Early Warning Defect Analysis and Reporting: A Need for Analysis and Reporting Improvement

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Abstract

While the National Highway Traffic Safety Administration (NHTSA) Early Warning Defect Reporting Requirements mandates automakers to report aggregate defect data, it does not prescribe a statistically valid method to analyze aggregate early warning reporting data (EWR). It has been reported by the Office of the Inspector General "*ODI (Office of Defect Investigation) does not follow standard statistical practices when implementing the test of the aggregate data. Specifically, ODI does not consistently identify a model (a set of assumptions) for the aggregate data to establish a base case that is, what the test results would be in the absence of safety defects*" (NHTSA Report ST-2105-063). A valid model is critical for using the data as an accurate predictor of vehicle safety. Furthermore, reporting of this data needs to be concise and informative to the general public as well as to the automotive industry. Thus, there is an insistent need to develop a statistical method and reporting protocol for Early Warning Reporting Data provided by the public and automobile manufacturers. Without a valid analysis model and a concise reporting mechanism, this data is not value-added and does not fulfill the critical intention of the Early Warning Reporting rule. A closed loop, quality assurance process to validate and assure comprehensive review, analysis and reporting of defect data by the automakers is essential to the Early Warning Rule success.

This paper will explore development of the statistical model to conduct valid analysis, expansion of defect reporting categories to ease data analysis, and development of a closed loop reporting process.

Biography

Christopher Kluse is an assistant professor of Engineering Technology, Quality Systems at Bowling Green State University. Christopher holds a PhD in Technology Management with a specialization in Quality Systems from Eastern Michigan University. Christopher is a former Quality & Manufacturing Professional; the majority of his 25 years experience spent in the automotive industry. Additionally, Christopher is an ASQ Certified Manager of Quality/Organizational Excellence and has served as a Subject Matter Expert in Quantitative Studies and Operations Management at Southern New Hampshire University.