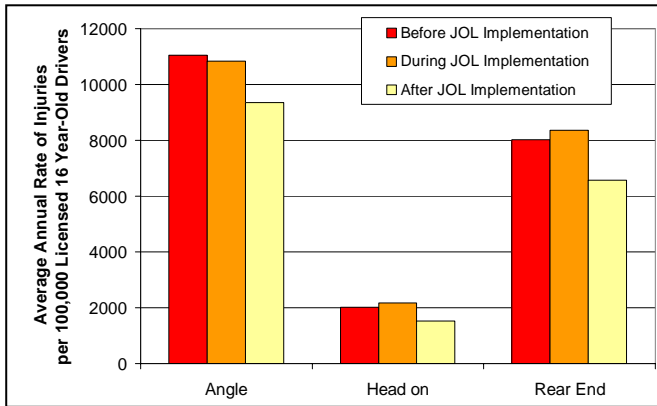


Junior Operator Law (JOL) Evaluation: Crash Factors

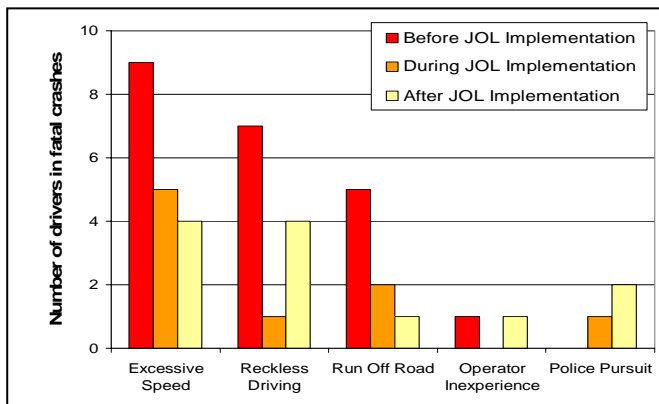
The effectiveness of JOL in Massachusetts was evaluated by examining crash and injury rates for the periods before, during and after implementation. Overall results showed the JOL was effective in reducing injury rates associated with 16 year old drivers. This fact sheet highlights further findings regarding crash factors.



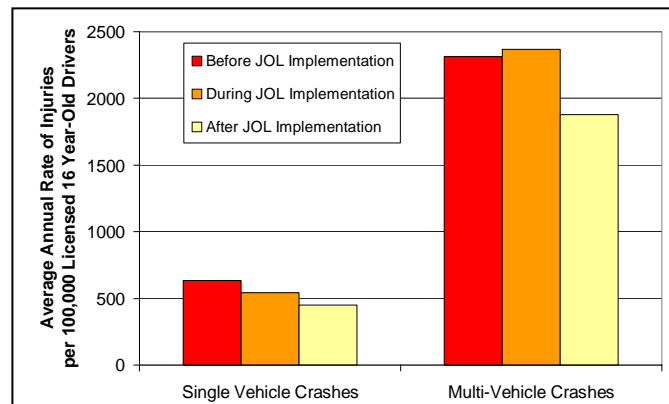
JOL affected a variety of crash types. Head-on crashes and single-vehicle crashes showed notable decreases.

Excessive speed was the driver error most common for young drivers in fatal crashes and was the one that decreased the most after JOL implementation.

After JOL implementation, the rate of all injuries resulting from crashes involving 16 year-old drivers involved in head-on crashes was reduced by 25 percent.



The most common error for 16 year old drivers in fatal crashes was excessive speed, which also saw the largest reduction after JOL implementation.



Injuries resulting from single vehicle crashes, saw a larger proportional decrease after JOL implementation than multi-vehicle crashes, with a decrease in injury rate of 29 percent.

Analysis Notes – For more information, see full report: *Graduated Driver Licensing – Data Analysis and Evaluation*.

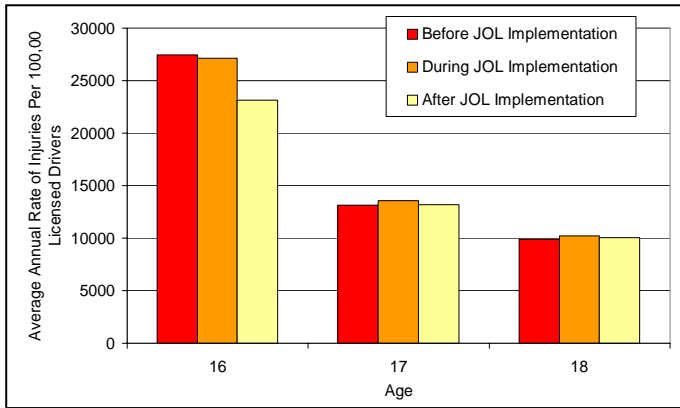
- Before JOL Implementation (1996 & 1997)
- Year of Implementation (1998)
- After JOL Implementation (1999 & 2000)

Average annual rate used for 2-year “before” and “after” periods.

Injury rate is rate of all injuries resulting from crashes involving 16 year old drivers per 100,000 16 year-old licensed drivers. Serious injury rate is rate of serious injuries resulting from crashes involving 16 year old drivers per 100,000 16 year-old licensed drivers.

Junior Operator Law (JOL) Evaluation: Demographic Factors

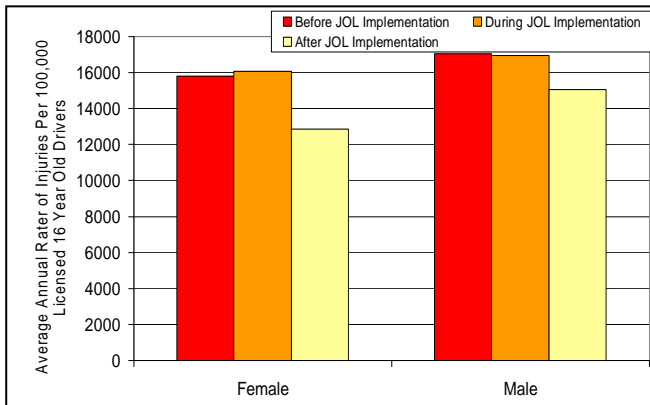
The effectiveness of JOL in Massachusetts was evaluated by examining crash and injury rates for the periods before, during and after implementation. Overall results showed the JOL was effective in reducing injury rates associated with 16 year old drivers. This fact sheet highlights further findings around demographic factors.



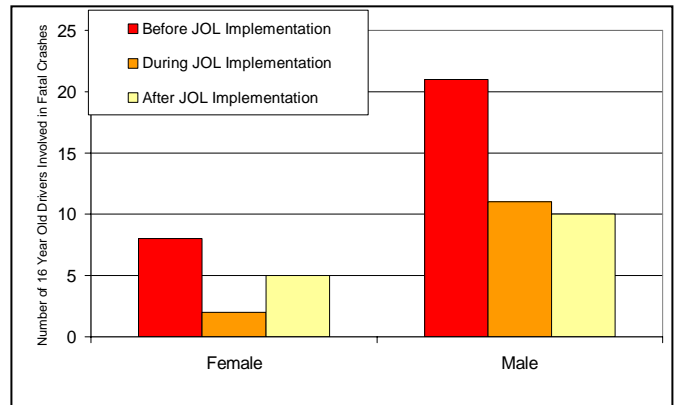
The rate of injuries resulting from crashes involving 16 year old drivers decreased 16 percent after JOL implementation.

JOL implementation most directly affected 16 year-old drivers – the target audience for this policy.

The total injury rate decreased more for females than males. However, the rate of involvement in fatal crashes decreased more for males than females.



The rate of injuries resulting from crashes involving 16 year-old female drivers decreased by 19 percent after JOL implementation, while the same rate for 16 year-old male drivers was reduced by only 12 percent.



The rate of 16 year-old male drivers involved in fatal crashes decreased by 50 percent after JOL implementation; the same rate for 16 year-old female drivers decreased by 34 percent.

Analysis Notes – For more information, see full report: *Graduated Driver Licensing – Data Analysis and Evaluation*.

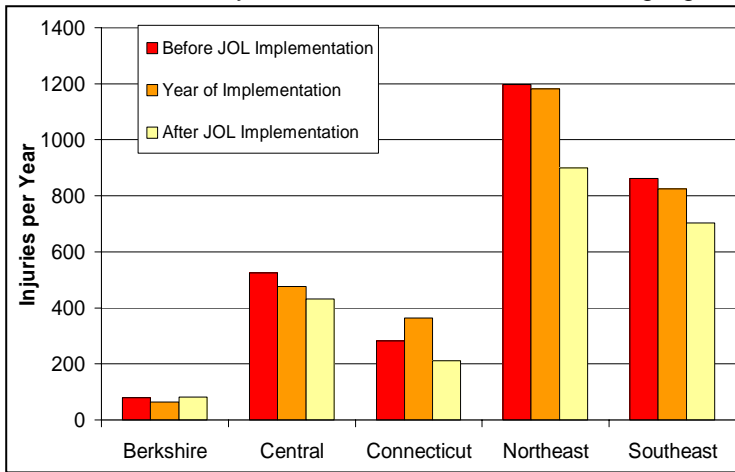
- Before JOL Implementation (1996 & 1997)
- Year of Implementation (1998)
- After JOL Implementation (1999 & 2000)

Average annual rate used for 2-year “before” and “after” periods.

Injury rate is rate of injuries resulting from crashes involving young drivers per 100,000 licensed drivers of that age/sex.

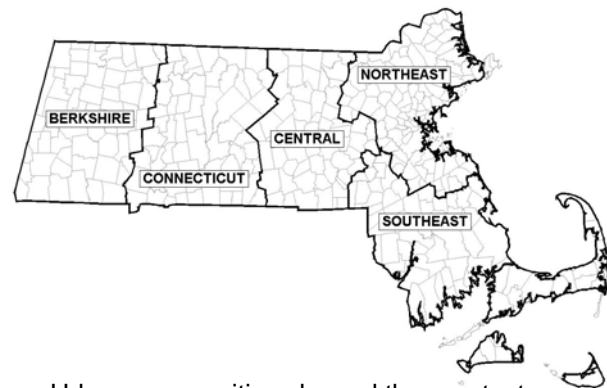
Junior Operator Law (JOL) Evaluation: Location

The effectiveness of JOL in Massachusetts was evaluated by examining crash and injury rates for the periods before, during and after implementation. Overall results showed the JOL was effective in reducing injury rates associated with 16 year old drivers. This fact sheet highlights further findings specific to location

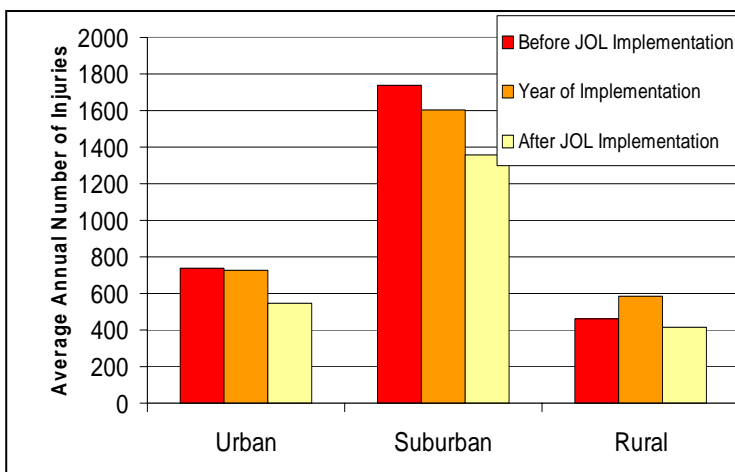


The Connecticut River Valley region and the Northeast region saw the largest proportional decreases in injuries after JOL implementation compared to the number of injuries before implementation, at 25 percent each.

It is interesting to note that the injuries resulting from crashes involving 16 year-old drivers for the Connecticut River Valley region increased by 29 percent during the year of implementation only.



After JOL implementation, the greatest decrease in injury rates occurred in the Northeast region of Massachusetts.



Urban communities showed the greatest decrease in number of injuries resulting from crashes involving 16 year old drivers after JOL implementation, with a decrease of 26 percent. Suburban communities sustained a 22 percent decrease in number of injuries while rural communities reduced injuries by 10 percent.

Urban communities experienced the greatest decrease in injuries from crashes involving 16 year old drivers, following JOL implementation.

Analysis Notes – For more information, see full report: *Graduated Driver Licensing – Data Analysis and Evaluation.*

- Before JOL Implementation (1996 & 1997)
- Year of Implementation (1998)
- After JOL Implementation (1999 & 2000)

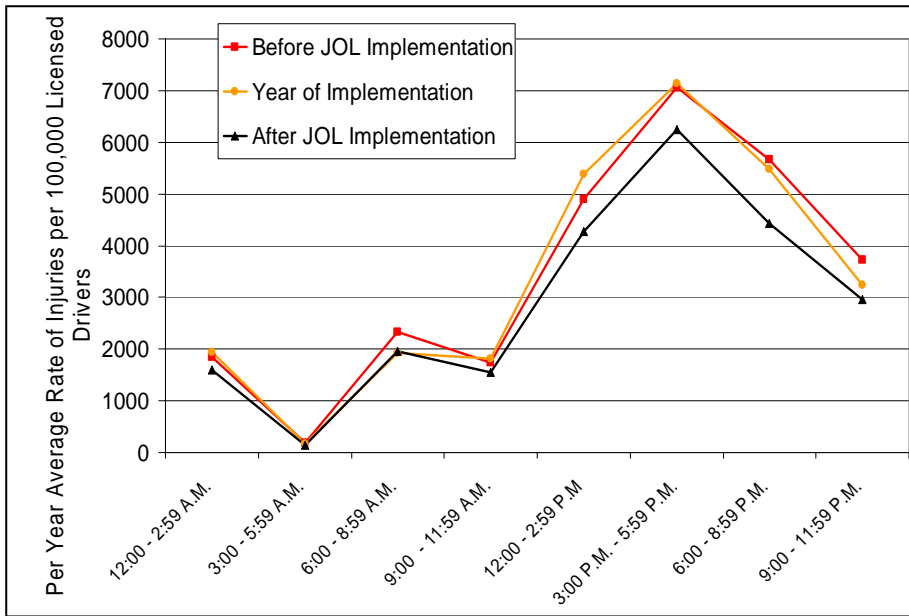
Analyses based on RMV crash data, 1996-2000 Average annual rate used for 2-year “before” and “after” periods.

Injury rate is rate of all injuries resulting from crashes involving 16 year old drivers per 100,000 16 year-old licensed drivers.

Urban communities were defined as those with a population density greater than or equal to 3,000 persons per square mile. Rural communities were those with fewer than 500 persons per square mile. Suburban communities were defined as those between the urban and rural population densities.

Junior Operator Law (JOL) Evaluation: Temporal Factors

The effectiveness of JOL in Massachusetts was evaluated by examining crash and injury rates for the periods before, during and after implementation. Overall results showed the JOL was effective in reducing injury rates associated with 16 year old drivers. This fact sheet highlights further findings around temporal factors.

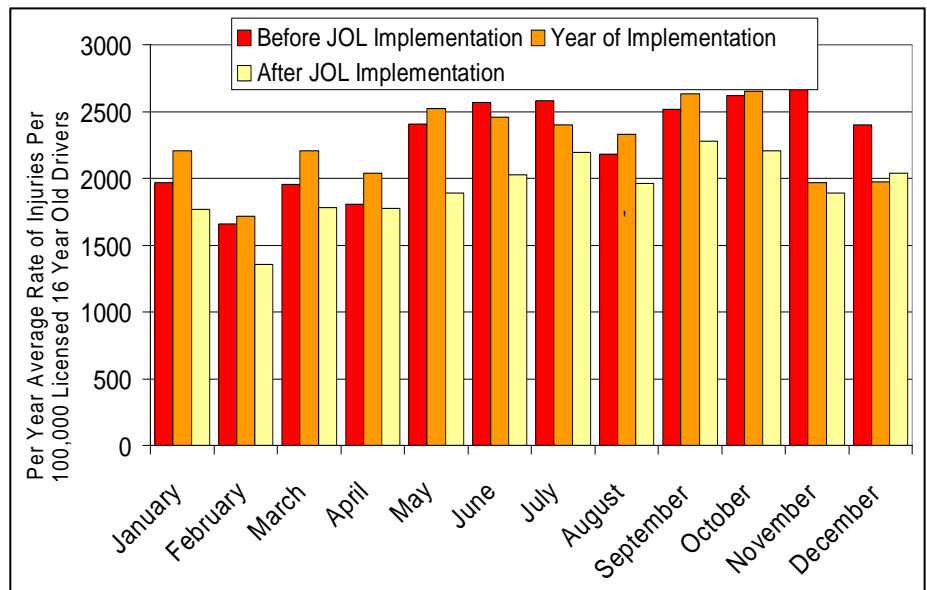


The rate of all injuries resulting from crashes involving a 16 year old driver was reduced by 27 percent between 3:00 A.M. and 5:59 A.M. and by 22 percent between 6:00 P.M. and 8:59 P.M.; these were the time periods with the greatest percentage decrease in injury rate.

Following JOL implementation, early morning and evening periods had the greatest decrease in injury rate.

Immediately following the implementation of JOL legislation, monthly injury rates decreased. This is especially true for the months of June, July and November.

Injury rates were lower for all months following JOL implementation. This includes the two months in 1998 immediately following implementation.



Analysis Notes – For more information, see full report: *Graduated Driver Licensing – Data Analysis and Evaluation*.

- Before JOL Implementation (1996 & 1997)
- Year of Implementation (1998)
- After JOL Implementation (1999 & 2000)

Average annual rate used for 2-year “before” and “after” periods.

Injury rate is rate of all injuries resulting from crashes involving 16 year old drivers per 100,000 16 year-old licensed drivers.