

Canadian Road Safety Strategies

Brian Jonah
Road Safety Canada Consulting

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Canadian Road Safety Strategies

- Road Safety Vision (RSV) 2001:
 - 1996-2001;
 - No targets;
 - National working group led by Transport Canada.
- Road Safety Vision (RSV) 2010:
 - 2002-2010;
 - Vision- Canada will have safest roads in world;
 - Overall target of 30% reduction in number of fatalities and serious injuries;
 - Targets for several road safety indicators (e.g., seat belt use, alcohol involvement, young drivers, etc.);
 - National working group led by Transport Canada.

Canadian Road Safety Strategies

- Road Safety Strategy (RSS) 2015:
 - 2011-2015;
 - Vision- Canada will have safest roads in world;
 - Target- Downward trend in fatalities and serious injuries;
 - Canadian Council of Motor Transport Administrators (CCMTA) was custodian.
- Road Safety Strategy (RSS) 2025:
 - 2016-2025;
 - Vision- Towards Zero: The safest roads in the world;
 - Target- Downward trend in fatalities and serious injuries
 - CCMTA is custodian;
- Each jurisdiction developed policies and programs to address their own priorities for road safety following principles of strategies.

Study Purpose

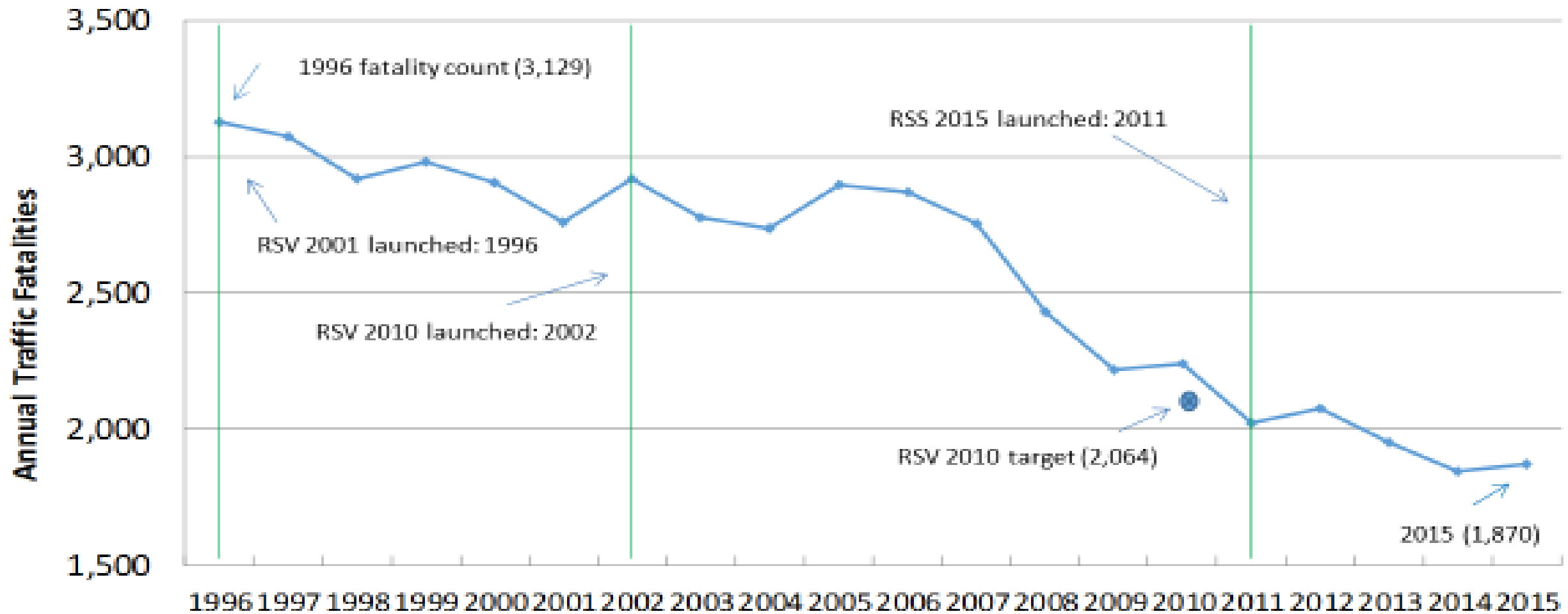
- Examine changes in number and rates of fatalities and serious injuries during first three Canadian road safety strategies.
- Examine changes in road safety indicators/contributing factors over this period of time:
 - Seat belt use;
 - Alcohol and drug use;
 - Driver distraction;
 - Speeding;
 - Young drivers (15-24);
 - Vulnerable road users (pedestrians, bicyclists, motorcyclists);
 - Looked at percentage change in involvement of these indicators.

Methodology

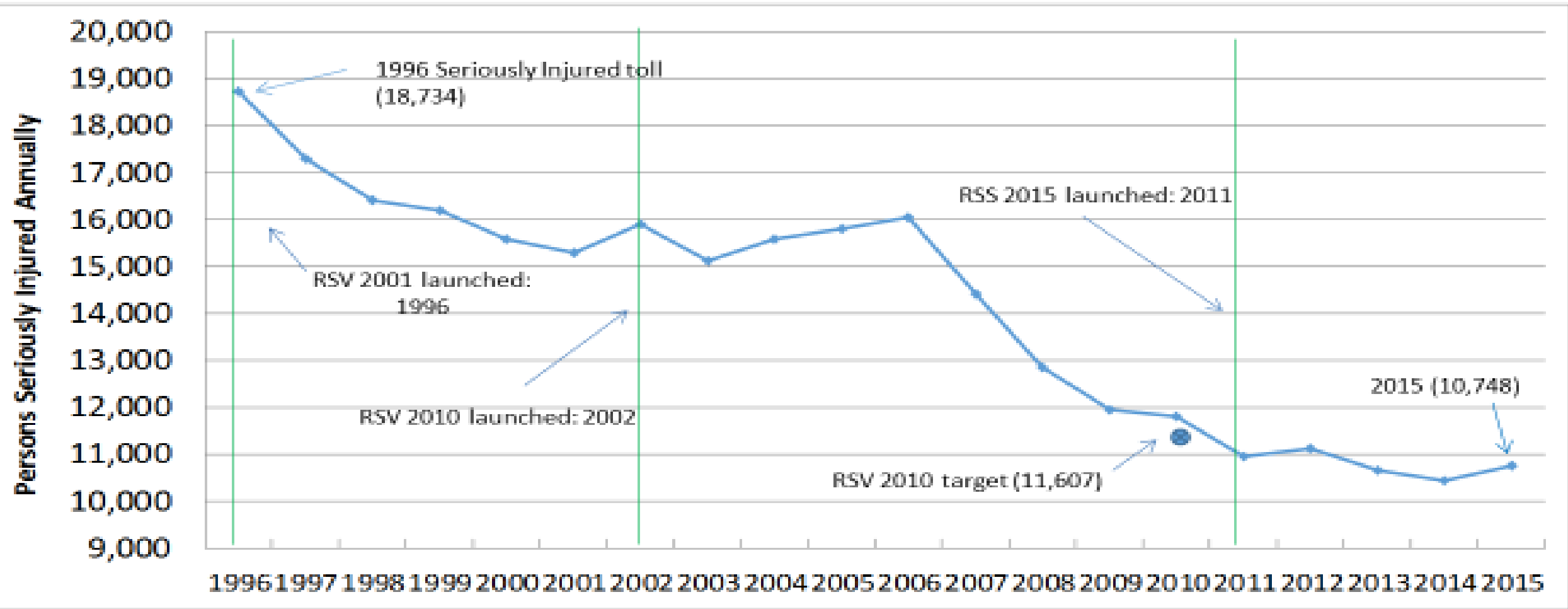
- Used data from Transport Canada's National Collision Database to examine changes in numbers and rates of fatalities and serious injuries (i.e., person hospitalized over-night) and to determine involvement of various contributing factors (e.g., non-use of belts, distracted driving, etc.);
- Used Canadian Vehicle Survey from 2000 to 2009 to obtain vehicle kilometres traveled for rates and then an estimation model from 2010 to 2015 based on fuel sales and economic indicators- TC/CCMTA;
- Coroner data were used to determine the prevalence of alcohol and drugs in fatally injured drivers and NCDB data for alcohol involvement in serious injury collisions- report prepared by TIRF;
- Periodic observational surveys provided data on seat belt use and use of electronic communication devices by drivers- TC/CCMTA;
- Data relating to some contributing factors were not available for all years.

Improvement in Canada's Level of Road Safety Over Three National Road Safety Plans

Traffic Fatalities 1996-2015



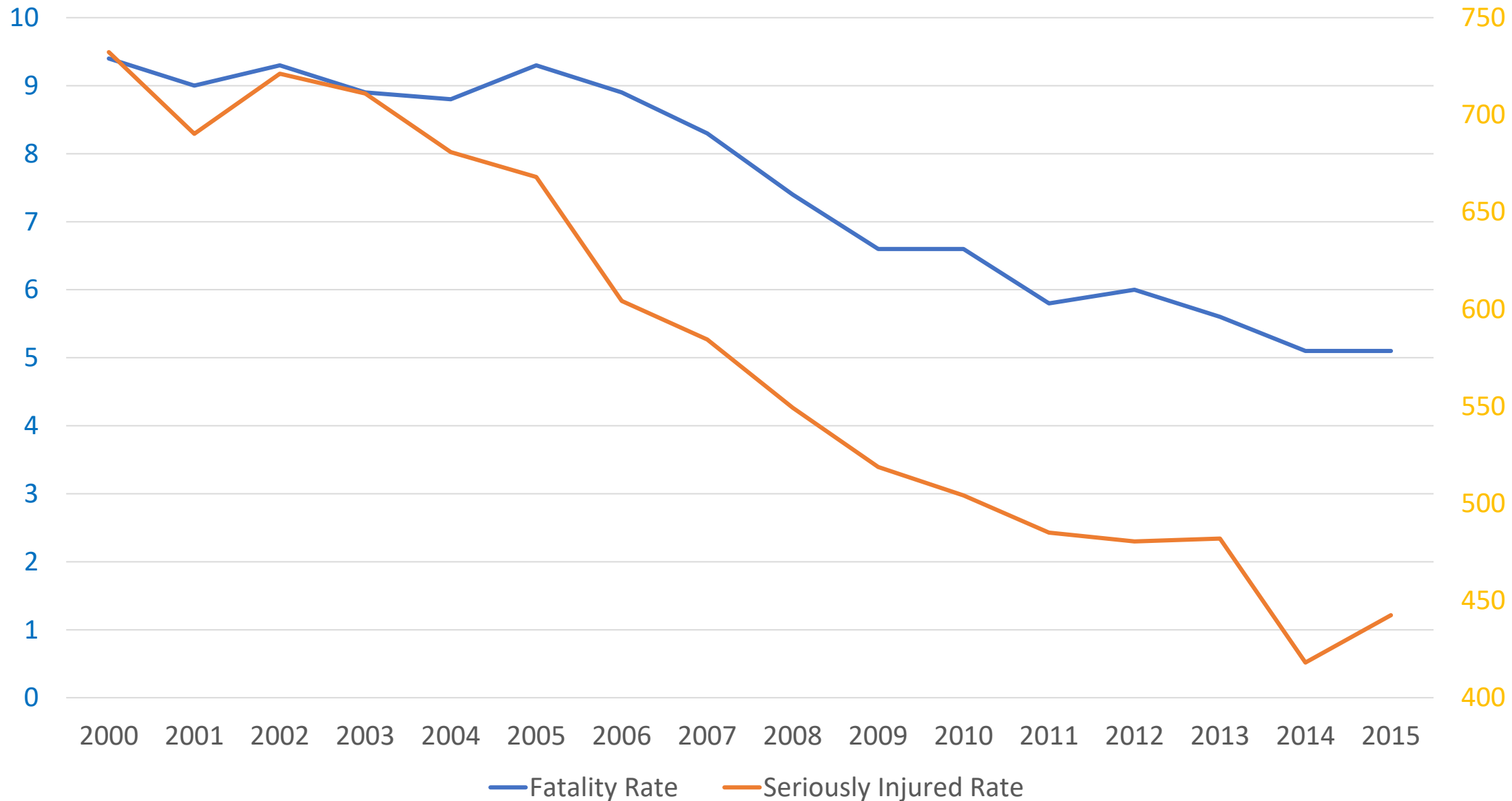
Improvement in Canada's Level of Road Safety Over Three National Road Safety Plans Serious Injuries 1996-2015



Percent Change in Number of Fatalities and Serious Injuries Over 3 Strategies

Comparison Periods	Number of Fatalities	Number of Serious Injuries
% Change from 1991-1995 to 1996-2001 (Road Safety Vision (RSV) 2001)	-14.7	-30.9
% Change from 1996-2001 to 2002-2010 (Road Safety Vision (RSV) 2010)	-10.8	-13.9
% Change from 2002-2010 to 2011-2015 (Road Safety Strategy (RSS) 2015)	-26.4	-25.0
% Change from 1991-1995 to 2011-2015 (Over all 3 strategies)	-43.7	-55.5

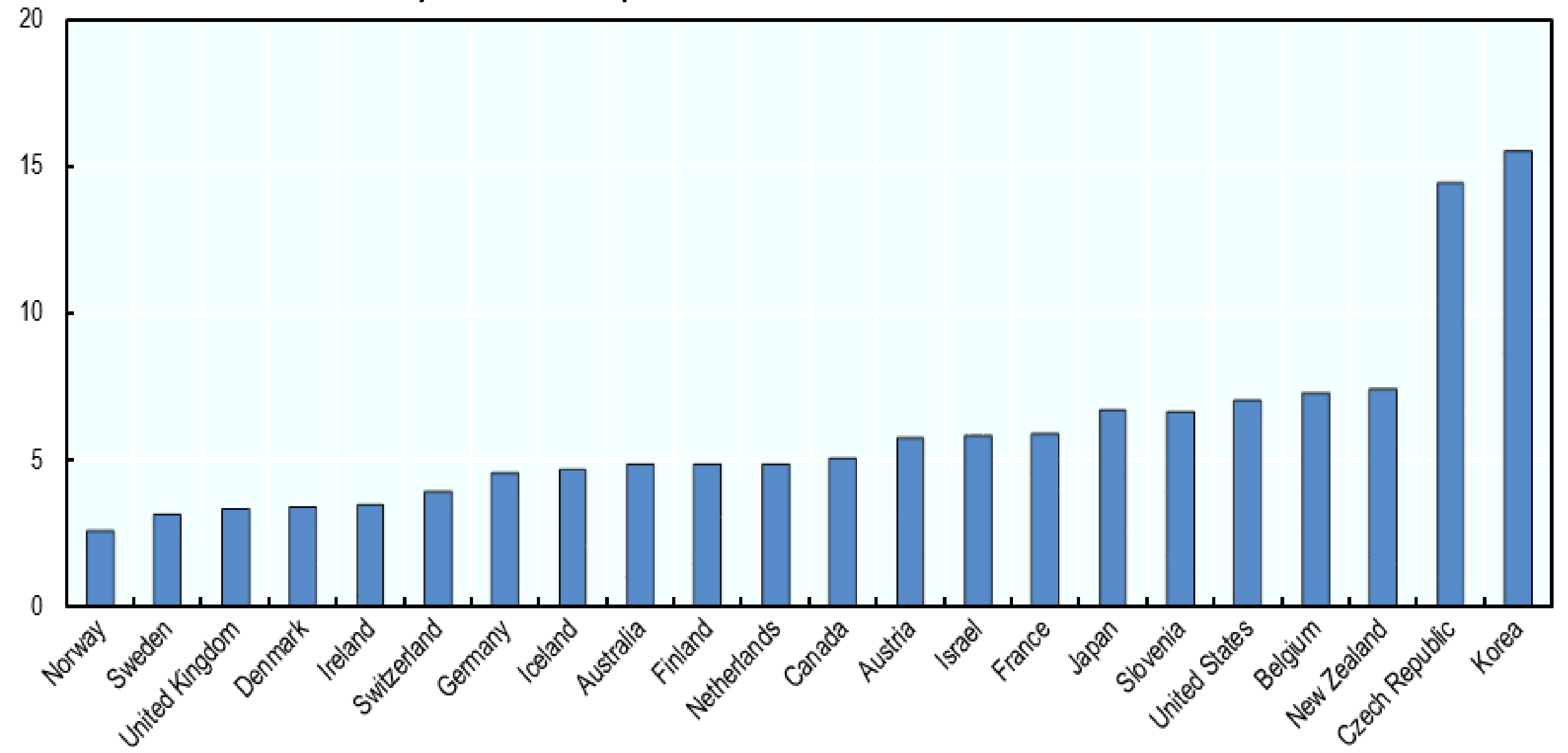
Fatality and Serious Injury Rates per Billion VKT Canada, 2000-2015



Fatality and Serious Injury Rates per Billion Vehicle Kilometres Traveled 2000-2015

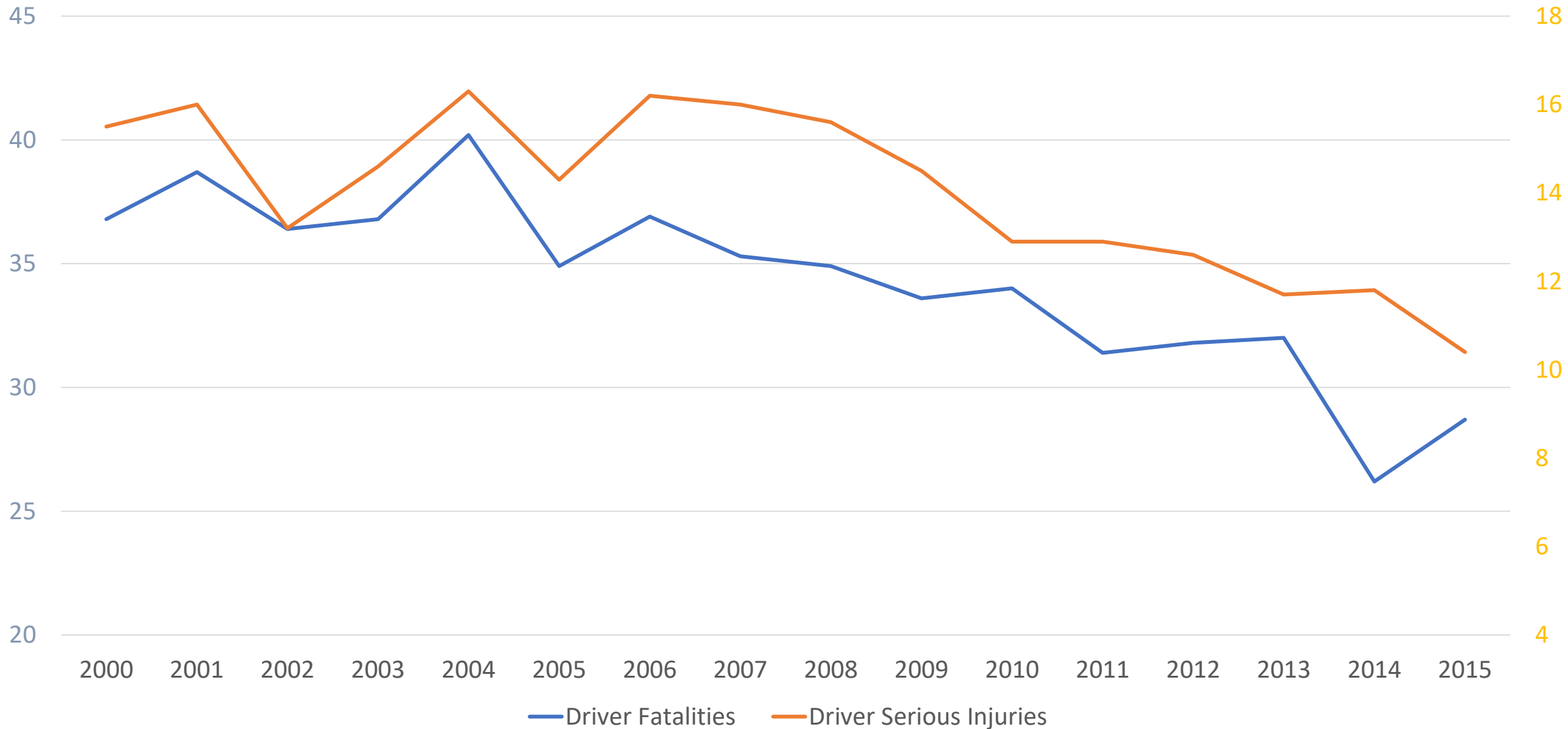
Comparison Period	Fatality Rate	Serious Injury Rate
% Change from 2000-2001 to 2002-2010 (RSV 2010)	-10.9	-13.4
% Change from 2002-2010 to 2011-2015 (RSS 2015)	-32.9	-25.0
% Change from 2000-2001 to 2011-2015	-40.2	-35.1

2015 Fatality Rates per Billion VKT



What factors may have contributed to the decline in fatalities and serious injuries?

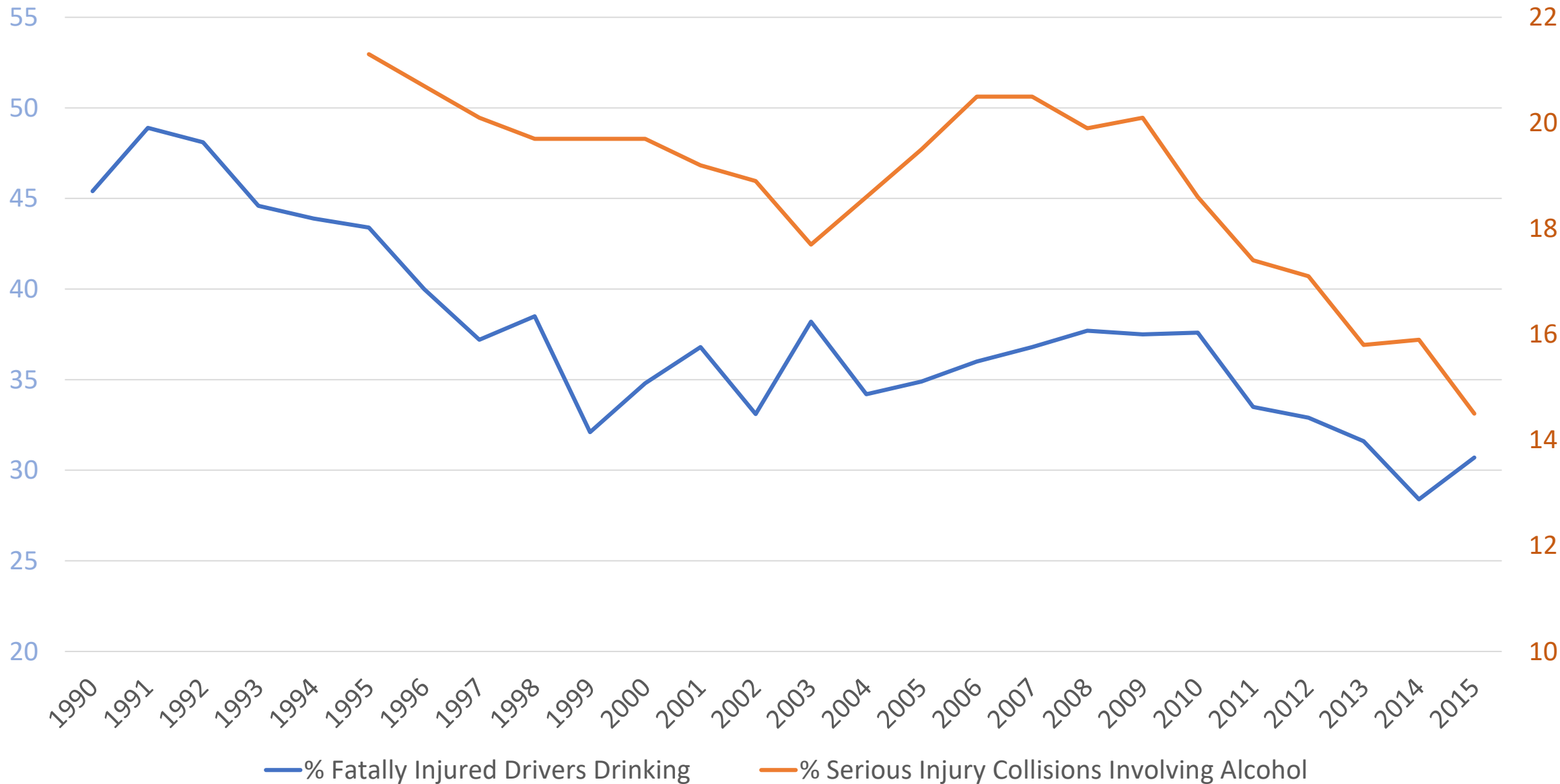
Percentage of Driver Fatalities and Serious Injuries Unbelted



Percentage of Driver Fatalities and Serious Injuries Where Occupant Was Unbelted

Comparison Period	% Driver Fatalities	% Driver Serious Injuries
% Change 2000-2001 to 2002-2010 (RSV 2010)	-5.0	-6.3
% Change 2002-2010 to 2011-2015 (RSS 2015)	-16.4	-19.6
% Change from 2000-2001 to 2011-2015	-20.6	-31.0

% of Fatally Injured Drivers Who Had Been Drinking and Serious Injury Collisions Involving Alcohol



Percentage Fatally Injured Drivers Drinking and Serious Injury Collisions Involving Alcohol

Comparison Period	% Fatally Injured Drivers Drinking	% Serious Injury Collisions Involving Alcohol
% Change 1990-1995 to 1996-2001 (RSV 2001)	-20.6	-6.6
% Change from 1996-2001 to 2002-2010 (RSV 2010)	-1.1	-2.5
% Change from 2002-2010 to 2011-2015 (RSS 2015)	-13.3	-16.0
% Change from 1990-1995 to 2011-2015	-31.9	-23.5

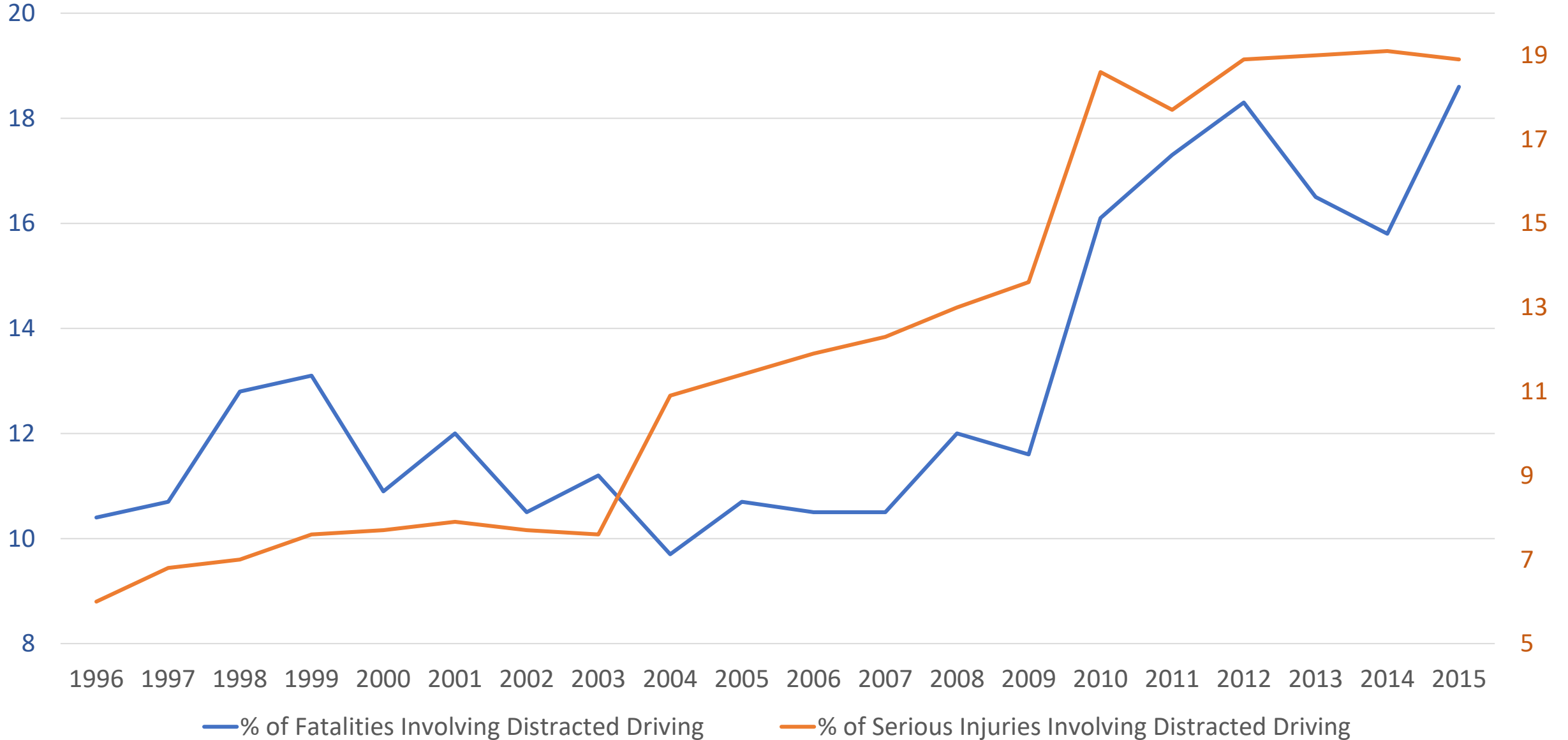
Percentage of Fatally Injured Drivers With Drugs in Body



Percentage of Fatally Injured Drivers Using Drugs

Comparison Period	% Fatally Injured Drivers with Drugs	% Fatally Injured Drivers with Cannabis
Change from 2000-2001 to 2002-2010 (RSV 2010)	6.4	7.2
% Change from 2002-2010 to 2011-2015 (RSS 2015)	19.1	30.2
% Change from 2000-2001 to 2011-2015	26.7	39.6

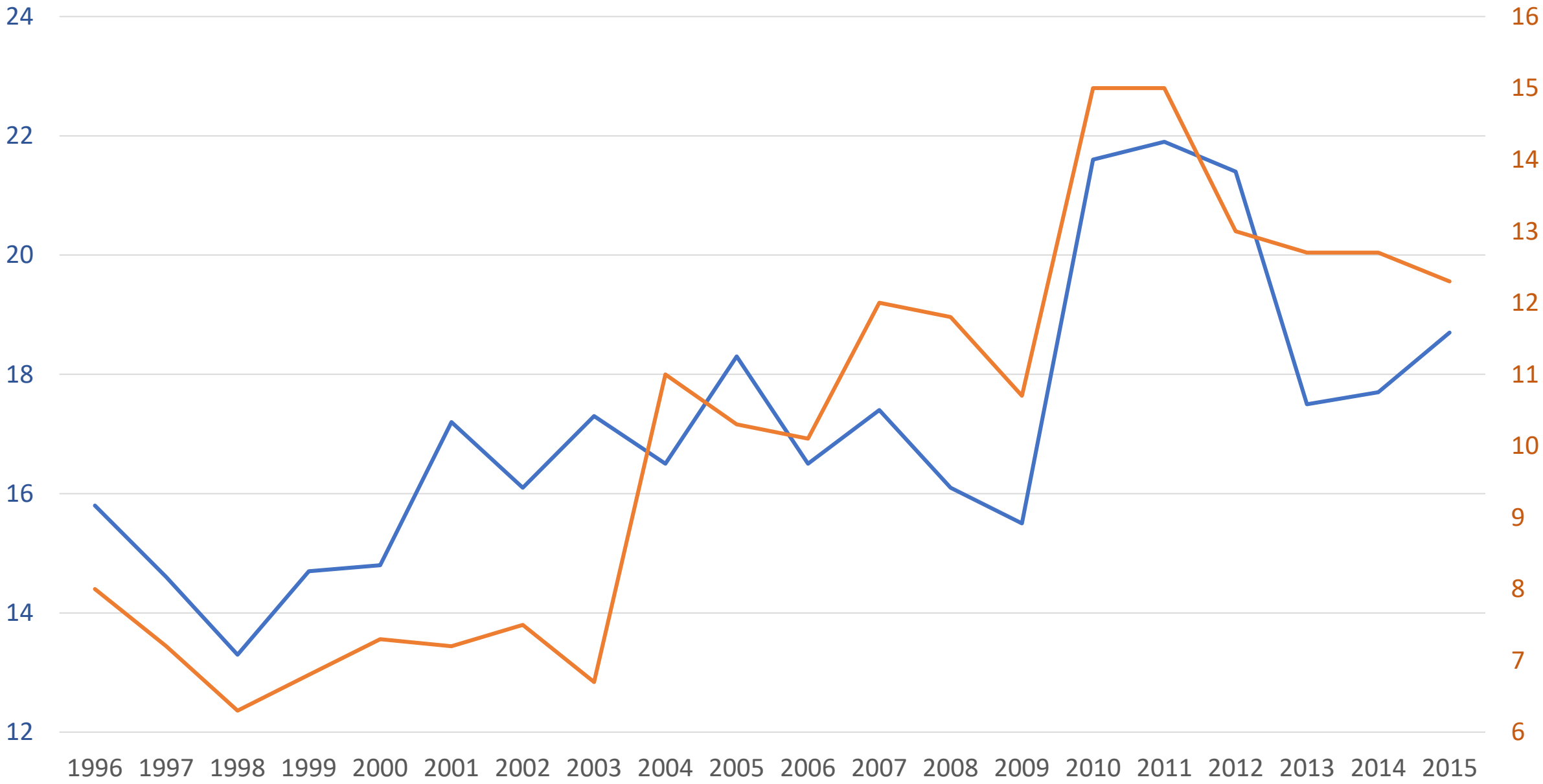
Percentage of Fatalities and Serious Injuries Involving Driver Distraction



Percentage of Fatalities and Serious Injuries Involving Distracted Driving

Comparison Period	% of Fatalities Involving Distracted Driving	% of Serious Injuries Involving Distracted Driving
% Change from 1996-2001 to 2002-2010 (RSV 2010)	-2.6	79.2
% Change from 2002-2010 to 2011-2015 (RSS 2015)	53.1	57.1
% Change from 1996-2001 to 2011-2015	47.8	159.7

Percentage of Fatalities and Serious Injuries Involving Speeding

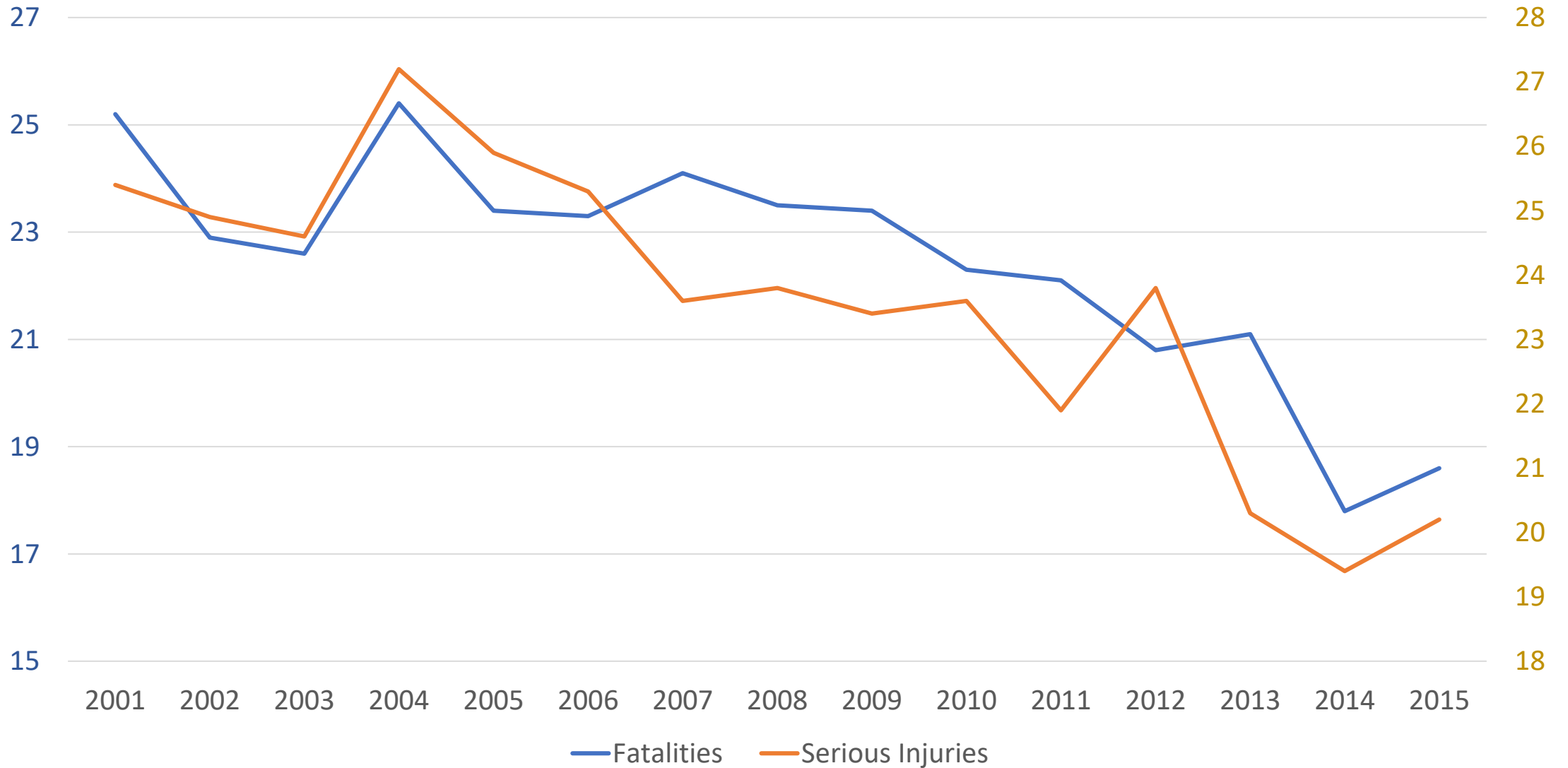


— % Fatalities — % Serious Injuries*

Percentage of Fatalities and Serious Injuries Involving Speeding

Comparison Period	% Fatalities	% Serious Injuries
% Change from 1996-2001 to 2002- 2010 (RSV 2010)	14.6	49.3
% Change from 2002-2010 to 2011-2015 (RSS 2015)	12.7	24.5
% Change from 1996-2001 to 2011-2015	29.1	85.9

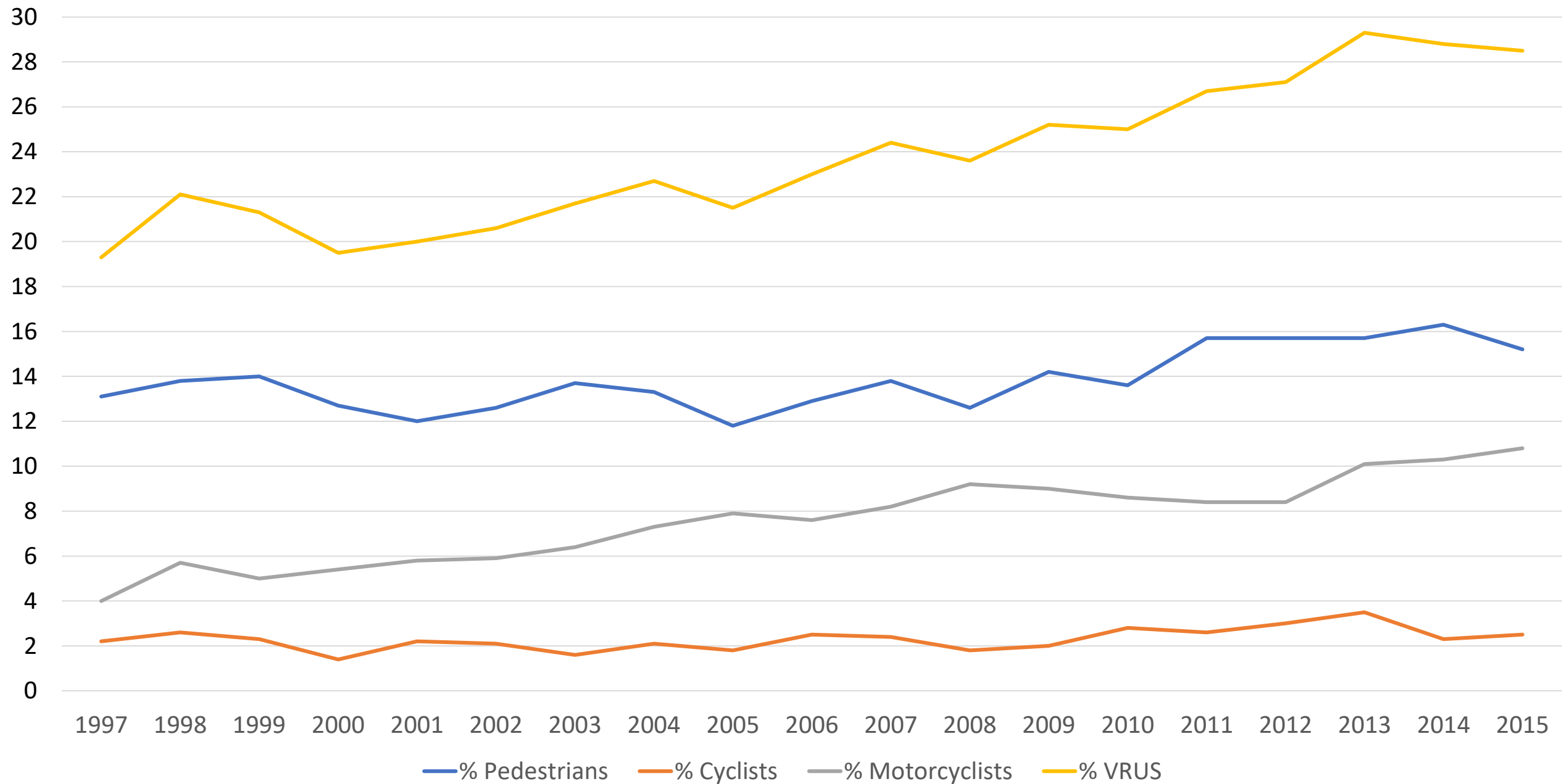
Percentage of Fatalities and Serious Injuries That Were Young Drivers 15-24



Percentage of Driver Fatalities and Serious Injuries Aged 15-24

Comparison Period	% Fatalities	% Serious Injuries
% Change from 2001 to 2002-2010 (RSV 2010)	-7.1	-2.7
% Change from 2002-2010 to 2011-2015 (RSS 2015)	-11.1	-14.2
% Change from 2001 to 2011-2015	-17.5	-16.5

Percentage of Fatalities That Were VRUs



Percentage of Fatalities Being Vulnerable Road Users 1997-2015

Year	Pedestrians	Cyclists	Motorcyclists	VRUS
% Change from 1997-2001 to 2002-2010 (RSV 2010)	7.6	0.0	50.0	13.2
% Change from 2002-2010 to 2011-2015 (RSS 2015)	18.9	33.0	23.1	21.6
% Change from 1997-2001 to 2011-2015	19.8	33.0	84.6	37.7

Conclusions

- Fatalities dropped by about 44% and serious injuries by 56% from pre-strategy period of 1991-1995 to 2011-2015 period
- Fatality and serious injuries rates per billion VKT have declined by 40% and 35% respectively from 2000-2001 to 2011-2015.
- Decreases were observed during all three strategies, although greater reductions occurred during RSV 2001 and RSS 2015.
- It is difficult to attribute improvement in road safety to presence of these national strategies in absence of appropriate comparison group.
- However, Canada has seen larger reductions in fatalities and serious injuries than those in U.S. over 1996-2015 period and it has better OECD fatality rate ranking.

Conclusions

- Overall improved level of safety could be attributed to higher seat belt use, lower incidence of drinking and driving, and fewer young drivers being killed or seriously injured.
- Percentages of fatalities and serious injuries involving speeding have increased over past 20 years.
- Percentage of fatalities that were vulnerable road users has increased, particularly for motorcyclists.
- Percentages of fatalities and serious injuries involving distracted driving have risen substantially as has percentage of fatally injured drivers with psychodynamic drugs present, particularly cannabis.
- Future should focus on speeding, drugs, and distraction.

QUESTIONS?

Contact: n.bjonah@gmail.com