 1,306	Heart Disease 3,984	Suicide 7,314	COVID-19 16,964	Unintentional Injury 28,915	Cerebro-vascular 137,392	Unintentional Injury 200,955
5	Maternal Pregnancy Comp. 1,116	Heart Disease 112	Heart Disease 56	Congenital Anomalies 150	Heart Disease 870	Malignant Neoplasms 3,573	COVID-19 6,079	Liver Disease 9,503	Chronic Low. Respiratory Disease 18,816	Alzheimer's Disease 132,741	Cerebro-vascular 160,264
6	Placenta Cord Membranes 700	Influenza & Pneumonia 84	Influenza & Pneumonia 55	Heart Disease 111	COVID-19 501	COVID-19 2,254	Liver Disease 4,938	Diabetes Mellitus 7,546	Diabetes Mellitus 18,002	Chronic Low. Respiratory Disease 128,712	Chronic Low. Respiratory Disease 152,657
7	Bacterial Sepsis 542	Cerebro-vascular 55	Chronic Low. Respiratory Disease 54	Chronic Low. Respiratory Disease 93	Congenital Anomalies 384	Liver Disease 1,631	Homicide 4,482	Suicide 7,249	Liver Disease 16,151	Diabetes Mellitus 72,194	Alzheimer's Disease 134,242
8	Respiratory Distress 388	Perinatal Period 54	Cerebro-vascular 32	Diabetes Mellitus 50	Diabetes Mellitus 312	Diabetes Mellitus 1,168	Diabetes Mellitus 2,904	Cerebro-vascular 5,686	Cerebro-vascular 14,153	Unintentional Injury 62,796	Diabetes Mellitus 102,188
9	Circulatory System Disease 386	Septicemia 43	Benign Neoplasms 28	Influenza & Pneumonia 50	Chronic Low. Respiratory Disease 220	Cerebro-vascular 600	Cerebro-vascular 2,008	Chronic Low. Respiratory Disease 3,538	Suicide 7,160	Nephritis 42,675	Influenza & Pneumonia 53,544
10	Neonatal Hemorrhage 317	Benign Neoplasms 35	Suicide 20	Cerebro-vascular 44	Complicated Pregnancy 191	Complicated Pregnancy 594	Influenza & Pneumonia 1,148	Homicide 2,542	Influenza & Pneumonia 6,295	Influenza & Pneumonia 42,511	Nephritis 52,547

10 Leading Causes of Unintentional Injury Deaths, United States 2020, All Races, Both Sexes

	Age Groups										
Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	All Ages
1	Unintentional Suffocation 1,024	Unintentional Drowning 425	Unintentional MV Traffic 319	Unintentional MV Traffic 476	Unintentional MV Traffic 6,741	Unintentional Poisoning 20,938	Unintentional Poisoning 21,943	Unintentional Poisoning 18,078	Unintentional Poisoning 15,030	Unintentional Fall 36,508	Unintentional Poisoning 87,404
2	Unintentional MV Traffic 72	Unintentional MV Traffic 284	Unintentional Drowning 117	Unintentional Drowning 91	Unintentional Poisoning 6,664	Unintentional MV Traffic 7,929	Unintentional MV Traffic 6,031	Unintentional MV Traffic 5,421	Unintentional MV Traffic 5,942	Unintentional MV Traffic 7,480	Unintentional Fall 42,114
3	Unintentional Drowning 34	Unintentional Suffocation 118	Unintentional Fire/burn 60	Unintentional Other Land Transport 52	Unintentional Drowning 593	Unintentional Drowning 611	Unintentional Fall 625	Unintentional Fall 1,282	Unintentional Fall 3,140	Unintentional Unspecified 4,839	Unintentional MV Traffic 40,698
4	Unintentional Poisoning 17	Unintentional Fire/burn 75	Unintentional Suffocation 38	Unintentional Poisoning 52	Unintentional Other Land Transport 184	Unintentional Fall 359	Unintentional Drowning 568	Unintentional Drowning 569	Unintentional Suffocation 827	Unintentional Poisoning 4,618	Unintentional Suffocation 6,768
5	Unintentional Natural/Environment 15	Unintentional Pedestrian, Other 54	Unintentional Other Land Transport 33	Unintentional Fire/burn 45	Unintentional Fall 152	Unintentional Suffocation 195	Unintentional Suffocation 273	Unintentional Suffocation 438	Unintentional Unspecified 664	Unintentional Suffocation 3,723	Unintentional Unspecified 6,265
6	Unintentional Fire/burn 8	Unintentional Natural/Environment 43	Unintentional Firearm 22	Unintentional Suffocation 33	Unintentional Firearm 129	Unintentional Other Spec., classifiable 181	Unintentional Fire/burn 238	Unintentional Unspecified 358	Unintentional Fire/burn 651	Unintentional Fire/burn 1,385	Unintentional Drowning 4,589
7	Unintentional Unspecified 8	Unintentional Firearm 40	Unintentional Pedestrian, Other 18	Unintentional Firearm 30	Unintentional Fire/burn 100	Unintentional Other Land Transport 175	Unintentional Other Spec., classifiable 214	Unintentional Fire/burn 315	Unintentional Drowning 639	Unintentional Drowning 941	Unintentional Fire/burn 3,036
8	Unintentional Fall 7	Unintentional Poisoning 37	Unintentional Natural/Environment 13	Unintentional Fall 18	Unintentional Suffocation 99	Unintentional Fire/burn 159	Unintentional Natural/Environment 201	Unintentional Natural/Environment 258	Unintentional Natural/Environment 464	Unintentional Natural/Environment 913	Unintentional Natural/Environment 2,118
9	Three Tied 2	Unintentional Other Land Transport 19	Unintentional Struck by or Against 13	Unintentional Other Transport 15	Unintentional Pedestrian, Other 78	Unintentional Pedestrian, Other 137	Unintentional Unspecified 201	Unintentional Other Spec., classifiable 254	Unintentional Other Spec., classifiable 331	Unintentional Other Spec., NEC ^N 605	Unintentional Other Spec., classifiable 1,446
10	Three Tied 2	Unintentional Struck by or Against 14	Unintentional Fall 10	Unintentional Struck by or Against 15	Unintentional Other Spec., classifiable 75	Unintentional Natural/Environment 133	Unintentional Other Land Transport 183	Unintentional Other Land Transport 185	Unintentional Other Spec., NEC ^N 229	Unintentional Other Spec., classifiable 360	Unintentional Other Land Transport 1,403

Relevant Public health skills and resources

- Focus on population-level change and upstream factors
- Insights on behavioral health and behavior change
- Multidisciplinary coalition-building
- Holistic performance metrics and needs assessment/evaluation tools
- Health communication and framing
- Community engagement
- Program implementation and training



Source: Ederer, Panik, Botchwey, & Watkins (2023). The Safe Systems Pyramid: A new framework for traffic safety.

Where can public health professionals be found?

- State, regional, and local departments of public health and social services
- Substance use prevention centers
- Hospital and health care institutions
- Health advocacy organizations
- University researchers



Source: CDC and APHA

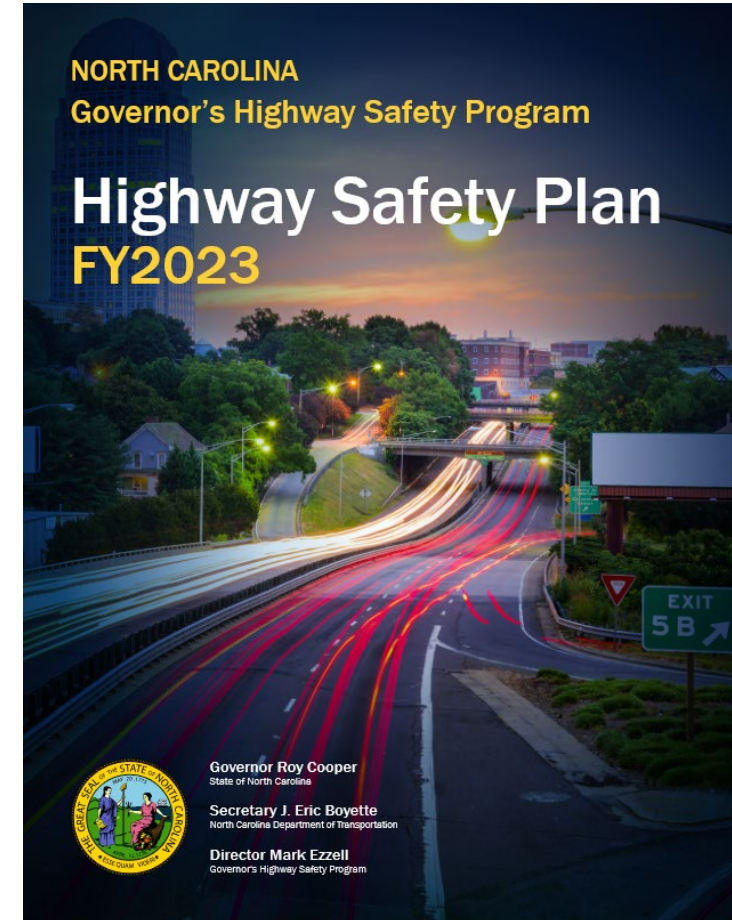
The NC Vision Zero Collaborative

A Public Health Approach to Transportation Safety



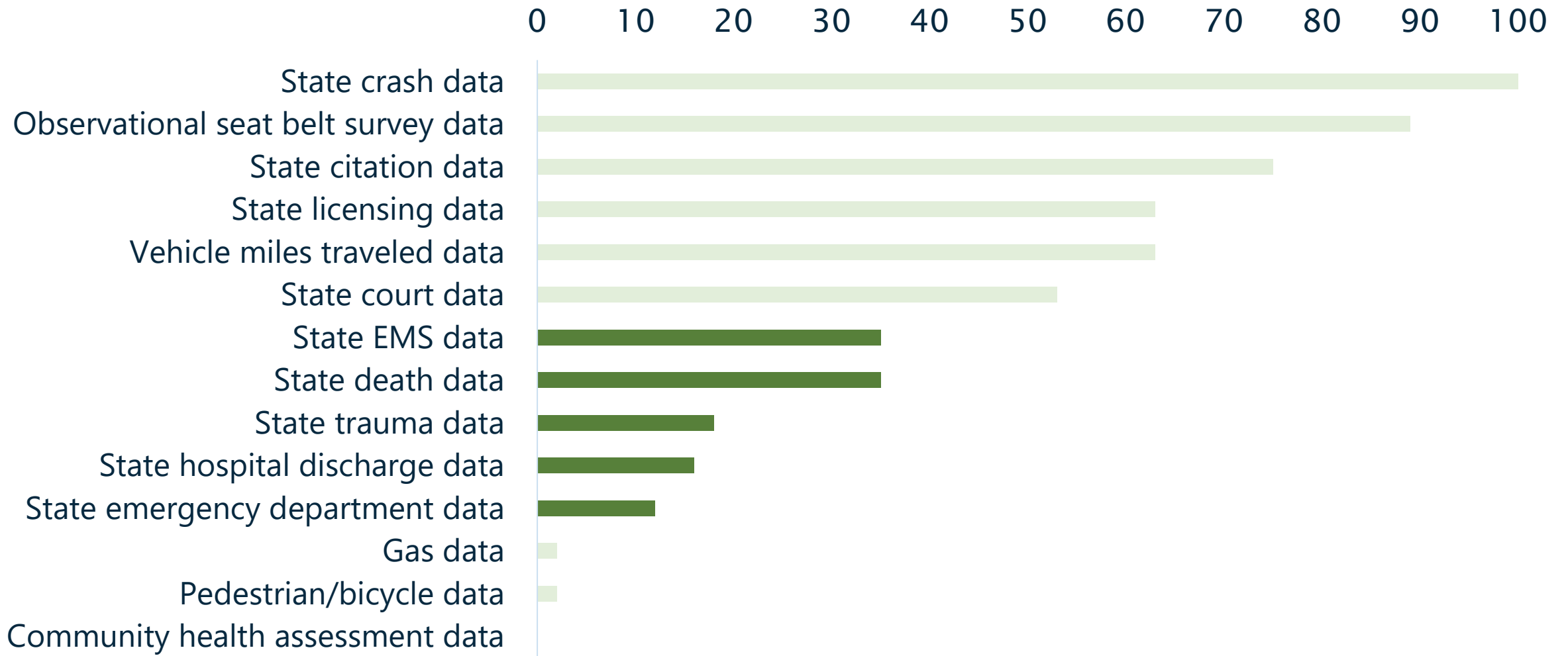
Integration of Public health in state Highway Safety Plans

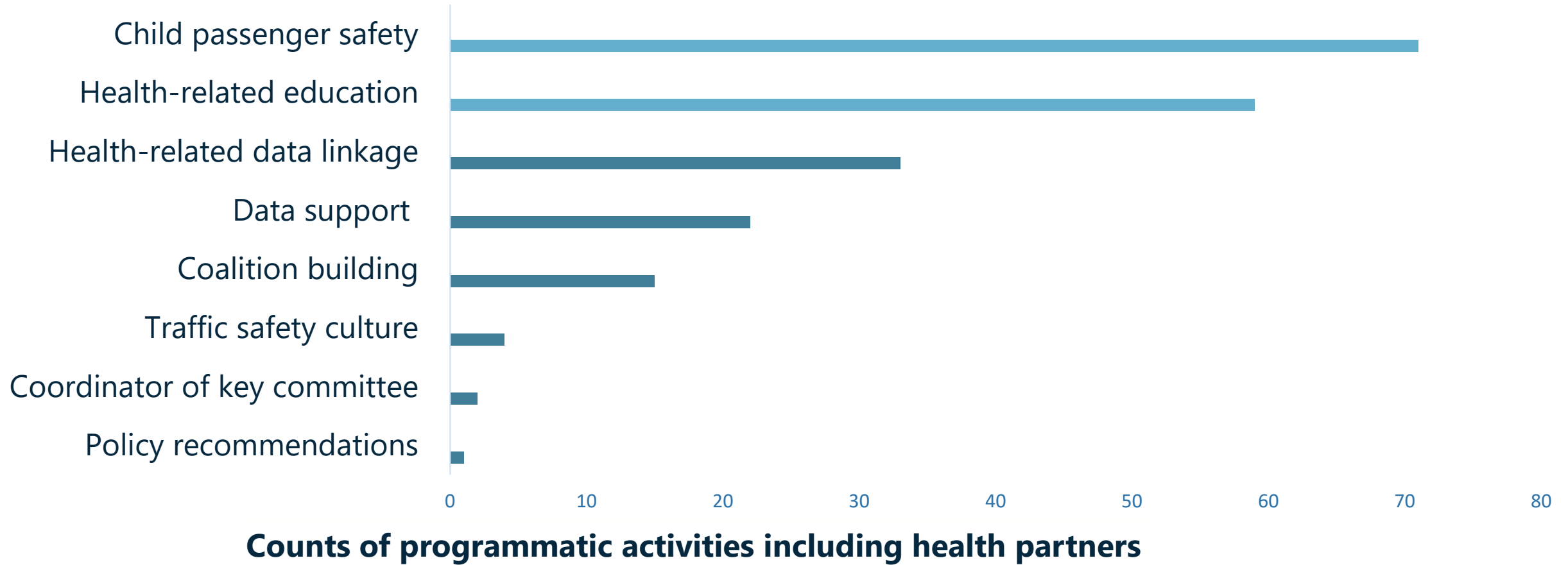
- Systemic analysis of all 2023 state highway safety plans (HSPs) (N = 57)
- Coding tool elements:
 - Health-related stakeholders involved in plan development
 - Integration of public health frameworks
 - Cross-sector coordination for data analysis
 - Data sources, uses, and activities
 - Public health partner engagement in safety activities



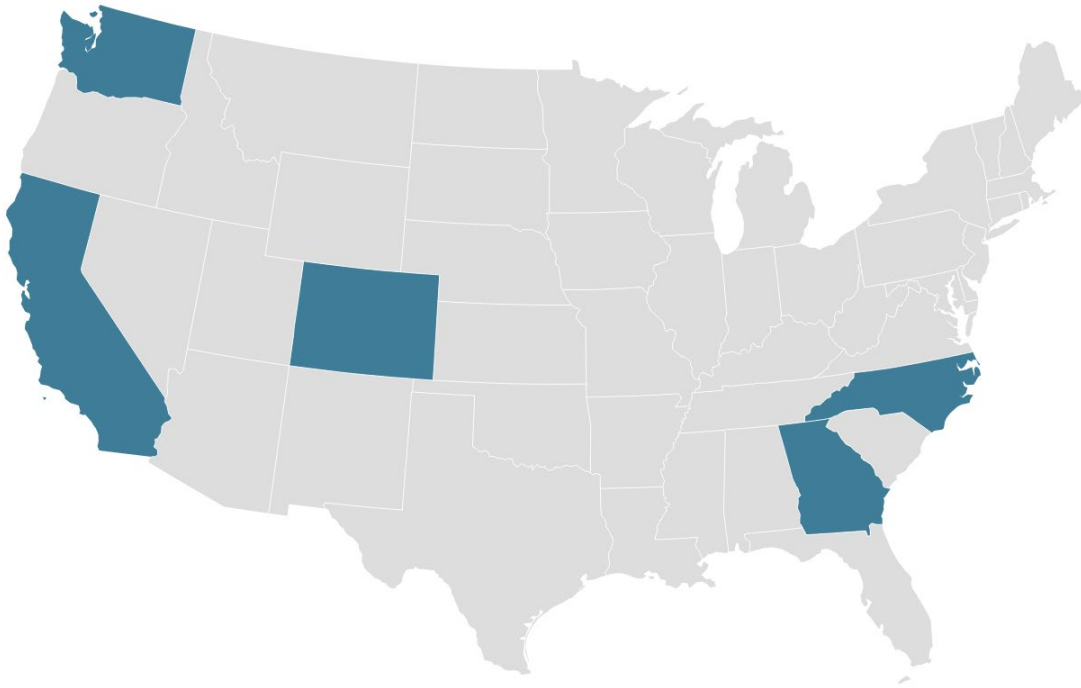
NCDOT

Percentage of plans using state and local data sources (N = 57)





Transportation-Public Health Leadership Pilot Program



Public Health and Transportation Foundations

- Describe sector win-wins of collaboration with Public Health
- Identify key public health roles, services, and practices

Identifying Root Causes of Traffic Injuries

- Develop an understanding of core contributors to traffic injury and death
- Gain familiarity with tools and processes to identify vulnerable populations and high priority areas

Strategic Planning and Building a Culture of Traffic Safety Through a Public Health Lens

- Describe opportunities to strengthen public health integration in transportation safety plans
- Apply tools to support collaborative planning processes

Public Health Oriented Program Development and Implementation

- Identify opportunities to assess and enhance public health approaches in program development, delivery, and evaluation

Data Enhancement for Safety Monitoring and Evaluation

- Recognize the value of public health data and understand actionable steps that can be taken to enhance data sharing and integration

The NC Vision Zero Collaborative

A Public Health Approach to Transportation Safety



Project team and Partners

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UNC Injury Prevention Research Center

Seth LaJeunesse

UNC Highway Safety Research Center

McKenzie Hellman

UNC Injury Prevention Research Center

Kristen Hassmiller Lich

UNC Department of Health Policy and Management

Stephen Heiny

UNC Highway Safety Research Center

Kelly Evenson

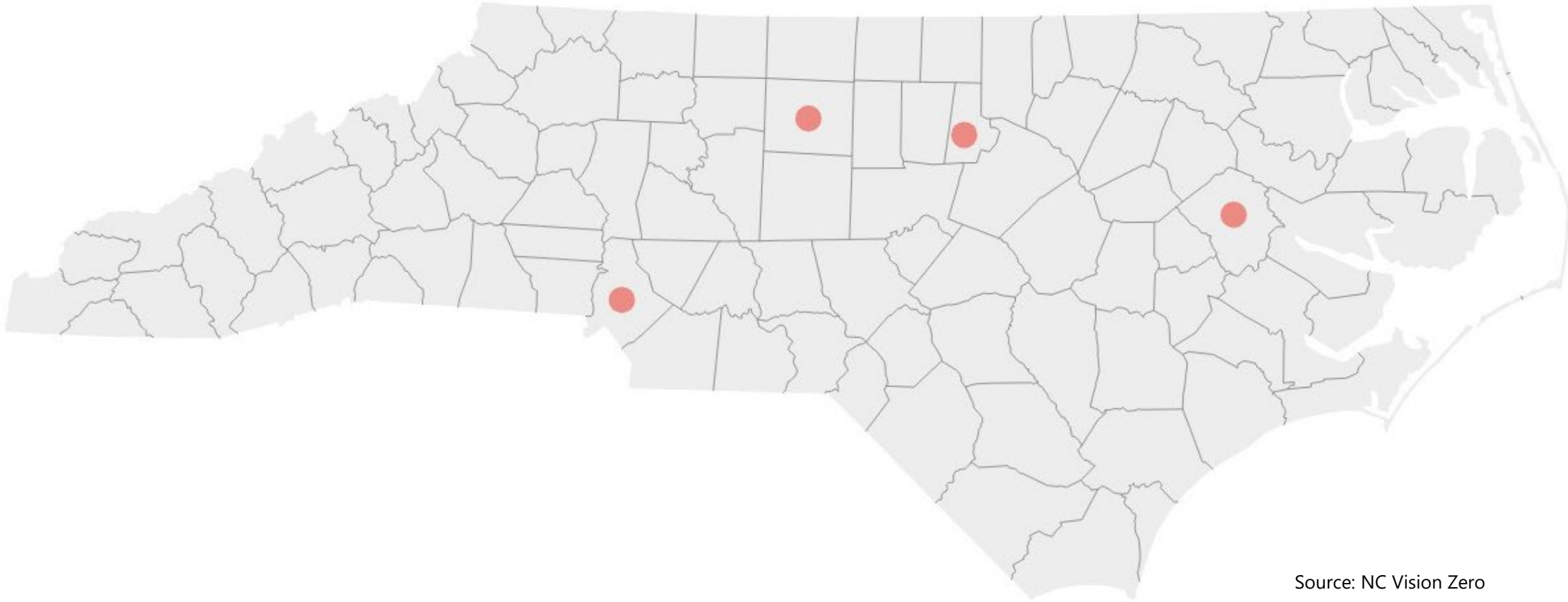
UNC Department of Epidemiology

Sandro Figueroa

UNC Highway Safety Research Center

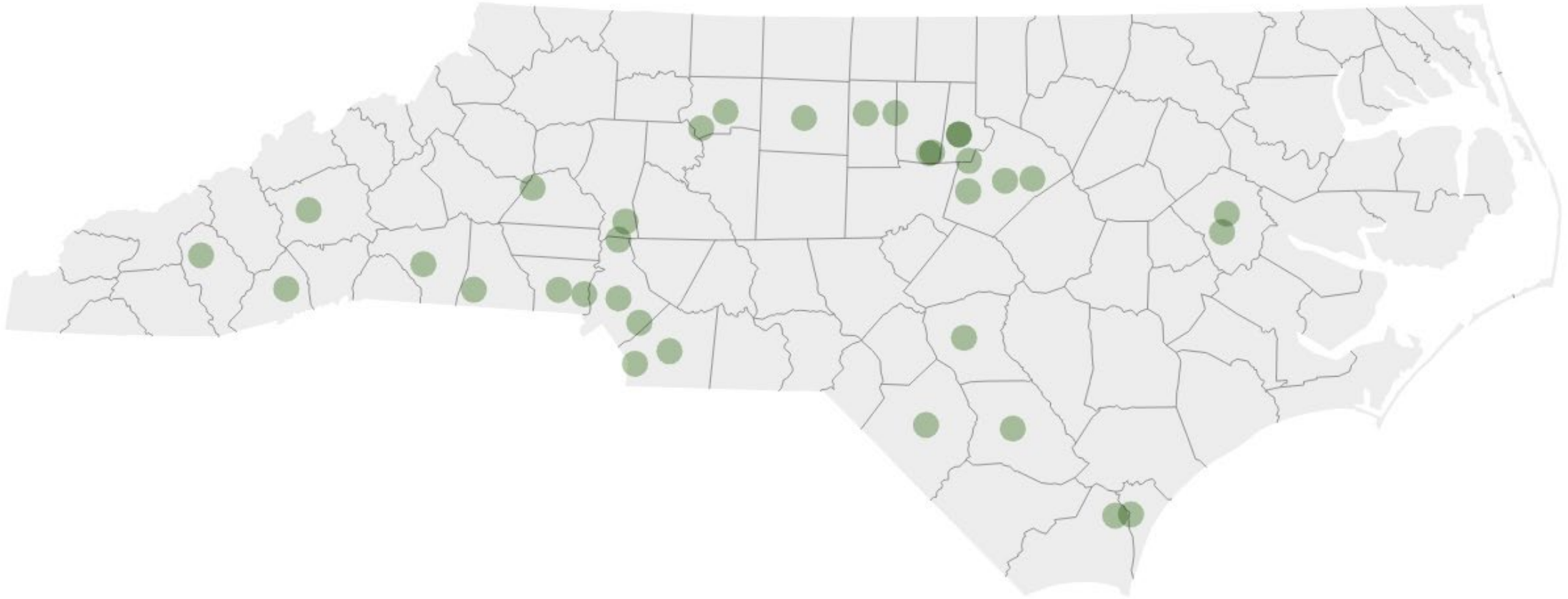


Vision Zero in NC (2018)



Source: NC Vision Zero

Vision Zero in NC (2025)



Source: NC Vision Zero

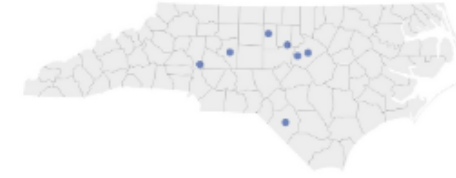
Exploration



COMMUNITY	VISION ZERO RESOLUTION	VISION ZERO COALITION	VISION ZERO CHAMPION	ADOPTED PLAN	PLAN PROJECTS IMPLEMENTED	SS4A FUNDING
Bolling Springs	✓	✓	✓			✓ ¹
Benson						✓ ¹
Broward	✓ 2022	✓	✓	✓	✓	
Carboro	✓ 2022		✓		✓	✓ ²
Central Piedmont Regional Council	data unavailable					✓ ¹
Claymont	✓ 2022	✓			✓	✓ ^{1,2}
Elizabethtown	data unavailable					✓ ¹
Fayetteville	data unavailable					✓ ¹
FootHills Regional Commission	data unavailable					✓ ¹
Gastonia						✓ ¹
Hickory	data unavailable					✓ ¹
Kannapolis	data unavailable					✓ ¹
Knightdale	✓ 2021					✓ ²
Land of Sky Regional Council	data unavailable					✓ ¹
Leland		✓				✓ ¹
Monroe						✓ ¹
Southwestern Commission	data unavailable					✓ ¹
Waxhaw	data unavailable					✓ ¹
Wilmington MPO						✓ ¹

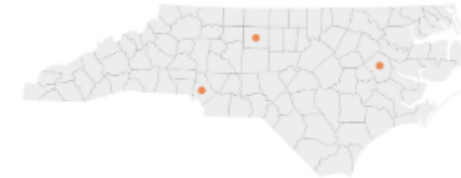
SS4A Funding: 1: Planning; 2: Planning as part of regional entity; 3: Implementation/Commissionation

Installation



COMMUNITY	VISION ZERO RESOLUTION	VISION ZERO COALITION	VISION ZERO CHAMPION	ADOPTED PLAN	PLAN PROJECTS IMPLEMENTED	SS4A FUNDING
Apex	✓ 2020	✓		✓ 2022	✓	✓ ²
Burlington-Graham	✓ 2022	✓	✓	✓ 2022	✓	✓ ²
Chapel Hill	✓ 2021	✓	✓	✓ 2021	✓	✓ ²
Davidson	✓ 2021	✓	✓	✓ 2022		
Durham	✓ 2017	✓		✓	✓	✓ ²
Mooreville	✓ 2021	✓	✓	✓ 2022	✓	
Raleigh	✓ 2022	✓	✓	✓	✓	✓ ¹
Robeson Co.						

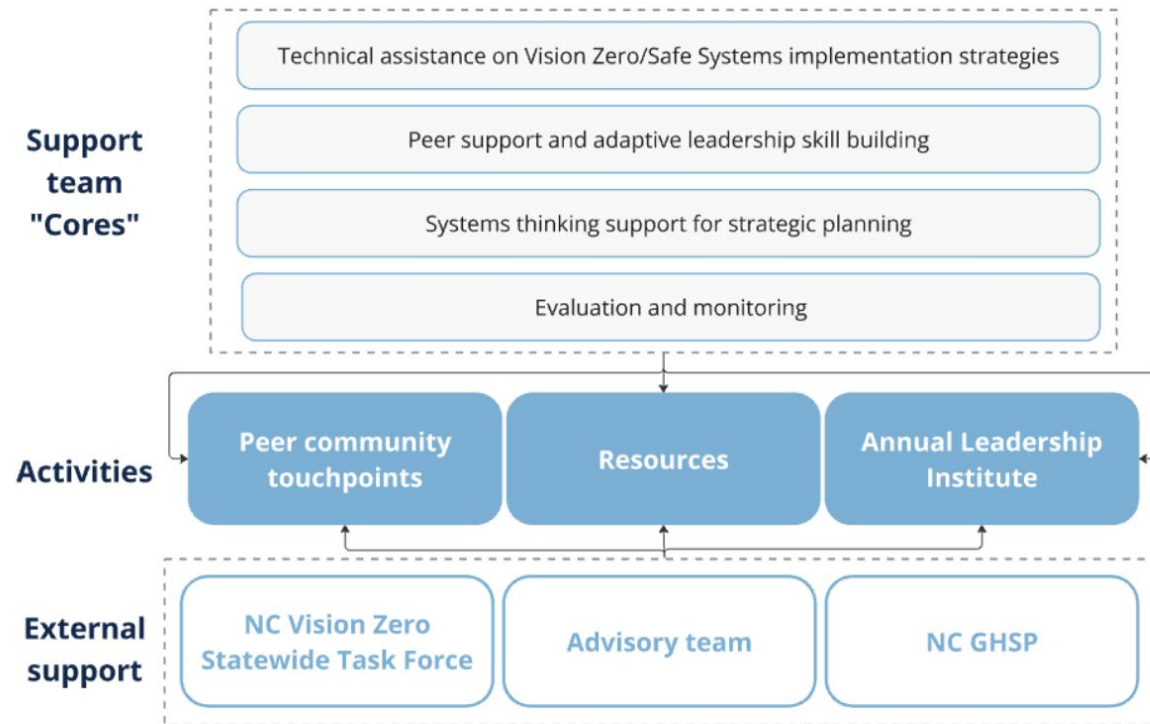
Implementation



COMMUNITY	VISION ZERO RESOLUTION	VISION ZERO COALITION	VISION ZERO CHAMPION	ADOPTED PLAN	PLAN PROJECTS IMPLEMENTED	SS4A FUNDING
Charlotte	✓ 2019	✓	✓	✓ 2019	✓	✓ ²
Greensboro	✓ 2017	✓	✓	✓ 2019	✓	✓ ^{1,2,3}
Greenville	2018	✓	✓	✓ 2018	✓	✓ ²

SS4A Funding: 1: Planning; 2: Planning as part of regional entity; 3: Implementation/Commissionation

The NC Vision Zero Collaborative Support Model



Peer Community Touchpoint Meetings

- Monthly meetings: Four groups of 4-5 communities
- Quarterly "All Hands" meetings: All communities and statewide partners (e.g., GHSP, NCDOT, ITRE)

**NC Vision Zero
"All Hands"
Quarterly Meeting**

**NC
VISION
ZERO**

**FEBRUARY 24, 2025
10 AM - 12:00 PM ET**

ZOOM LINK

**For more information:
NCVisionZero@unc.edu**

Featured Speakers

Joel Meyer, AICP
Acting Transportation Safety Officer
Vision Zero Austin
Join us for Joel's presentation on communicating VZ success using data visualizations

Carrie Simpson, PE
Safety Evaluation Engineer
NCDOT
Join us for Carrie's presentation on NCDOT's Secondary Road Safety Program

GOVERNOR'S HIGHWAY SAFETY PROGRAM

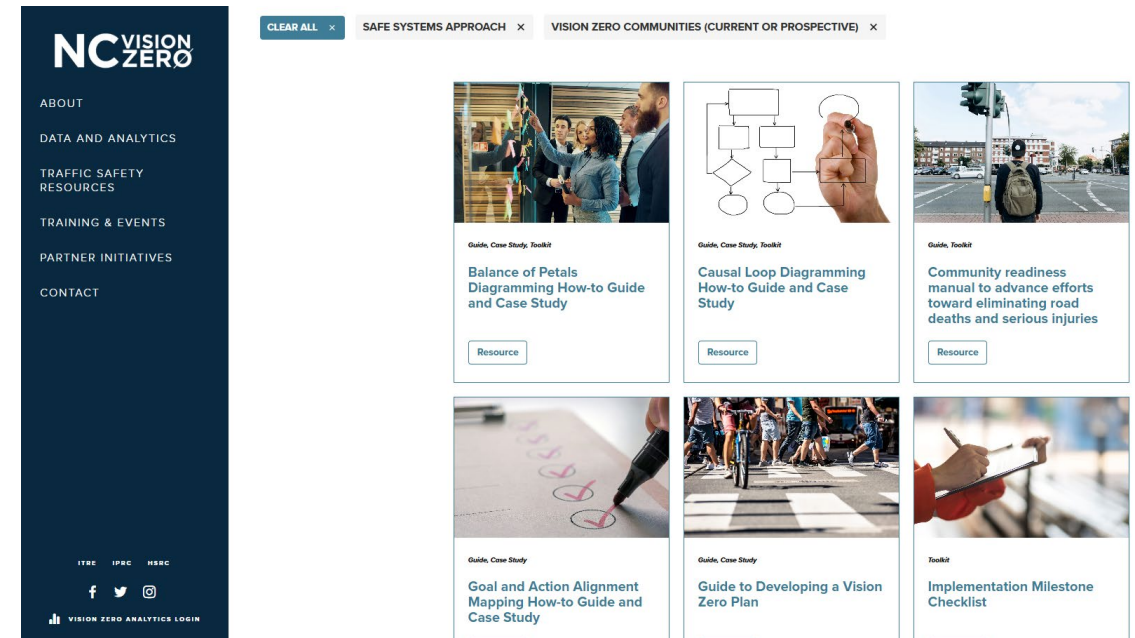
**THE UNIVERSITY OF NORTH CAROLINA
HIGHWAY SAFETY RESEARCH CENTER**

UNC INJURY PREVENTION RESEARCH CENTER

Source: NC Vision Zero

Resources

- Key Partner Reports
- Guide for Developing a Vision Zero Plan
- Readiness Assessments
- Voices of Vision Zero video series
- Media Framing Guide
- Partner Identification Tool
- Implementation Milestone Checklist
- VZ Plan Library



Source: NC Vision Zero

NC Vision Zero Leadership Institute

- **Who:** Team-based training for multisector community groups (3+ sectors)
- **Format:** 1/2 day virtual Pre-Session + 2 days in-person (Chapel Hill, NC)
- **Delivery:** speakers, panelists, team-based, facilitated activities, peer exchange, and community-building
- **Cost:** free to attend, hotel accommodations covered for all traveling 40+ miles



Content: Strategic skill areas

1. Cross-sector collaboration
2. Safe Systems and Vision Zero
3. Metrics, evaluation, and data-driven strategies
4. Centering equity in planning and implementation
5. Speed management
6. Community engagement and participatory planning
7. Tactical urbanism/quick build projects
8. Effective communications and building a culture of safety



NC Vision Zero Evaluation 2025



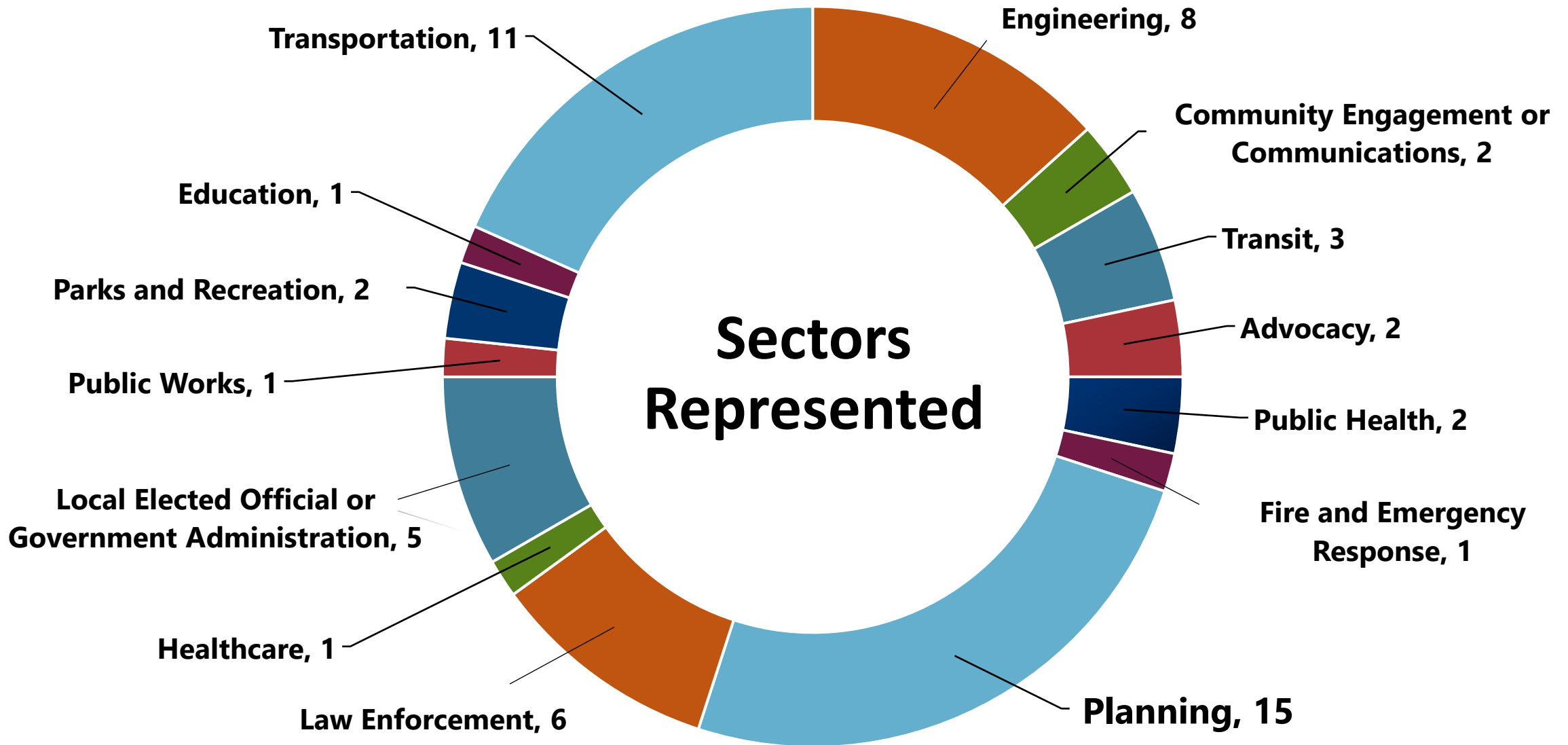
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Evaluation measures

- Team characteristics
- Confidence in skills
- Meeting session objectives
- Satisfaction with the Institute

Team characteristics



Identifying and addressing upstream factors

The Safe System Pyramid and AcciMapping

I can describe what the “pathological agent” in road safety is.



I can differentiate between “latent” and “active” safety measures.



To what extent do you agree that the presentation by Dr. David Ederer titled “Vision Zero and Safe System Approach” was useful in your work with Vision Zero?



■ Strongly Agree ■ Agree ■ Disagree ■ Strongly Disagree

'I can identify at least one policy or practice that could be changed or added to improve road safety outcomes in my community'



'I can explain what Accimapping is and its use in understanding road safety'



'I can describe at least two leverage points relevant to (your) community'



'I can describe at least one chain of factors through all levels of an Accimap'



■ Strongly Agree ■ Agree ■ Disagree ■ Strongly Disagree

Coalition-building

Assessing and improving coalition factors

This question reflects on the session objectives with Dr. Kristen Hassmiller Lich. I can describe the importance of assessing my coalition's strengths and challenges in working together.



To what extent do you agree that the presentation by Dr. Kristen Hassmiller Lich titled "The Importance of Investing in Strong Coalitions" and discussion on coalition factors was useful in your work with Vision Zero?



■ Strongly Agree ■ Agree ■ Disagree ■ Strongly Disagree

'I can describe at least one strategy another community used to strengthen their coalition that could be useful for our coalition'



'I can identify two coalition factors our team is proud of and how those factors were achieved'



■ Strongly Agree ■ Agree ■ Disagree ■ Strongly Disagree

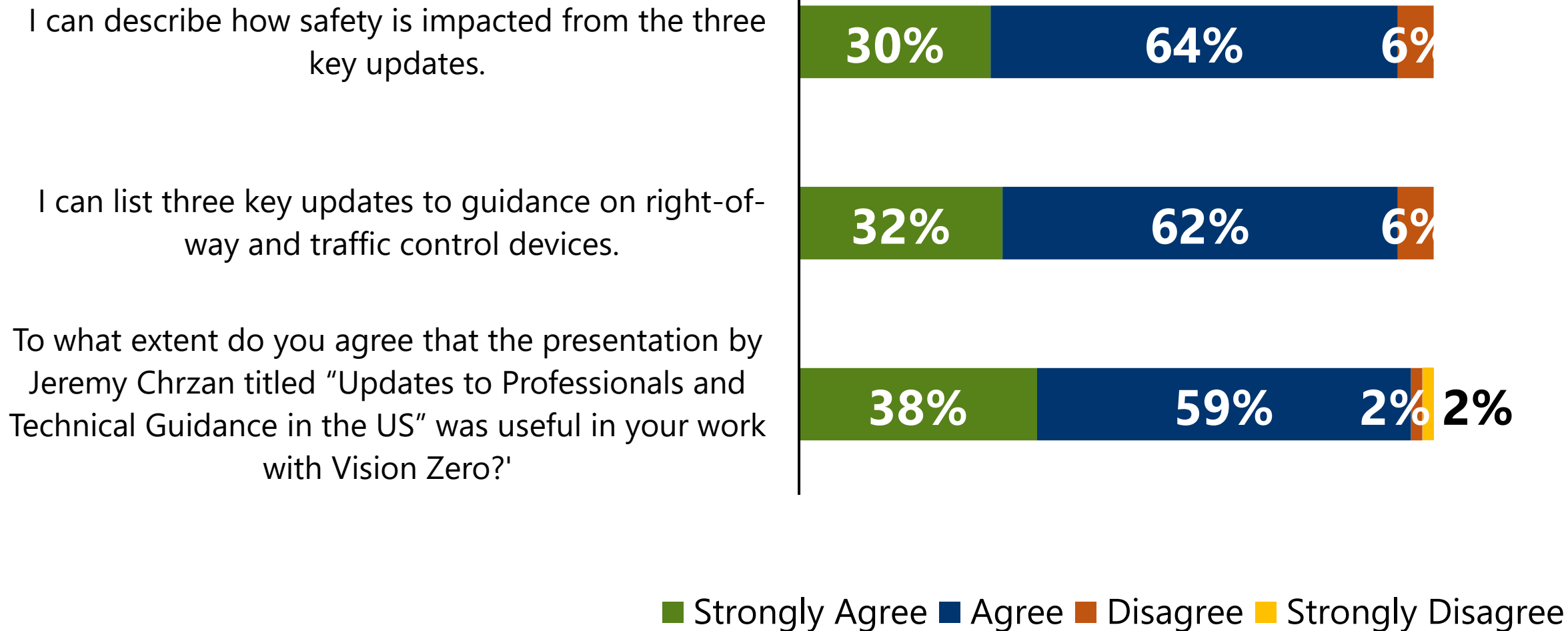
'Were the coalition assessment results useful?'



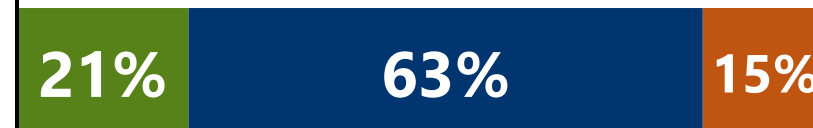
■ Yes ■ No

Best practices in road safety

Updates to PROWAG/MUTCD and panel on working effectively with DOTs to prioritize safety



'I can identify at least three strategies to work more effectively with DOT around road safety'



'To what extent do you agree that the presentations by the panel, titled "Working Effectively with the Department of Transportation" was useful in your work with Vision Zero?'



■ Strongly Agree ■ Agree ■ Disagree ■ Strongly Disagree

Communications, framing, and community engagement

Photovoice tool, solutions framing, and communicating results

I can discuss how photovoice could be used with your Vision Zero initiative (from group discussion)



I can describe the purpose of photovoice.



To what extent do you agree that the presentation by Dr. Alexandra Lightfoot titled "Introduction to Photovoice" was useful in your work with Vision Zero?

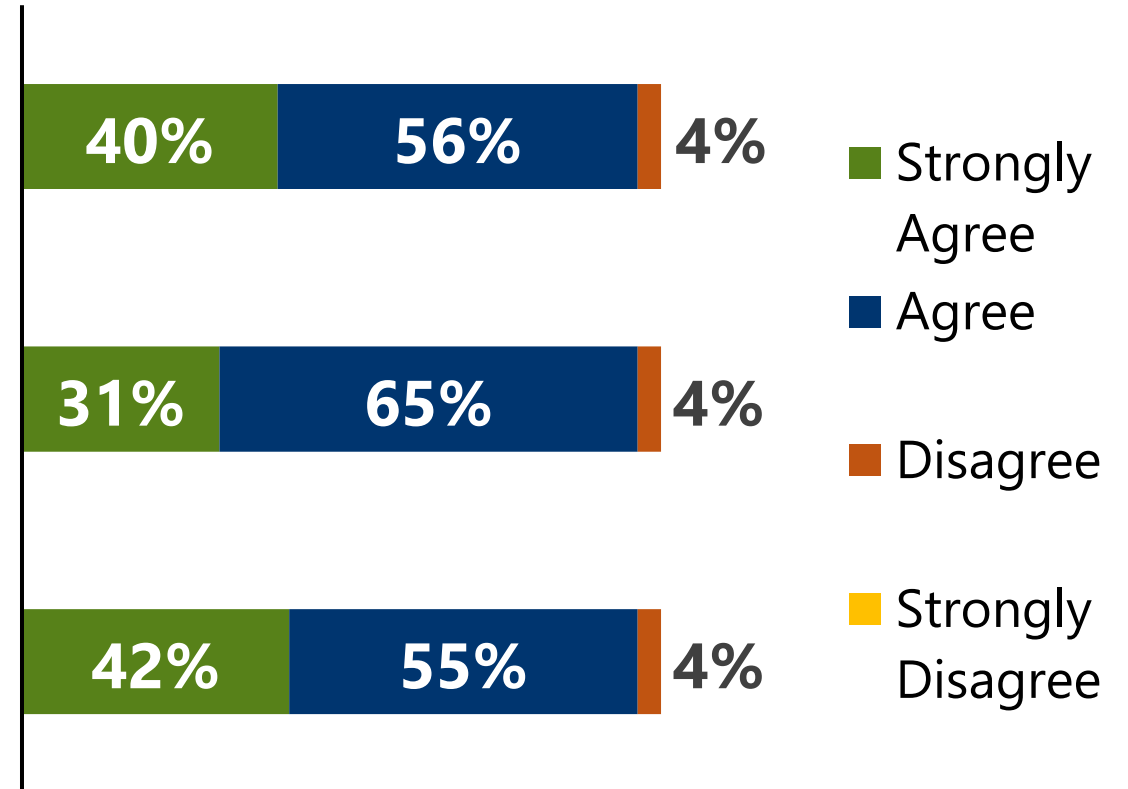


■ Strongly Agree ■ Agree ■ Disagree ■ Strongly Disagree

'I can articulate the value of solutions framing in comparison to crisis framing.'

'I can describe at least two different framing techniques.'

'To what extent do you agree that the presentation by Seth LaJeunesse on "Solutions Framing" and discussion were useful in your work with Vision Zero?'



'I can articulate the next steps our coalition will take on the storyboard'

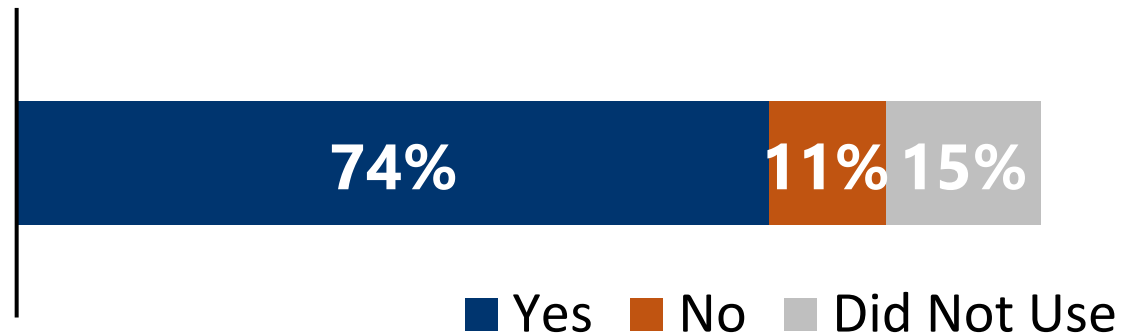


'I can apply solutions framing skills to develop a storyboard for a safety project'



■ Strongly Agree ■ Agree ■ Disagree ■ Strongly Disagree

'Was the Storyboarding Template useful?'



Satisfaction with Institute

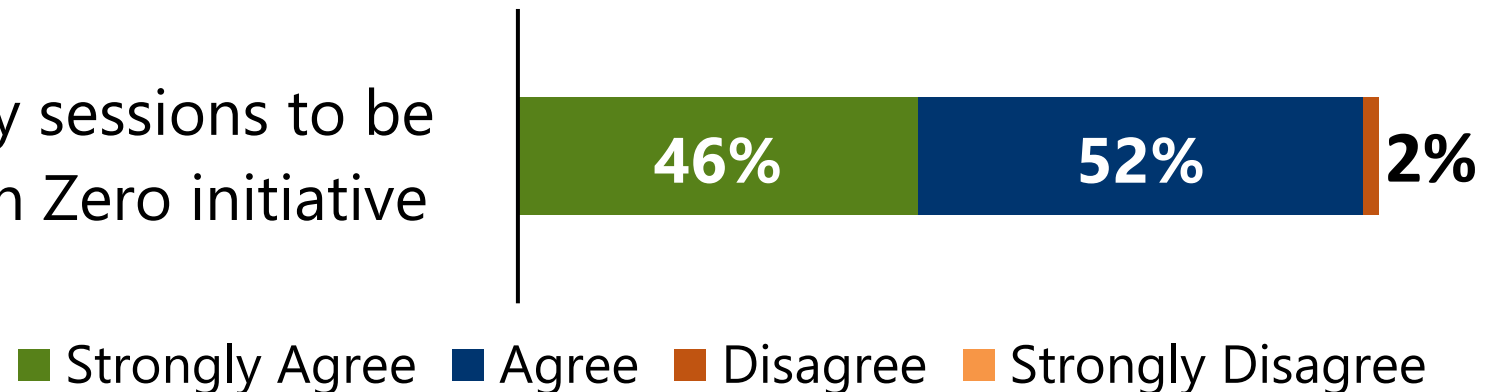
What was the best part of Monday's session?

The small group acclimating discussion (outside of my working group). Great to meet/discuss with others in the field.

Accimapping and solutions framing were great and appreciated the time given for both activities.

I really enjoyed Accimapping as a means of understanding what falls upstream of our organization and how our regional reach trickles down to "on-the-ground" experiences in our communities.

I found the Monday sessions to be useful for my Vision Zero initiative



I feel confident in my familiarity with Vision Zero and Safe Systems approaches, including the roles of different sectors (e.g., public health, engineering) in a Vision Zero initiative.



I found the overall Tuesday sessions to be useful for my Vision Zero initiative



■ Strongly Agree ■ Agree ■ Disagree ■ Strongly Disagree

What was the best part of Tuesday's session?

I really liked the bonus team time. My team was prepared with a challenge that we wanted to workshop and jumped right in.

The session with our teams were really great. Seth did a fantastic job facilitating

"Built upon day 1 well" ... "Examples of successful strategies" ... "The after lunch team time" ... "Storyboard!" ... "Team collaboration and open discussion" ... "Panel with NCDOT" ... "Team work time. We had to plan a quick build program!"

I liked having again dedicated team time since we brought people we often don't get a lot of time to talk with (ie communication, council members)

The panel was a nice spread of professionals offering their feedback to working with NCDOT

Takeaways and next steps

- Leverage the skills and resources public health can offer to transportation safety efforts (e.g., the NC Vision Zero collaborative support model)
- Let's connect!
 - Building a community of practice through the Transportation-Public Health Leadership Pilot Program
 - Adapting the NC Vision Zero model in your state

Contact:

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UNC Injury Prevention Research Center

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Presentation Title

Garrett Townsend

Public Affairs Director AAA - Georgia

The Role of HSOs: Understanding how Highway Safety Offices lead traffic safety efforts at the state level and why partnerships are essential.

The mission of the Governor's Office of Highway Safety is to reduce the number of traffic fatalities and injuries by providing highway safety data and fact-based analyses. This will assist communities and safety advocates in implementing effective programs that will change high-risk driving behavior and increase safety on our streets and highways.



Voices are amplified with strategic use of partners.



DRIVE DOWN TRAFFIC FATALITIES



Effective Partnerships: Strategies for collaborating with law enforcement, local agencies, businesses, and non-profits to enhance safety outcomes.

Align priorities, find stakeholders with shared vision and common goals



Create multi-sector safety task forces



Provide support to grantees



Mobilization support (State and National)

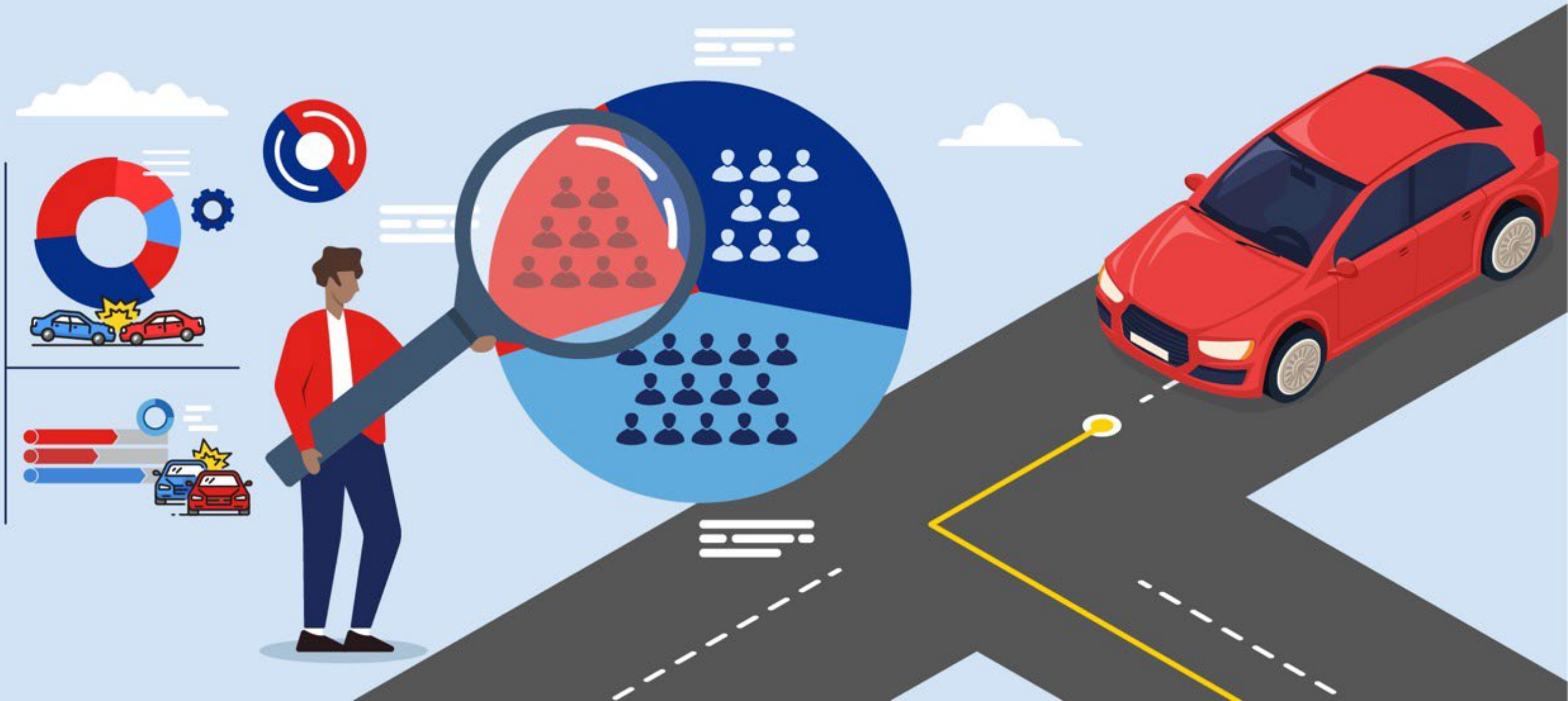


Data-Driven Collaboration: How HSOs and partners can use data to identify problem areas and design targeted interventions.

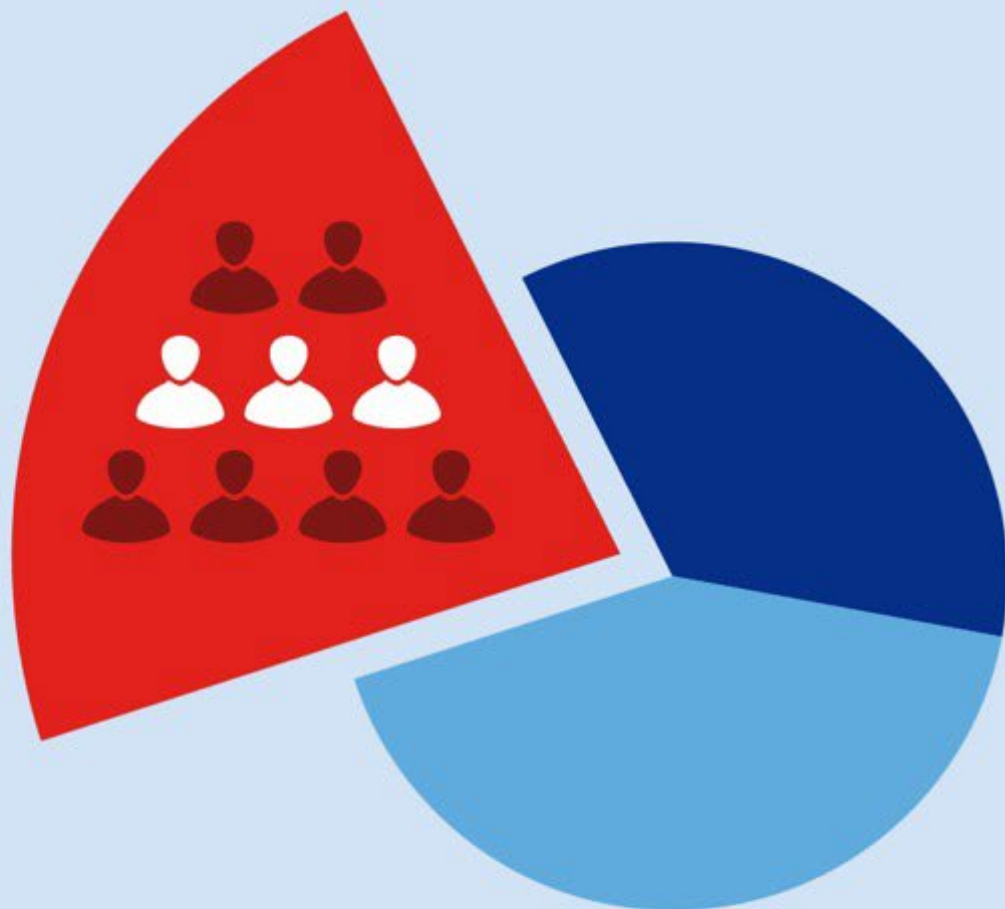
Data-sharing, real time data that engages partners and answers the questions, why I should be involved



Identify common data points



Turn data into people



Real-World Successes: Brief case studies that showcase the effectiveness of collaborative efforts in reducing crashes and fatalities.

Schools Open Drive Carefully ➡



Just Drive – Teen Driver Safety Week



JUST DRIVE

**TEEN DRIVER SAFETY
PROGRAM**

**NATIONAL TEEN DRIVER
SAFETY WEEK 2024**

Traffic Safety Summits

