Incident Experience of Massachusetts Drivers Before and After Participation in the *DDC-Attitudinal Dynamics of Driving Course* During the Period from January 1, 2011 to December 31, 2015

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Registry of Motor Vehicles

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EXECUTIVE SUMMARY

This study compares the motor-vehicle records for one year before participation in the Defensive Driving Course (DDC) Attitudinal Dynamics of Driving (ADD) with participants' first year, second year, and third year post-DDC ADD experience and indicates any significant differences in incidents. Use of the DDC ADD program satisfies provisions of Chapter 175, section 113B, of the Motor Vehicle and Traffic Laws of Massachusetts. In 2010, this section was modified to state that drivers subject to suspension for accumulating *three surchargeable incidents* within the past 24 months must be required to complete a *driver education program*, which may be completed in lieu of suspension. Prior to October 2010, the law required the driver education program training for drivers who had accumulated five surchargeable incidents within a three year period.

The findings presented in this report are limited to those drivers who attended DDC ADD during the 2012 calendar year. The violation experience of these 47,513 drivers was analyzed from January 1, 2011 to January 1, 2016. This time frame allows for the capturing of violations one year before and three years after any training event occurring in 2012. If drivers completed more than one training event during the study period, both the cumulative impact of all training events as well as the improvement associated with each individual training event was assessed. Three categories of motor vehicle incidents were analyzed:

- Major traffic violations
- Minor traffic violations
- Surchargeable violations

Results summary:

- Of the 47,513 drivers included in this study:
  - 41,696 completed DDC ADD once
  - 5,033 completed DDC ADD twice
  - 616 completed DDC ADD three times
  - 134 completed DDC ADD four times
  - 22 completed DDC ADD five times
  - 10 completed DDC ADD six times
  - 1 completed DDC ADD seven times
  - 1 completed DDC ADD eight times

- The cumulative impact of DDC ADD was assessed by comparing the violation experience one year before the first training event against the first, second, and third years following the last training event. Using this cumulative impact method, the following results were found:
  - All participant groups had significantly fewer violations in each of the three years after taking DDC ADD than in the year before (regardless of age group or sex).
  - Minor traffic violations decreased an average of 84% during the third year following DDC ADD participation compared to the year before training
  - Major traffic violations decreased an average of 78% during the third year following DDC ADD participation compared to the year before training

    - Surchargeable violations decreased an average of 88% during the third year following DDC ADD participation compared to the year before training
- A second analysis method was used to assess the individual impact of each DDC ADD training event. This analysis method compared the year before and the first, second, and third years after each individual training event (from one training event through six training events).
    - Training events one through six are each associated with significantly fewer violations for each of the three years following training compared to the year prior to training. Training events seven through eight had insufficient sample sizes to test.
    - Training events one through six are each individually associated with between 84% to 88% decreases in minor violations during the third year following DDC ADD participation compared to the year before training.
    - Training events one through six are each individually associated with between 57% to 79% decreases in major traffic violations during the third year following DDC ADD participation compared to the year before training. However, not all decreases reached statistical significance.
    - Training events one through six are each individually associated with between 85% to 90% decreases in surchargeable violations during the third year following DDC ADD participation compared to the year before training.

These results highlight two very important aspects of the MA driver improvement program. First, results provide convincing evidence that the decrease in violations persists for at least three years following training. Results showed no evidence of attenuation over time. Instead, violation experience appears to continue to trend downward even after three years. Second, the structure of the MA driver improvement program demonstrates the "Goldilocks Principle" by providing drivers with the "just right" level of training intervention. Drivers with the worst violation records attend more hours of training than drivers with fewer violations. The intensity of the intervention is tailored for each individual driver based on their violation history, so it is not too little or too much. Importantly, all driver groups, regardless of violation history, benefited from the MA driver improvement program.

INTRODUCTION

The provisions of Chapter 175, section 113B, of the Motor Vehicle and Traffic Laws of Massachusetts require that a driver that has had *three surchargeable incidents* within the past 24 months must be required to complete a *driver education program* satisfactory to the registrar. If the driver fails to complete the program within 90 days after notice of the requirement is sent to the driver, the registrar will suspends the motorists' driver's license until such time as they are notified of completion of the required course. If the program is completed within the 90 days, the completion is accepted in lieu of suspension. Prior to October 2010, the law required the driver education program training for drivers who had accumulated five surchargeable incidents within a three year period.

A *surchargeable incident* is an "at-fault" accident or conviction of moving violations under motor vehicle laws that can increase a driver's insurance surcharge points under the Safe Driver Insurance Plan (SDIP). A surchargeable incident is defined by the nature of the violation and not by the number of citations. It is possible, therefore, to receive several surcharge points for a single citation. The Massachusetts Point System defines surchargeable incidents as follows:

- Minor Traffic Law Violations: = **2 points**
- Minor Accidents (at fault in excess of 50%):
  (between $501and $2001 property damage/collision/bodily injury coverage) = **3 points**
- Major Accidents (at fault in excess of 50%):
  (exceeds $2001 property damage/collision/bodily injury coverage) = **4 points**
- Major Traffic Law Violations: = **5 points**

The Registrar has selected the National Safety Council (NSC) Defensive Driving Course (DDC) Attitudinal Dynamics of Driving (ADD) as the program to meet the provisions of Chapter 175, section 113B. Now in its 4th Edition, DDC ADD is an 8-hour instructor-led classroom program.

During the DDC ADD class, participant involvement is necessary to ensure success of the program. Students are actively involved in evaluating their driving habits and making decisions and choices about their driving behaviors. From the beginning of the program, students are exposed to the concepts of Reality Therapy, Choice Theory and the Quality World concept as developed by Dr. William Glasser. Students complete a self-assessment profile that helps them identify their behind-the-wheel behaviors and then learn how those behaviors are chosen and not simply a response to a stimulus. As an important principle in the application of Reality Therapy and Control Theory is not to accept excuses, but rather to focus on behaviors, the students then complete an activity that demonstrates that they do, in fact, know their state's traffic laws, which helps remove excuses from their reasons for being in the class. Students can only then begin to learn they need to change their ineffective, irresponsible driving behaviors by choosing more effective behaviors and are guided into making an individual action plan. That plan is then put into action through a variety of driving situations and scenarios.

The findings presented in this report are limited to those drivers who attended DDC ADD during the 2012 calendar year. Violation experience of these 47,513 drivers was analyzed from January

1, 2011 to January 1, 2016. This time frame allows for the capturing of violations 12 months before and 36 months after any training event occurring in 2012. During this time frame the 47,513 drivers received a total of 230,603 violations. A graphic depiction of the number of violations during this five-year period is provided below (Figure 1). As can be clearly seen, this group of targeted drivers received dramatically fewer violations following the training year. This contrasts sharply with the pattern of violations experienced by the full population of Massachusetts drivers. As shown in Figure 2, all though there is a slight downward trend in the number of violations in Massachusetts, no dramatic drop in violations is apparent. This report documents the analysis conducted by NSC to assess changes in violation frequency before and after participation in the DDC ADD program.

Figure 1: Number of violations experienced by target drivers, 2011-2015

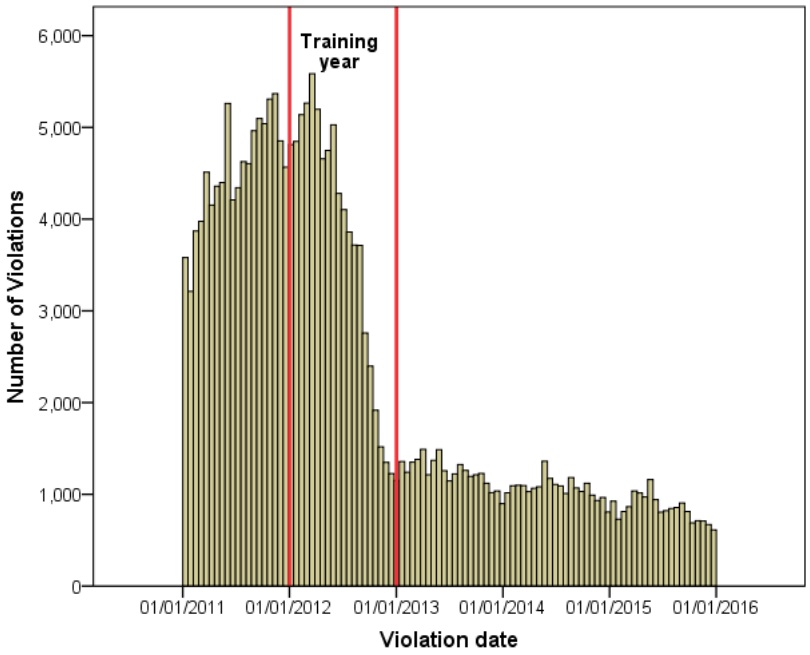
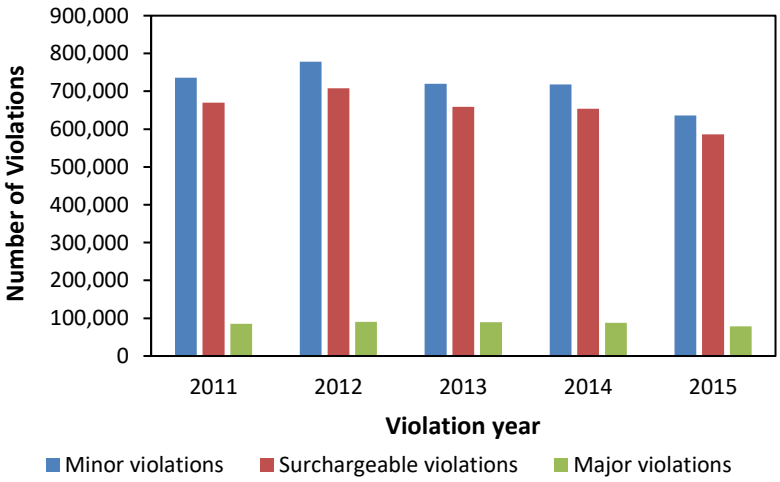


Figure 2: Number of violations experienced by all drivers, 2011-2015



METHOD

The National Safety Council (NSC) sent the Massachusetts Registry of Motor Vehicles (RMV) a computerized list of 49,039 drivers who completed the DDC ADD course. This driver group attended the course during the 2012 calendar year. The RMV furnished a computerized list containing the motor-vehicle records (MVRs) of 47,513 drivers with matching motorist IDs, valid training class completion dates, and at least one offense during the study period.

The course participant MVR data used in this study were as follows:

- Motorist ID
- Gender
- Birth date
- Training date
- Incident date
- Major/Minor traffic violation code
- Surchargeable violation indicator

Statistical tests were performed using the computer software package SPSS. Paired samples *t*-tests were used for pre/post comparisons of mean violations per driver. Two types of *t*-tests were used. One used the actual MVR data of each subject and the other used the square root of each subject's data. The square root transformation was done to equalize pre- and post-course variances. When rare event means, such as surchargeable incidents, are compared, inequality between their variances can be large enough to violate a primary assumption that must be followed for the valid use of a *t*-test (Snedecor & Cochran, 1989).

An alpha level of .05 was used for all statistical tests, i.e. a requirement of at least 95% probability that differences were not due to chance alone.

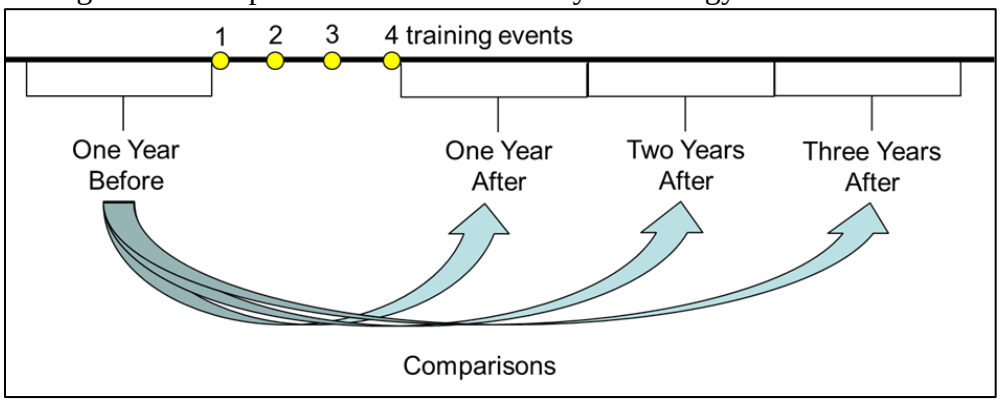
Because drivers included in this study could participate in DDC ADD multiple times, two strategies were used to explore the possible impact of the program.

The first analysis strategy treats multiple training events as a single intervention. This approach allows for the assessment of the cumulative impact of DDC ADD regardless of the number of times a driver participated in the training program during the study period. The cumulative impact of DDC ADD was assessed by comparing the number of violations before the first training event against the number of violations after the last training event. In addition, to assess the stability of performance changes following training, three separate comparisons were conducted:

- one year before the first training event against the first year following the last training event,
- one year before the first training event against the second year following the last training event,
- one year before the first training event against the third year following the last training event.

An example of this evaluation strategy is provided below for a driver who participated in four training events.

Figure 3: Example of a Cumulative Analysis Strategy

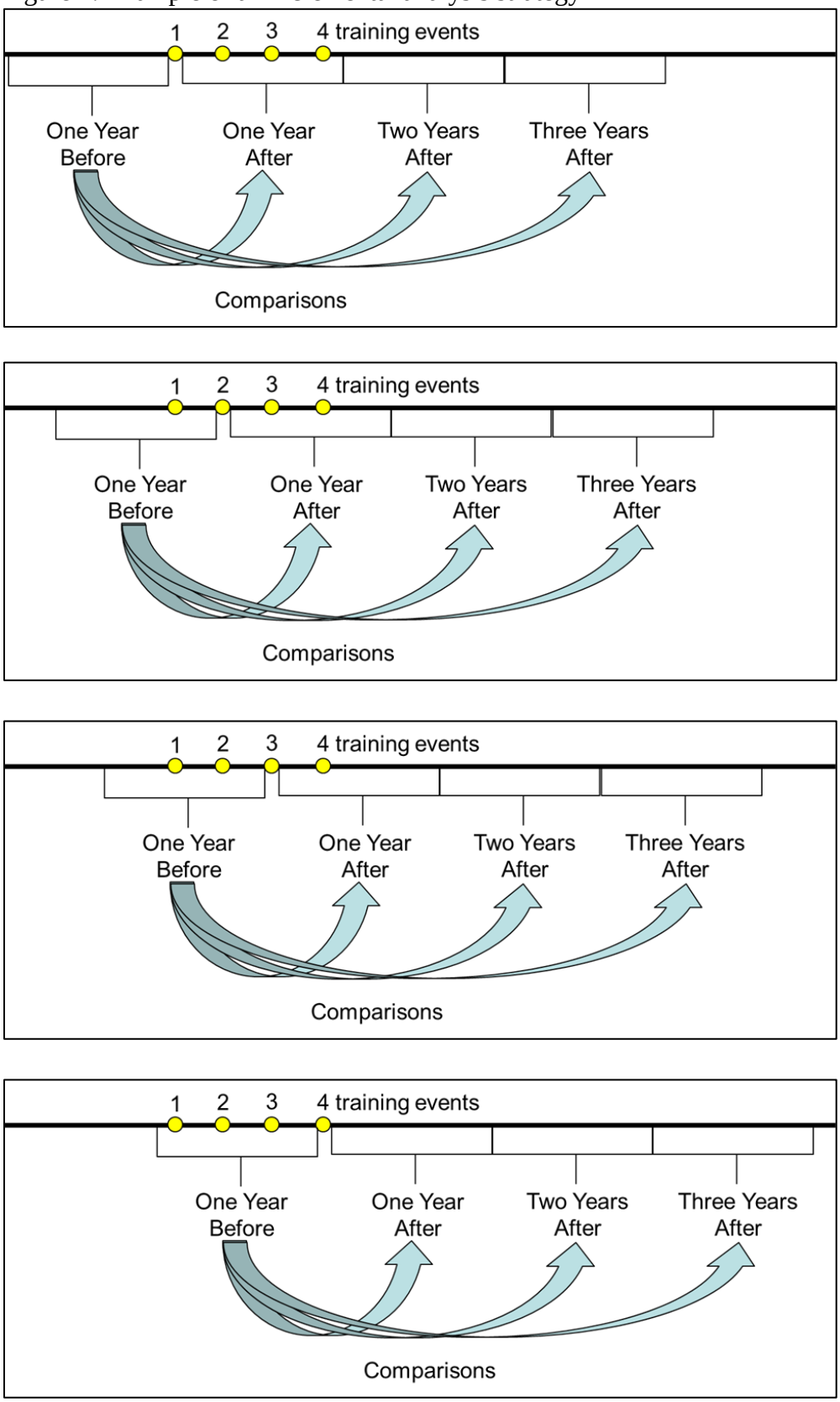


The second analysis strategy assesses the individual impact of each of the training events separately. This analysis method compares the number of violations before and after each individual training event (from one training event through six training events). However, because multiple training events could be closely spaced in time, it was not always possible to fully isolate the individual impact of a single training event. Similar to the first analysis strategy, three separate comparisons were conducted in order to assess the stability of performance changes following training:

- one year before a training event against the first year following the training event,
- one year before a training event against the second year following the training event,
- one year before a training event against the third year following the last training event.

Examples of this evaluation strategy are provided on the next page for a driver who participated in four training events. As can be seen, separate comparisons are conducted for each training event.

Figure 4: Example of an incremental analysis strategy



RESULTS

Demographics

The mean age of the 47,513 DDC ADD participants was 33.0 years. The mean age for male participants was 32.8 years, while the mean age for females was 33.4 years. Females made up 29% of the drivers studied.

A slightly larger proportion of the male drivers were under 21 years old compared to female drivers, 12.8% versus 9.2%, while a larger proportion of female drivers were 21 to 64 years old compared to male drivers, 88.4% versus 86.0%. About 2.5% of the drivers were aged 65 and older in the study group. As the number of training events attended by a driver increases, the demographics of drivers generally shift to increasing proportions of male and younger drivers under 21 years of age. See Table 1 for the demographic breakdown of drivers by the number of training completions.

Table 1. Number and Percentage of DDC ADD Course Participants by Gender, Age and Number of Training Events

Age Group	Gender					
	Male		Female		TOTAL	
	Number	%	Number	%	Number	%
All Participants						
Under 21	3,906	11.8	1,259	9.2	5,165	11.0
21-64	28,403	86.0	12,159	88.4	40,562	86.7
65 and older	707	2.1	337	2.5	1,044	2.2
TOTAL	**33,016**	**100.0**	**13,755**	**100.0**	**47,513**	**100.0**
Participants Completing One Training Event						
Under 21	3,126	10.9	1,089	8.9	4,215	10.3
21-64	24,947	86.9	10,901	88.7	35,848	87.5
65 and older	622	2.2	30	2.4	923	2.3
TOTAL	**28,695**	**100.0**	**12,291**	**100.0**	**41,696**	**100.0**
Participants Completing Two Training Events						
Under 21	640	17.3	143	11.1	783	15.7
21-64	2,993	80.7	1,117	86.5	4,110	82.2
65 and older	77	2.1	31	2.4	108	2.2
TOTAL	**3,710**	**100.0**	**1,291**	**100.0**	**5,033**	**100.0**
Participants Completing Three Training Events						
Under 21	110	23.3	21	14.6	131	21.3
21-64	356	75.4	119	82.6	475	77.1
65 and older	6	1.3	4	2.8	10	1.6
TOTAL	**472**	**100.0**	**144**	**100.0**	**616**	**100.0**

Table 1. (Continued) Number and Percentage of DDC ADD Course Participants by Gender, Age and Number of Training Events

Age Group	Gender					
	Male		Female		TOTAL	
	Number	%	Number	%	Number	%
Participants Completing Four Training Events						
Under 21	21	18.9	4	17.4	25	18.7
21-64	88	79.3	18	78.3	106	79.1
65 and older	2	1.8	1	4.3	3	2.2
TOTAL	**111**	**100.0**	**23**	**100.0**	**134**	**100.0**
Participants Completing Five Training Events						
Under 21	5	27.8	1	25.0	6	27.3
21-64	13	72.2	3	75.0	16	72.7
65 and older	0	0.0	0	0.0	0	0.0
TOTAL	**18**	**100.0**	**4**	**100.0**	**22**	**100.0**
Participants Completing Six Training Events						
Under 21	4	44.4	0	0	4	40.0
21-64	5	55.6	1	100.0	6	60.0
65 and older	0	0.0	0	0	0	0.0
TOTAL	**9**	**100.0**	**1**	**100.0**	**10**	**100.0**
Participants Completing Seven Training Events						
Under 21	0	0.0	1	100.0	1	100.0
21-64	0	0.0	0	0.0	0	0.0
65 and older	0	0.0	0	0.0	0	0.0
TOTAL	**0**	**100.0**	**1**	**100.0**	**1**	**100.0**
Participants Completing Eight Training Events						
Under 21	0	0.0	0	0.0	0	0.0
21-64	1	100.0	0	0.0	1	100.0
65 and older	0	0	0	0.0	0	0.0
TOTAL	**1**	**0**	**0**	**100.0**	**1**	**100.0**

The majority of drivers included in this study completed only one training event during the study period. Of the 47,513 drivers included in this study, 41,696 (88%) completed one training event, 5,033 (11%) completed two training events, 616 (1%) completed three training events, and 168 (<1%) completed four or more training events. On average, drivers who completed two or more training events attended training over a span of 4.6 months. In general, as the number of completed training events increases, so does the span of time used to attend the multiple training events. Drivers who completed two training events took on average 4.52 months while the one driver who completed eight training events took 7.75 months. See Table 2 for a summary of the number of months spent attending multiple training events.

Table 2. Number of Months Spent Attending Multiple Training Events

	Number of Participants	Average
Participants Completing Two Training Events	5,033	4.52 months
Participants Completing Three Training Events	616	5.46 months
Participants Completing Four Training Events	134	5.37 months
Participants Completing Five Training Events	22	4.59 months
Participants Completing Six Training Events	10	5.09 months
Participants Completing Seven Training Events	1	2.30 months
Participants Completing Eight Training Events	1	7.75 months

First Analysis Strategy

The first set of analyses explores the cumulative impact of DDC ADD, regardless of the number of training events completed during the study period. Table 3 shows the mean (average) number of violations per participant in the study group in the year prior to completing the first DDC ADD training event and the third year following exposure to the last DDC ADD training event as well as the percent changes in the means. Analyses were also conducted looking at the first and second year following training, but because results were consistent across the three years, Table 3 highlights only the third year after training. The analyses found that all participant groups, regardless of age group or sex, had significantly fewer violations in each of the three years after completing DDC ADD than in the year before the first DDC ADD training event.

As shown in the "All Age Groups" column in Table 3, males and females had statistically significant reductions across the three MVR categories defined in this study using both raw data and the square root transformations. Percentage reductions in incidents during the third year after DDC ADD ranged from a 76% decrease in major traffic violations for males in the 21 to 64 age group, to a 93% decrease in minor and surchargeable violations by females in the 65 and older age group. Females had consistently greater post DDC ADD reductions in the all violation categories and all age groups than did males.

Table 3. Cumulative Impact of DDC ADD Training Events (Regardless of the Number of Training Events Completed) - Mean Number of Violations One Year Before Compared to Three Years After by Age and Sex

Sex	Age Group											
	Under 21 Years Old			21-64 Years Old			65 And Older			All Age Groups		
	One Year Before	Three Years After	% Chg.	One Year Before	Three Years After	% Chg.	One Year Before	Three Years After	% Chg.	One Year Before	Three Years After	% Chg.
Minor Traffic Violation												
Male	2.57	0.46	-82%	2.05	0.33	-84%	1.62	0.18	-89%	2.10	0.35	-83%
Female	2.08	0.30	-86%	1.88	0.25	-87%	1.46	0.10	-93%	1.89	0.25	-87%
Total	2.46	0.42	-83%	2.00	0.31	-85%	1.58	0.15	-91%	2.04	0.32	-84%
Major Traffic Violations												
Male	0.48	0.11	-77%	0.37	0.09	-76%	0.56	0.08	-86%	0.38	0.09	-76%
Female	0.53	0.10	-81%	0.43	0.08	-81%	0.64	0.07	-89%	0.44	0.08	-82%
Total	0.49	0.11	-78%	0.38	0.08	-79%	0.58	0.08	-86%	0.40	0.09	-78%
Surchargeable Violations												
Male	2.64	0.35	-87%	2.17	0.28	-87%	2.10	0.18	-91%	2.22	0.28	-87%
Female	2.37	0.28	-88%	2.15	0.23	-89%	2.06	0.15	-93%	2.17	0.24	-89%
Total	2.58	0.33	-87%	2.17	0.26	-88%	2.09	0.17	-92%	2.21	0.27	-88%

Note: *t*-tests were conducted on both male and female means using raw data and the square root transformation.
All changes in means from before to after were statistically significant ($p < 0.05$).

The cumulative impact of DDC ADD participation was also assessed by number of training events completed. As shown in Table 4, participants completing from one to six training events had fewer violations in the first, second, and third years after completing their last DDC ADD training event than in the year before their first DDC ADD training event. For drivers completing from one to four training events, the decreases of minor traffic violations, major traffic violations and surchargeable violations were all found to be statistically significant. Among drivers completing five training events, the reduction in major traffic violations was not significant during the second year following training but did show a statistical decrease during the third year. For drivers completing a total of six training events, the decreases in major violations were not significant. However, in all cases substantial reductions of 30% or more were measured. These non-significant exceptions may be the result of the small sample sizes with 22 drivers completing five training events and 10 completing six training events. Drivers completing seven and eight training events had insufficient sample sizes to test.

Table 4. Cumulative Impact of DDC ADD Training Events - Mean Number of Before/After Violations and Percentage Change by Total Number of Training Events Completed

	One Year Before	One Year After (% Change)	Two Years After (% Change)	Three Years After (% Change)
All Participants				
Minor Traffic Violations	2.04	0.42 (-79)	0.37 (-82)	0.32 (-84)
Major Traffic Violations	0.40	0.11 (-73)	0.10 (-75)	0.09 (-78)
Surchargeable Violations	2.21	0.42 (-81)	0.38 (-83)	0.33 (-85)
Participants Completing a Total of One Training Event				
Minor Traffic Violations	1.91	0.40 (-79)	0.36 (-81)	0.31 (-84)
Major Traffic Violations	0.38	0.10 (-74)	0.10 (-74)	0.08 (-79)
Surchargeable Violations	2.09	0.40 (-81)	0.37 (-82)	0.32 (-85)
Participants Completing a Total of Two Training Events				
Minor Traffic Violations	2.76	0.56 (-80)	0.43 (-84)	0.37 (-87)
Major Traffic Violations	0.52	0.15 (-71)	0.12 (-77)	0.10 (-81)
Surchargeable Violations	2.92	0.57 (-80)	0.45 (-85)	0.39 (-87)
Participants Completing a Total of Three Training Events				
Minor Traffic Violations	3.93	0.64 (-84)	0.54 (-86)	0.41 (-90)
Major Traffic Violations	0.59	0.17 (-71)	0.13 (-78)	0.11 (-81)
Surchargeable Violations	3.94	0.60 (-85)	0.55 (-86)	0.43 (-89)
Participants Completing a Total of Four Training Events				
Minor Traffic Violations	4.62	0.77 (-83)	0.51 (-89)	0.48 (-90)
Major Traffic Violations	0.80	0.18 (-78)	0.14 (-83)	0.13 (-84)
Surchargeable Violations	4.70	0.76 (-84)	0.46 (-90)	0.47 (-90)
Participants Completing a Total of Five Training Events				
Minor Traffic Violations	6.73	1.32 (-80)	0.50 (-93)	0.64 (-90)
Major Traffic Violations	0.59	0.27 (-54)	0.45 (-24*)	0.27 (-54)
Surchargeable Violations	6.09	1.09 (-82)	0.64 (-89)	0.64 (-84)
Participants Completing a Total of Six Training Events				
Minor Traffic Violations	7.10	0.90 (-87)	0.70 (-90)	0.70 (-90)
Major Traffic Violations	0.70	0.50 (-29*)	0.60 (-14*)	0.30 (-57*)
Surchargeable Violations	6.70	0.90 (-87)	0.90 (-87)	0.60 (-91)

Note: *t*-tests were conducted using raw data and the square root transformation.
All but four of the changes in the means from before to after were statistically significant ($p < 0.05$). The non-significant changes are marked with an *.

Second Analysis Strategy

The second analysis strategy assesses the individual impact of each of the training events separately. This analysis method compared the year before and the first, second, and third years after each individual training event (from one training event through six training events). As shown in Table 5, training events one through six are all associated with significantly fewer violations in the three years after completing the DDC ADD training event than in the year before that training event. Although all results showed improvement, a small handful of comparisons did not reach statistical significance. Following the fifth training event, the number of major traffic violations during the second year following training did not show a statistically significant decrease. Similarly, following the sixth training event, major traffic violations did not show statistical improvement in any of the three years. Training events seven through eight had insufficient sample sizes to test. Although this analysis strategy assesses each training event separately, many of the multiple training events were completed within a short period of time, with as little as one day separating some training events. Therefore it is not always possible to fully isolate the individual impact of a single training event.

Table 5. Individual Training Impact - Mean Number of Before/After Violations and Percentage Change by Training Event Number

	One Year Before	One Year After (% Change)	Two Years After (% Change)	Three Years After (% Change)
Impact of First Training Event				
Minor Traffic Violations	2.04	0.47 (-77)	0.38 (-81)	0.32 (-84)
Major Traffic Violations	0.40	0.12 (-70)	0.10 (-75)	0.09 (-78)
Surchargeable Violations	2.21	0.48 (-78)	0.39 (-82)	0.34 (-85)
Impact of Second Training Event				
Minor Traffic Violations	2.67	0.60 (-78)	0.45 (-83)	0.38 (-86)
Major Traffic Violations	0.52	0.16 (-69)	0.12 (-77)	0.11 (-79)
Surchargeable Violations	2.84	0.60 (-79)	0.46 (-84)	0.40 (-86)
Impact of Third Training Event				
Minor Traffic Violations	3.70	0.69 (-81)	0.55 (-85)	0.44 (-88)
Major Traffic Violations	0.62	0.17 (-73)	0.16 (-74)	0.12 (-81)
Surchargeable Violations	3.80	0.65 (-83)	0.56 (-85)	0.45 (-88)
Impact of Fourth Training Event				
Minor Traffic Violations	4.38	0.88 (-80)	0.55 (-87)	0.55 (-87)
Major Traffic Violations	0.76	0.20 (-74)	0.22 (-71)	0.16 (-79)
Surchargeable Violations	4.46	0.82 (-82)	0.56 (-87)	0.51 (-89)
Impact of Fifth Training Event				
Minor Traffic Violations	6.15	1.26 (-80)	0.68 (-89)	0.71 (-88)
Major Traffic Violations	0.56	0.32 (-43)	0.47 (-16*)	0.24 (-57)
Surchargeable Violations	5.94	1.12 (-81)	0.76 (-87)	0.59 (-90)
Impact of Sixth Training Event				
Minor Traffic Violations	6.33	1.17 (-82)	1.08 (-83)	0.92 (-85)
Major Traffic Violations	0.58	0.42 (-28*)	0.50 (-14*)	0.25 (-57*)
Surchargeable Violations	6.33	1.17 (-82)	1.00 (-84)	0.67 (-89)

Note: *t*-tests were conducted using raw data and the square root transformation.
All but four of the changes in the means from before to after were statistically significant ($p < 0.05$). The non-significant changes are marked with an *.

Summary

In summary, based on the information made available by the Commonwealth of Massachusetts RMV, participants in this study showed statistically significant reductions in minor, major, and surchargeable incidents in the first, second, and third years after exposure to the DDC ADD course compared with the year before. These reductions were significant regardless of which of several methods of analysis was used, and were consistent whether considering each training event individually or grouped together as one intervention.

These results highlight two very important aspects of the MA driver improvement program. First, these results provide convincing evidence that the decrease in violations persists for at least three years following the training event. Results showed no evidence of attenuation over time. Instead, violation experience appears to continue to trend downward even after three years. Second, the structure of the MA driver improvement program demonstrates the "Goldilocks Principle" by providing drivers with the "just right" level of training intervention. Drivers with the worst violation records attend more hours of training than drivers with fewer violations. The intensity of the intervention is tailored for each individual driver based on their violation history, so it is not too little or too much.

Importantly, all driver groups, regardless of violation history, benefited from the MA driver improvement program. Drivers who completed one training event had an average of 2.09 surchargeable violations the year before training and demonstrated an 85% decrease in violations the third year following training. Drivers who completed six training events had an average of 6.70 surchargeable violations the year before training and demonstrated a 91% decrease in violations the third year following training.

REFERENCES

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