



How Effective are Compliance Reviews?

The on-site compliance review (CR) is perhaps the single greatest resource-consuming activity of the Federal Motor Carrier Safety Administration (FMCSA). Thousands of CRs are conducted each year. In fiscal year 2001, Federal and State enforcement personnel conducted almost 14,000 CRs on individual motor carriers. FMCSA expects that through education, heightened safety regulation awareness, and the enforcement of the CR, motor carriers will improve the safety of their commercial vehicle operations, and, ultimately, reduce their crash rates.

FMCSA, in cooperation with the Volpe National Transportation Systems Center, has developed an analytic model to measure the effectiveness of the CR in terms of crashes avoided, injuries avoided, and lives saved. This tool will provide FMCSA management with the information it needs to address the requirements of the Government Performance and Results Act (GPRA) of 1993, which obligates Federal agencies to measure the effectiveness of their programs as part of the budget cycle process. It will also provide FMCSA and State safety program managers with a quantitative basis for optimizing the allocation of field safety resources. This analytic tool is known as the CR Impact Assessment Model. FMCSA has implemented the model for 1999, 2000, 2001 and 2002.

CR Effectiveness in 1999

A total of 6,055 carriers received CRs in 1998. These carriers had a total of 13,844 million vehicle miles traveled (VMT) and an average crash rate of 0.823 crashes per million VMT.

CR Effectiveness in 2000

A total of 8,877 carriers received CRs in 1999. These carriers had a total of 17,409 million vehicle miles traveled (VMT) and an average crash rate of 0.804 crashes per million VMT.

CR Effectiveness in 2001

A total of 11,340 carriers received CRs in 2000. These carriers had a total of 22,610 million vehicle miles traveled and an average crash rate of 0.757 crashes per million VMT.

CR Effectiveness in 2002

A total of 8,924 carriers received CRs in 2001. These carriers had a total of 18,455 million vehicle miles traveled and an average crash rate of 0.715 crashes per million VMT.

The model produced the following estimates:

Compliance Review Program Effectiveness: 1999 - 2002

	1999	2000	2001	2002
Crashes Avoided	1,200	1,500	2,200	1,600
Injuries Avoided	822	1,028	1,395	1,015
Lives Saved	51	64	91	67

The CR Impact Assessment Model shows the direct impact of compliance reviews on carrier safety, but not the "deterrent" effects (i.e., the "threat" of having a CR). The model is based on the individual and cumulative "before and after" changes in the safety performance of carriers that received CRs. The model compares a motor carrier's crash rate in a time period after a CR to its crash rate prior to that review. To make this comparison, the model uses crash and mileage data collected during compliance reviews and CR follow-up inquiries.

How Can FMCSA Use the Model?

Certain carriers may respond better to CRs (i.e., lower their crash rates more) than other carriers do. With Data Analysis Division assistance, FMCSA managers can use the model to determine which carriers do or do not improve after receiving CRs, and the extent of the improvement of those that do improve.

The results of the implementation of the model can be further analyzed by size of carrier, as measured by number of power units. The results can be studied to see if small carriers reduce their crash rates more than large carriers, or vice versa.

The results of this analysis will reveal the types of carriers that will most likely respond positively to CRs. Alternative treatment approaches may be suggested for carriers that are at risk, but will most likely not respond positively to CRs. By focusing on carriers that are likely to respond positively to CRs, the effectiveness of the compliance review program may be improved.

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