

## OBJECTIVE

The University of Wisconsin – Milwaukee (UWM), with the support of the WisDOT, designed and developed an online survey to get feedback regarding the usage and collection of the data found on the DT4000 report.

## BACKGROUND

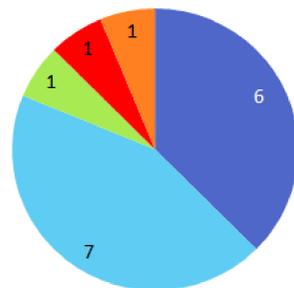
- The Wisconsin Department of Transportation (WisDOT) is working to improve the format of the DT4000 Crash Report.
- The crash narrative depicts the scene of the crash. Specifics are included such as which vehicle hit whom, the details regarding why the crash occurred, and specific location details regarding the crash. The narrative is often used to confirm other details that are in the data field section of the report and find additional information. The other written section on the report is the crash diagram which shows the physical layout of the area in which the crash occurred.

## METHODOLOGY

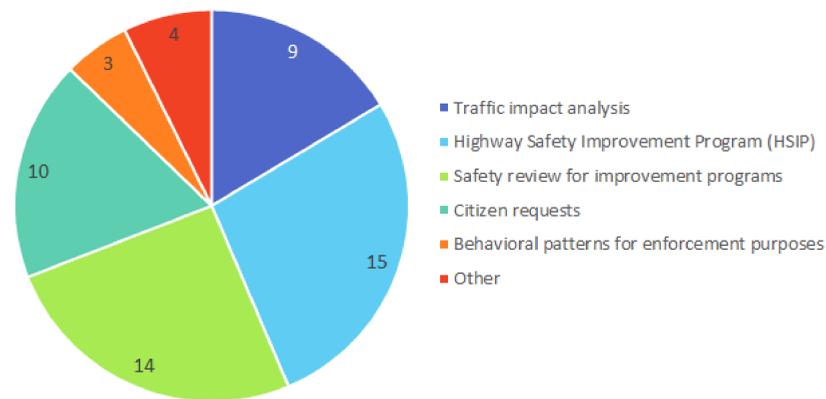
By targeting the data users, a comprehensive survey was created to pinpoint what works and does not. Working with WisDOT, an initial set of questions was defined to be distributed. The survey contained 12 questions for the data user. The survey was distributed through different transportation engineering groups and asked users for their participation in December of 2020.

### In what capacity have you used crash narratives?

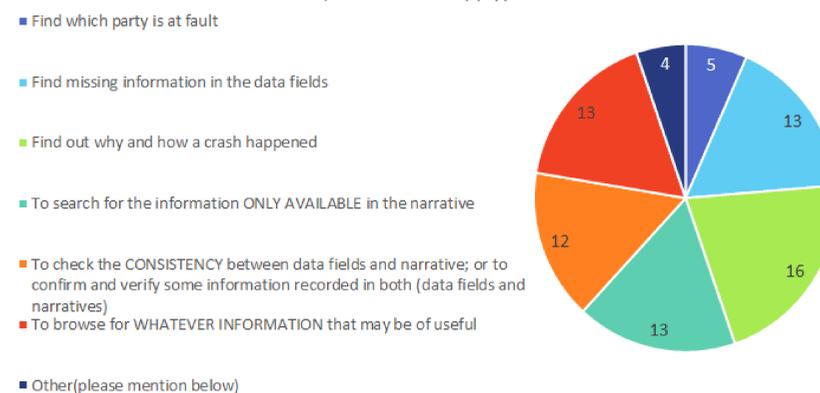
- I am a government employee/onsite consultant. This is part of my job.
- I am a consultant. This is for projects/services funded by the government.
- I am a consultant. This is for projects/services funded by other agencies.
- I am a researcher. This is for projects/services funded by the government.
- I am a consultant that uses the information for projects funded by both the government and other agencies



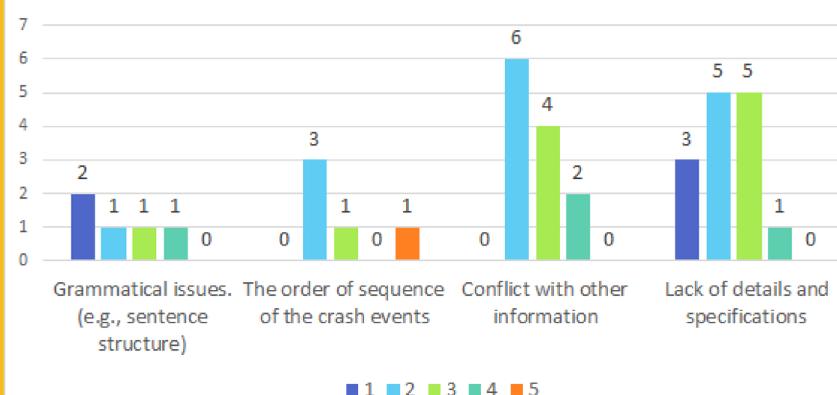
### For what type of work do you need to review the crash narratives? (Select all that apply)



### Why do you need to review the crash narrative section given the data fields? (Check all that apply)



### What are the biggest challenges during your review of narrative section in a crash report? (check all that apply with a scale for the frequency of the challenges (0 being never and 5 being every time))



## RESULTS

- A total of 16 responses were collected for this survey comprised of 14 data users and 2 data user & collectors. 93.75% of the data collectors identified themselves as consultants or government employees. The data users use the crash narratives for a variety of purposes, including Highway Safety Improvement Program (15), safety review for improvement programs (14), citizen requests (10), and traffic impact analysis (9).
- All indicated that they use the narrative to look for detailed information and the rate that they find the information they needed on a scale of 1-5 was an average of 3.38. Most commonly, the narrative was used to find out why and how a crash happened (16), to search for information only in the narrative (13), to browse for whatever information may be useful (13), find missing information in the data fields (13), and to check for consistency (12). When asked how often the information is found within the narrative, the conclusion was sometimes.
- Discussing the challenges of reviewing the crash narrative, the lack of details and specifications (14) and conflict with other information (12) were the largest problems. When asked the frequency of these issues on a scale of 0 – 5 (with 5 being every time), for the lack of details and specifications and conflict with other information the mean of the ratings were 2.29 and 2.667, respectively. To improve the review of the crash narrative, using text processing techniques was indicated 6 times. Other possibilities were identified as improving the consistency of the narrative by adding questions or required fields within the narrative and adding a GPS location of the crash.

## CONCLUSION

Overall, the most common obstacle when analyzing the traffic report was the narrative. Whether it was the consistency or lack of details, 87% of the time, information can only sometimes be found within the narrative. Users want to see a more consistent narrative written. Users indicated that they thought the crash narrative could be improved (13). Of those who responded yes, 6 commented on consistency of the reports, 5 on the details of the report, and 2 indicating that better location indication would be better. Comments on the consistency included adding set questions and added training. Improving details included always including specific information regarding why and how the crash occurred. Ideas for location included adding GPS coordinates for the crashes location and a diagram that shows where the vehicles began, collided, and ended. Many had overlaps regarding the consistency, details, and location details being things to improve upon they do not believe that all narratives are hard to analyze but when too much or too little information is provided, they cannot find what they are looking for.

To improve the narrative, I propose adding GPS coordinates to the crash location and specified questions to the crash narrative to ensure that all necessary details of the crash are reported.

## CONTACT INFORMATION

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