

Background

The Wichita Area Metropolitan Planning Organization (WAMPO) is the MPO for the Wichita metropolitan area. Covering all of Sedgwick County and portions of Butler and Sumner County including 22 cities, the WAMPO region has a population of 547,230 as of the 2020 census. In early 2023, WAMPO and its member agencies embarked on a Comprehensive Safety Action Plan with the goal to reduce and ultimately eliminate fatal and serious injuries on their roadway network. This plan is currently on track to be completed in September 2023. From this plan, several strategies are being explored and it was determined that additional planning efforts would be needed to determine the strategies that would be most effective in this region.

Between 2016 and 2020, Sedgwick County recorded 305 traffic-related deaths and more than 900 suspected serious injuries. Sedgwick County had nearly double the number of fatalities of Johnson County and Wyandotte County combined. Together, these three counties comprise the highest number of fatalities in the state of Kansas. As part of their Drive to Zero Campaign, Kansas DOT identified Sedgwick County as a priority area for improving traffic safety. WAMPO is partnering with Kansas DOT on this Comprehensive Safety Action Plan to collectively partner to reduce fatalities and serious injuries.

Supplemental Planning and Demonstration Grant Activities

While working to complete their [Comprehensive Safety Action Plan](#), WAMPO and its member agencies identified the need for additional analysis and desire to pilot some potential strategies to determine which of the following countermeasures may be most effective in mitigating crashes in the region:

Behavioral Messaging and Outreach Pilot Projects

Kansas DOT developed a messaging campaign in conjunction with the statewide efforts called “Drive Safe Sedgwick”. To build upon this statewide effort, WAMPO and its member agencies would like to conduct a messaging campaign specific to their region involving grassroots community organizations like neighborhood and community groups. Ideally, a marketing and advertising company would be hired to develop safety messages, specifically those about speeding, intersection safety, and vulnerable road users. Focus groups involving residents of all ages and gender will be used to determine which messages resonate the most with people in the WAMPO region. Once developed, the message will be disseminated through multiple mediums – tv commercials, social media, radio, etc. The reach of these campaigns will be measured based on the number of views and other statistics.

Additionally, outreach may be implemented at specific schools in the region to target younger drivers. One way to involve schools may be to host an assembly or event for students to understand the dangers of speeding. Messaging through a motivational speaker or showing a vehicle that was involved in a severe crash may be used to communicate to the students. After the assembly, the students will be polled to determine how the message resonated with them. From this information, the campaign may be applied to other schools in the region.

Another message effort would be to partner with a large regional employer, particularly one involved in the transportation industry and/or with a large amount of their workforce using the roadway network for their jobs. This campaign would be focused on the employer and its employees adopting a culture of safety – one where seat belts are required for all vehicle occupants, where cell phone use, particularly use that is not hands-free, is prohibited, and other safety behaviors are promoted and rewarded. The focus of this pilot project is to determine the best way to approach additional companies to participate, gauge interest in employee participation, determine if the corporate culture shift was successful in behavior change, and solicit feedback to optimize the campaign for other companies in the future.

Successes gleaned from the behavioral messaging and pilot projects will be implemented region-wide.

Before and After Safety Analysis

A series of potential infrastructure countermeasures have been identified for the WAMPO region's Comprehensive Safety Action Plan. Several of these improvements have already been implemented in some areas of the region but haven't been analyzed to determine if they improved outcomes for traffic safety as expected. Analyzing these existing countermeasure locations is desired. Data, including crashes, vehicular speeds, and public perception will be collected. Countermeasures may include roundabouts, road diets, bicycle facilities, and pedestrian enhancements such as curb extensions and leading pedestrian intervals. Furthermore, if these examples can provide data to prove to local skeptics that these generally proven safety countermeasures did, in fact, have the expected outcomes at the local level, they can help garner support for the proliferation of these improvements region-wide.

For other countermeasures, a temporary demonstration can be used to assess effectiveness. For example, one common concern at intersections is the presence of large, channelizing right-turn lanes which result in higher free-flow speeds and the potential for crashes involving pedestrians. Using temporary or removable products, the channelization lane would be temporarily closed, such that right-turning movements would be limited to a tighter turning radius at the intersection. Using cameras, driver and pedestrian behaviors and near-miss interactions could be monitored both before and after the channelization closure along with measuring the speeds of the turning vehicles.

Another countermeasure being explored is the HAAS Alert System. With this system, a transponder is installed and integrated with the lightbar on a law enforcement or first responder vehicle which sends digital alerts to other drivers via online mapping applications (such as Waze) to inform drivers of approaching emergency vehicles. Per the HAAS website, the signal can alert drivers of police activity within up to 30 seconds of an officer arriving on a scene or approaching the area. This alert will help drivers slow down or move over for oncoming emergency vehicles. The Sedgwick County Sheriff's Department would like to pilot this device to determine if it will be effective for other first responders in the WAMPO region. The Kansas Highway Patrol has already implemented this device on a few of its vehicles with success. Success metrics for the implementation in the WAMPO region include measurement of response times, number of motorists reached, and number of incidents.

Once the before and after analyses are complete, specifically for infrastructure changes, further analysis will be performed to determine which segments and intersections within the WAMPO region would most benefit from these specific improvements. A report summarizing the results of the analysis and proposed corridors for improvement will be developed.

Supplemental Planning for the City of Andover

The City of Andover is seeking money to perform a deeper analysis of the contributing factors of crashes in their city. Andover is in the small portion of Butler County covered within the WAMPO region and is the fastest-growing city within the state. Given the anticipated growth, Andover would like to further evaluate and proactively identify safety improvements on their roadway network specifically. This plan will be a supplement to the WAMPO Comprehensive Safety Action Plan. As part of this planning effort, Andover-specific stakeholders will be convened. As part of this outreach, the stakeholders and residents will be educated about safety improvements that may be implemented in Andover to prevent crashes from occurring, especially as additional development occurs in the city. This supplemental plan will also coordinate with the city's comprehensive plan which is currently in development. As a result of this planning effort, all departments of the city will be coordinated in reducing the potential for fatalities or serious injuries on their roadway network. The strategies included in Andover's plan will support WAMPO's Comprehensive Safety Action Plan while providing a list of proactive safety strategies that will be implemented within the City of Andover to accommodate growth and new development.