

New Zealand Injury Prevention Strategy
Rautaki Arai Whara o Aotearoa

December 2010

**A Chartbook of the
New Zealand Injury Prevention Strategy
Serious Injury Outcome Indicators: 1994-2009**



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Zealand Injury Prevention
Strategy Serious Injury
Outcome Indicators:
1994-2009**

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Contents

Acknowledgements	iv
Foreword	v
Abbreviations	vi
Summary of the charts – key highlights of the chartbook	vii
Frequencies	vii
Age standardised rates	viii
Part 1: Background and Methods	1
1.1 The New Zealand Injury Prevention Strategy	2
1.2 What is a serious injury?	2
1.3 The indicators	3
1.4 What the chartbook comprises	3
1.5 Frequently Asked Questions	3
1.6 Interpretation of the charts	6
Part 2: The Charts	7
2.1 All injury	8
2.2 Assault	11
2.3 Work related injury	14
2.4 Intentional self-harm	17
2.5 Falls	20
All ages	20
Aged 0-74 years	23
Aged 75 years and over	26
2.6 Motor vehicle traffic crashes (MVTC)	29
2.7 Drowning	35
References	37
Appendix: Tables	38

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Foreword

Presented here is a chartbook of the New Zealand Injury Prevention Strategy serious injury outcome indicators. This is the fifth in a series of chartbooks. The development of these outcome indicators was described in the report:

Cryer C, Langley J, Stephenson S. Developing valid injury indicators. [A report for the New Zealand Injury Prevention Strategy. Injury Prevention Research Unit Occasional Report OR 049, Dunedin: University of Otago, September 2004.](#)

The Chartbooks have been developed to provide a measure of New Zealand's progress in reducing the incidence and annual rates of injury since the introduction of the New Zealand Injury Prevention Strategy. The main foci of the Chartbooks are the charts. These charts provide a diagrammatic representation of the changes in the annual incidence and rates of injury, both overall and for each of the six New Zealand Injury Prevention Strategy priority areas. Because the charts are intended to be the main focus of the chartbooks, we have intentionally limited the description of the background and methods surrounding the development of these charts. For more technical detail, please refer to the "[The New Zealand Injury Prevention Strategy Serious Injury Outcome Indicators: Technical Report](#)".

Abbreviations

ACC	Accident Compensation Corporation
Cryer 2004 report	Developing valid injury outcome indicators. A report for the New Zealand Injury Prevention Strategy.
ICD	WHO International Classification of Diseases
ICD-9	WHO International Classification of Diseases 9 th revision
ICD-9-CM	ICD-9, Clinical Modification
ICD-9-CM-A	ICD-9-CM, Australian Modification
ICD-10	WHO International Classification of Diseases 10 th revision
ICD-10-AM	ICD-10, Australian Modification
ICISS	ICD-based Injury Severity Score
IPRU	Injury Prevention Research Unit, University of Otago, New Zealand
MVTC	Motor Vehicle Traffic Crashes
MoT	Ministry of Transport
NMDS	Ministry of Health National Minimum Data Set of hospital discharges
NZIPS	New Zealand Injury Prevention Strategy
SNZ	Statistics New Zealand
SRR	Survival Risk Ratio
TCR	MoT Traffic Crash Report
Technical Report	The New Zealand Injury Prevention Strategy Serious Injury Outcome Indicators: Technical Report
WHO	World Health Organisation
WRFIS	Work-Related Fatal Injury Study
WSNZ	Water Safety New Zealand

Summary of the charts – key highlights of the chartbook

Below is a summary of the overall changes from baseline in the frequency and age-standardised rates of serious non-fatal injury and death for ‘All injury’ and each of the six NZIPS priority areas.

Frequencies

The frequency of injury details the number of fatalities or serious hospitalisations resulting from injury, thereby describing the impact of injury on society.

Injury Area	Fatal trends to 2007*	Serious non-fatal trends to 2009
<u>All injury</u>	I11: Evidence of an increase from the baseline of 1680 to almost 1800.	I01: Increase from the baseline of around 8,000 to over 10,000 in 2009.
<u>Assault</u>	A11: No evidence of a change from baseline.	A01: Increase from baseline
<u>Work related</u>	W12 (provisional indicator): No change from baseline.	W01 (provisional indicator): Increase from baseline in the annual frequencies.
<u>Intentional self-harm</u>	S11: No change from baseline.	S01: Substantially higher than baseline.
<u>Falls</u>	F11a-c: Increase from baseline for all ages, and 75+ age group. No change from baseline in the 0-74 age group.	F01a-c: Increase from baseline for all ages, the 0-74 and 75+ age group.
<u>MVTC</u>	M11 and M15: No change from baseline for the Mortality Collection based indicator. Reduction from baseline for the MoT traffic crash report based indicator (provisional indicator).	M01: Substantial increase from baseline.
<u>Drowning</u>	D11 and D13: Mortality Collection data show a decrease from baseline in 2006 and 2007. Drownbase data (provisional indicator) provide evidence of a decrease from baseline for 2006, 2008 and 2009.	D01: No indicator presented.

*M15 & D13 show trends to 2009

Age standardised rates

Age standardised rates provide an estimate of an individuals' average annual risk of being injured.

Injury Area	Fatal trends to 2007*	Serious non-fatal trends to 2009
<u>All injury</u>	I12: No change from baseline.	I02: Increase from baseline
<u>Assault</u>	A12: No change from baseline.	A02: Increase from baseline
<u>Work related</u>	W14 (provisional indicator): Reduction from the baseline.	W02 (provisional indicator): No change from the baseline.
<u>Intentional self-harm</u>	S12: Weak evidence of a reduction from baseline.	S02: Increase from baseline
<u>Falls</u>	F12a-c: Increase from baseline for all ages and 75+ age group. No change from baseline in 0-74 age group.	F02a-c: No change from baseline across all ages and the 75+ age group. Increase from baseline for the 0-74 age group.
<u>MVTC</u>	M12 - M14 and M16 – M18: Decrease from baseline in rates based on Mortality Collection data and MoT traffic crash reports (provisional indicators).	M02: Increase from baseline.
<u>Drowning</u>	D12 and D14: Mortality Collection data show a decrease from baseline in 2006 and 2007. Drownbase data (provisional) show a decrease from baseline from 2006 to 2009	No indicator presented.

*M16-M18 & D14 show trends to 2009

Part 1: Background and Methods

1.1 The New Zealand Injury Prevention Strategy

The [New Zealand Injury Prevention Strategy \(NZIPS\)](#) is an expression of the Government's commitment to working with organisations and groups in the wider community to improve the country's injury prevention performance.

The broad structure of the Strategy includes a vision, principles, goals, objectives and actions. The vision is "a safe New Zealand, becoming injury free", which is supported by two goals:

- to achieve a positive safety culture, and
- to create safe environments.

Ten key objectives are identified which are designed to address the vision and goals of the NZIPS. (For further details see www.nzips.govt.nz.)

Six priority areas are referred to in the objectives and actions. These priority areas are:

- Assault,
- Workplace injuries,
- Suicide and deliberate self harm,
- Falls,
- Motor vehicle traffic crashes, and
- Drowning and near-drowning.

Serious injury outcome indicators, that include fatal, serious non-fatal and serious (fatal and non-fatal) injury indicators, have been developed for these areas as the main means of measuring performance in reducing injury. The purpose of this chartbook is to present trends over the period 1994 to 2007 for each of the NZIPS fatal and serious (fatal and non-fatal) and 1994 to 2009 for the NZIPS serious non-fatal injury indicators, for each of these priority areas, in order to judge progress in the prevention of serious injury during the lifetime of the NZIPS.

1.2 What is a serious injury?

Serious injuries were those that resulted in death, or an admission to hospital that was associated with at least a 6% chance of death (serious non-fatal injury). Amongst first discharges from hospital (i.e. not including those who are readmitted for the same injury) with a primary diagnosis of injury, approximately 13% have at least a 6% chance of death. The methods by which cases of fatal and serious non-fatal injury are identified are described briefly in the accompanying technical report "[The New Zealand Injury Prevention Strategy Injury Outcome Indicators: Technical Report](#)"

1.3 The indicators

The development of the NZIPS indicators is described in the Cryer 2004 [report](#)¹.

The NZIPS fatal and serious non-fatal injury indicators are one of the key indicators to measure the Strategy's progress and impact. In April 2010, lead agencies for the six NZIPS priority areas signed a 'Protocol for government agency reporting on serious injury' (developed by Statistics NZ) which ensures that lead agencies adopt consistent, high level injury measures when reporting on injury trends.

The high threshold of 6% or greater threat to life, used to define serious non-fatal injury and described above, was chosen for the non-fatal injury indicators to reduce the likelihood of producing misleading time trends. For discussion and illustration of this point, see the Cryer 2004 report¹.

The detailed methods used to produce the charts in this chartbook and the indicator specifications are presented in the accompanying [Technical Report](#). These methods and specifications are the same as those presented in the Cryer 2004 report¹.

1.4 What the chartbook comprises

Part 2 presents the charts for the NZIPS fatal and serious non-fatal injury indicators for 'All injury' and for the six priority areas. Each chart contains a baseline to allow for comparisons over time (see section 1.5 for an explanation of how to interpret the charts). These charts speak largely for themselves, and so only a brief commentary is provided for each. The figures from which the charts are derived have been reproduced as Appendices at the end of this document.

1.5 Frequently Asked Questions

Q What are the validated^a NZIPS serious injury indicators for all injury?

A The validated NZIPS fatal, serious non-fatal, and serious (fatal and non-fatal) injury indicators for 'all injury' are as follows:

- Frequency of injury deaths
- Age-standardised injury mortality rate, per 100,000 person-years at risk
- Frequency of serious non-fatal injuries
- Age-standardised serious non-fatal injury incidence rate, per 100,000 person-years at risk
- Frequency of serious (fatal and non-fatal) injuries
- Age-standardised serious (fatal and non-fatal) injury incidence rate, per 100,000 person years at risk.

^a The terms 'validity' and 'validated' refer to the extent that the indicators measure what they are intended to measure (incidence of injury) rather than measuring other factors that may influence injury (admission criteria, funding, hospital policies etc)

Age standardisation is a process of adjusting the rates of injury to account for changes in the age structure of a population over time. It allows comparison of the rates of injury from one year to another, taking into account the aging population.

The methodology for the derivation of the NZIPS fatal, serious non-fatal and serious (fatal and non-fatal) injury indicators for most of the priority areas is based on those for ‘all injury’ (refer ‘[Technical Report](#)’ for more detail).

Q Why is there a serious (fatal and non-fatal) injury indicator?

A We have supplemented the original NZIPS fatal and serious non-fatal injury indicators with “serious injury indicators”, for which the numerators are the sum of the relevant fatal and the serious non-fatal injury indicators – see the Technical Report. The reason for including these additional indicators is as follows. Where there is a decline in the rates or numbers of fatal injury, one explanation could be improved case-fatality rates, for example improved emergency medical systems resulting in more cases of serious injury surviving than before. If this is the case, then there would be a shift of cases from the fatal category to the serious non-fatal category. In order to present a more complete picture, the trends in serious injury (fatal and serious non-fatal injury) have also been presented.

Q What data are the indicators based on?

A The majority of these indicators are based on the Ministry of Health’s Mortality Collection² and their National Minimum Dataset (NMDS)³ of hospital inpatient data. Provisional fatal work related injury indicators are based on Accident Compensation Corporation (ACC) data, whereas serious non-fatal work related indicators are based on ACC-NMDS linked data. Provisional indicators for fatal motor vehicle traffic crash injuries are based on [Ministry of Transport](#) (MoT) annual road toll figures. Provisional indicators for drowning are based on [Water Safety New Zealand](#)’s (WSNZ) [DrownBase](#)TM, which records drowning reported in police reports, media releases and Coroners’ reports.

Q What do the frequencies and rates reflect?

A Frequencies reflect the societal burden of injury^b, while rates reflect individual risk of being injured.

Q Why are there provisional indicators?

A Where valid indicators could not be identified, provisional indicators were developed (see Cryer 2004 [report](#))¹. The provisional serious injury indicators were candidate NZIPS indicators, but had some identifiable threats to validity. In these cases it was considered that the count of injuries based on the data available could be impacted by factors such as reporting behaviour (people being more willing to report the true cause of an injury because of an increased awareness) or monitoring behaviour (more cases being identified because of increased policing, or a cause of injury becoming more of a public health priority).

^b In this context, the societal burden of injury is considered to be related to the number of deaths and hospitalisations associated with injury. The majority of injury discharges from hospitals in New Zealand are publicly funded. For 2007 it was estimated that 99.5% of all hospital injury discharges were publicly funded.

Prior to the 2010 update of the Chartbook, the serious non-fatal assault and self-harm indicators were considered provisional. However, in an investigation conducted in 2009, it became apparent that there had been no detectable change in the way either assault or self-harm was captured or recorded in the NMDS between 2001 and 2007. As a result, the provisional status for these indicators has been removed.

Q What is the period presented in the charts?

A Wherever possible, the period presented for serious non-fatal injuries is 1994 to 2009. For fatal injuries, the period presented is 1994 to 2007. Because many cases of injury related death are required to be reviewed by a Coroner, there is a time delay in the recording of the cause of fatal injury. Hence, 2007 is the most recent year available for the mortality data, with the exception of Work Related, MVTC and Drowning fatalities, based on ACC, Ministry of Transport and DrownBase data respectively. For all of these sources, the most recent year available is 2009. There have been slight changes by MoT in the methods used to estimate the number of vehicles in New Zealand and the kilometres travelled by light vehicles. As a consequence, the period covered by the provisional indicators for the rates of MVTC fatalities now start from 2000 (rate per light vehicle) and 2001 (rate per vehicle kilometer travelled).

Q What is the coding scheme used for diagnosis of injury?

A The coding system used for classifying injury diagnosis and cause of injury in the Mortality Collection and NMDS is the World Health Organisation (WHO) International Classification of Diseases (ICD)⁴. During the period considered in these charts, the ICD was substantially revised, and a new version of the coding scheme was introduced (from ICD-9 to ICD-10, refer Technical Report). This change has resulted in differences in the number of deaths and hospitalisations attributable to injury⁵. That is, for some of the charts, the years before 1999 cannot be compared with the years after 1999.

Readers should exercise caution if commenting on trends that include indicator values based on both ICD-9 and ICD-10 coded data. Accordingly, the commentary will focus on the trends since the implementation of the newest revision ICD-10, ie. from the year 2000 onwards.

Q Why include the years before 2000 in the charts, given that commentary is only provided from 2000 onwards?

A For some of the priority areas, the effect of the changeover is discernable, in others it is not. Since the effects vary for each priority area, we have elected to present the whole of the period from 1994 onwards and let the reader make their own judgments about trends in the period before 2000, and their relevance to the trends from 2000 onwards.

Q What is the significance of the various colours used in the charts?

A The colours used in the charts have been chosen in order to signal the different status of the indicators (NZIPS compared with provisional), as well as the information used to generate the bars in the charts (ICD-9 vs ICD-10 coded data).

Blue:	NZIPS fatal, serious non-fatal and serious (fatal and non-fatal) injury indicator (ICD-9).
Green:	NZIPS fatal, serious non-fatal and serious (fatal and non-fatal) injury indicator (ICD-10).
Light brown:	Provisional fatal, serious non-fatal and serious (fatal and non-fatal) indicator (ICD-9).
Brown:	Provisional fatal, serious non-fatal and serious (fatal and non-fatal) injury indicator (ICD-10).

An intermediate colour (teal) was used for the bars for 1999 for indicators based on hospitalisation data, because 1999 was a transitional year when both ICD-9 and ICD-10 coding systems were used.

Q Why are some of the fatal injury indicators presented as a 3-year moving average? What does this mean?

A For some of the fatal injury indicators, the numbers of fatalities attributable to specific causes of death fall below 100 per year, and in these instances, the numbers fluctuate substantially on a year-to-year basis. Such fluctuations may hide trends in the numbers and rates of injury. In order to overcome this effect, 3-year moving averages have been estimated. This means, for example, that data from 1994, 1995 and 1996 are used to estimate an indicator value for 1995. Consequently, when using 3-year moving averages, the indicator values for 1999 (which use data from 1998, 1999 and 2000) and 2000 (which uses data from 1999, 2000, and 2001) are presented using an intermediate colour as they are based on both ICD-9 and ICD-10 coded mortality data (ICD9 in 1998 and 1999, ICD10 in 2000 and 2001). For similar reasons, the final years presented in this Chartbook for indicators based on moving averages are: mortality – 2006; serious non-fatal – 2008; serious – 2006.

Q What is the 'baseline'?

A The 'baseline' (horizontal line half way up the graphs) provides a point from which to compare the frequencies and rates of injuries. It is the average count or rate of injury for the three years leading up to the launch of the NZIPS (2001-2003). For those indicators where moving averages were used, the baseline is the average count or rate of injury for the five years closest to the launch of the NZIPS (2000-2004). The line has been extended across the graphs to provide an easy point of reference for the description of any injury trends.

Q What are the red lines shown on the graphs and what do these mean?

A Each bar on each chart has confidence intervals shown in red. These indicate the amount of random variation associated with a single year's indicator value. Narrow confidence intervals indicate little random variability; wide confidence intervals suggest a lot of random variability. Where wide confidence intervals are displayed, little weight should be given to the variation from one year to the next – it could be due to chance alone.

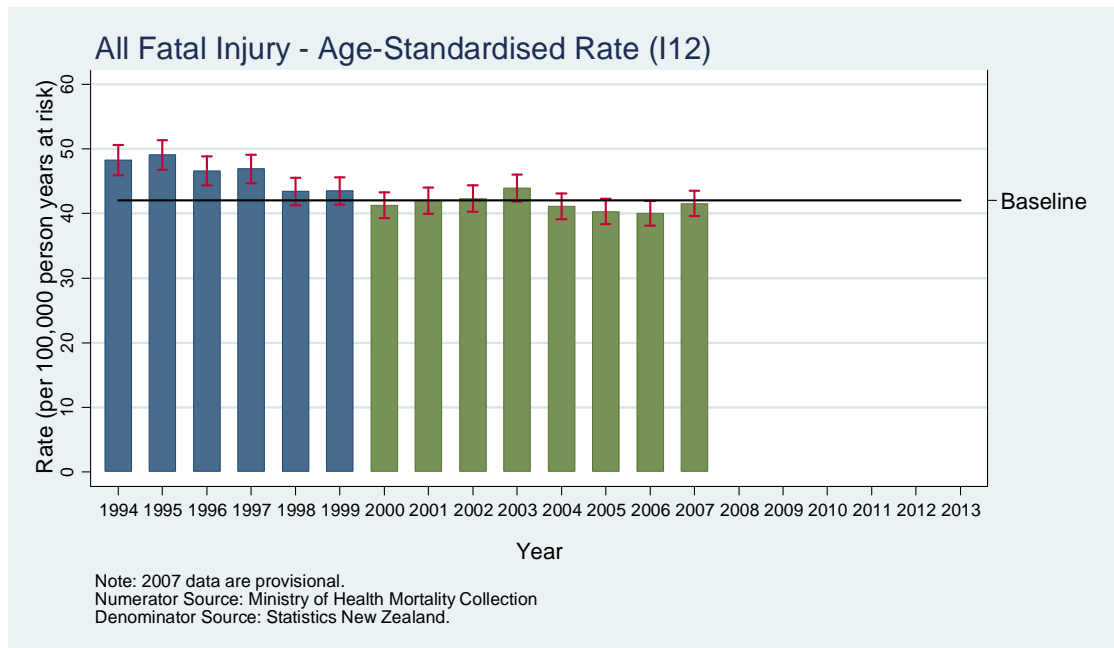
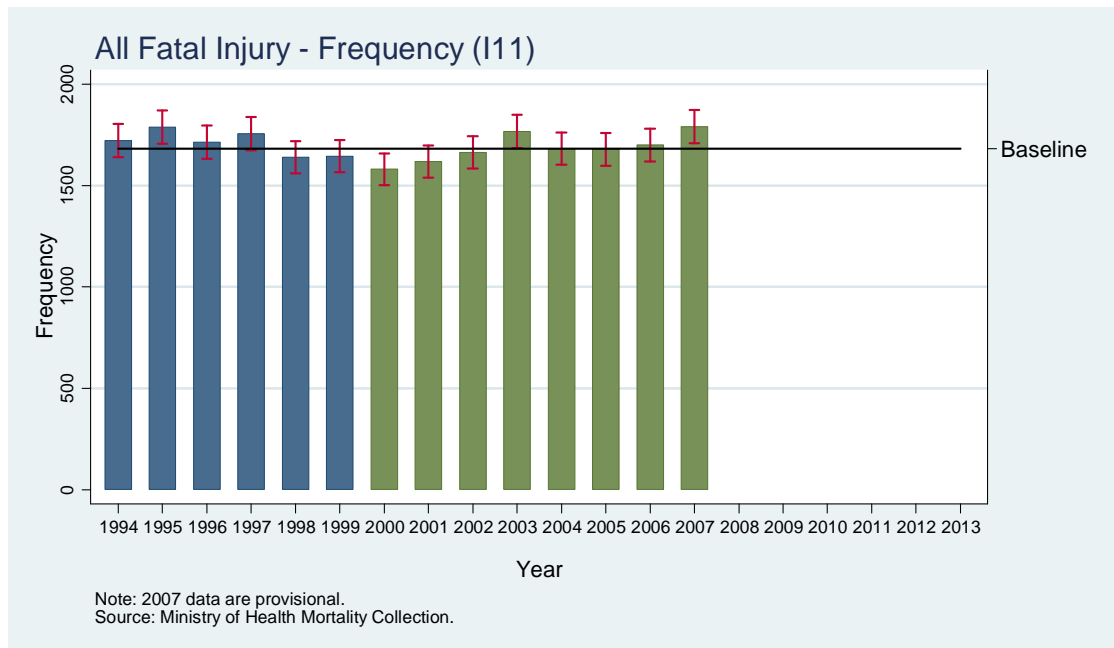
Confidence intervals are useful when gauging change from one point to another. They may also be useful when examining the frequency or rate of injury in a given year. When considering trends, the amount of overlap of the confidence intervals for individual years is important. Confidence intervals that do not overlap from one year to another are indicative of a change. Similarly, confidence intervals that do not overlap the baseline (the years immediately preceding the baseline) are indicative of a change from baseline that is unlikely to be due to chance alone.

1.6 Interpretation of the charts

Brief comments on each chart are provided at the foot of each page in Part 2. The interpretations provided are based on a visual inspection (as opposed to formal statistical trend analysis). Where the confidence intervals do not overlap the baseline within a chart, this indicates a change from baseline that is unlikely to be due to chance alone. This is likely to represent a real change unless some threats to validity of the indicator have been identified.

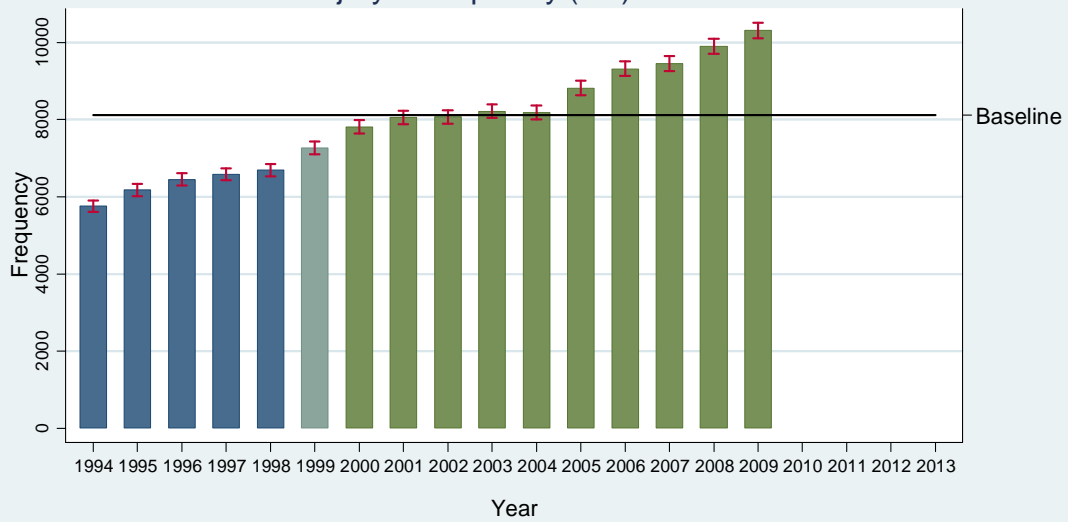
Part 2: The Charts

2.1 All injury



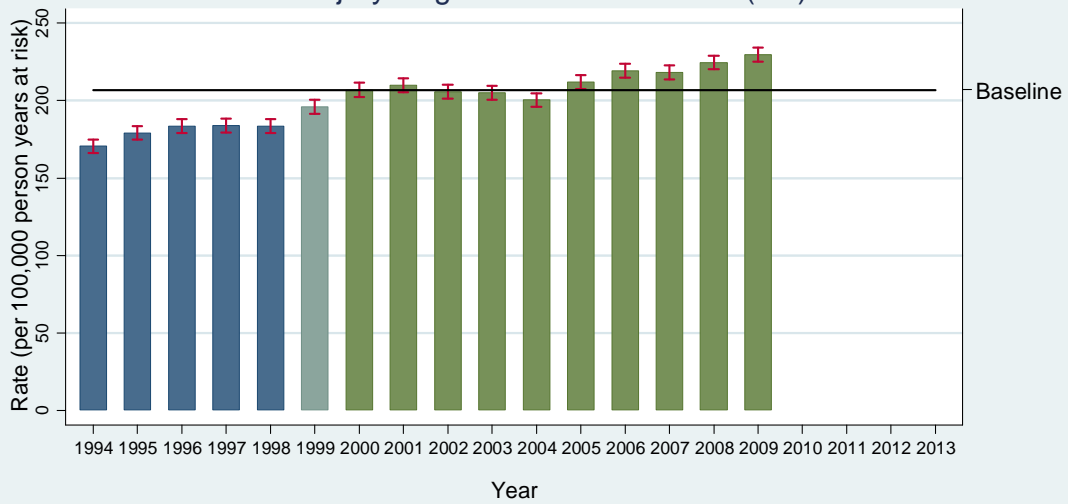
In 2007 there was an increase in the annual frequency of fatal injury (I11) however, the rate of fatal injury (I12) showed no change from baseline.

All Serious Non-Fatal Injury - Frequency (I01)



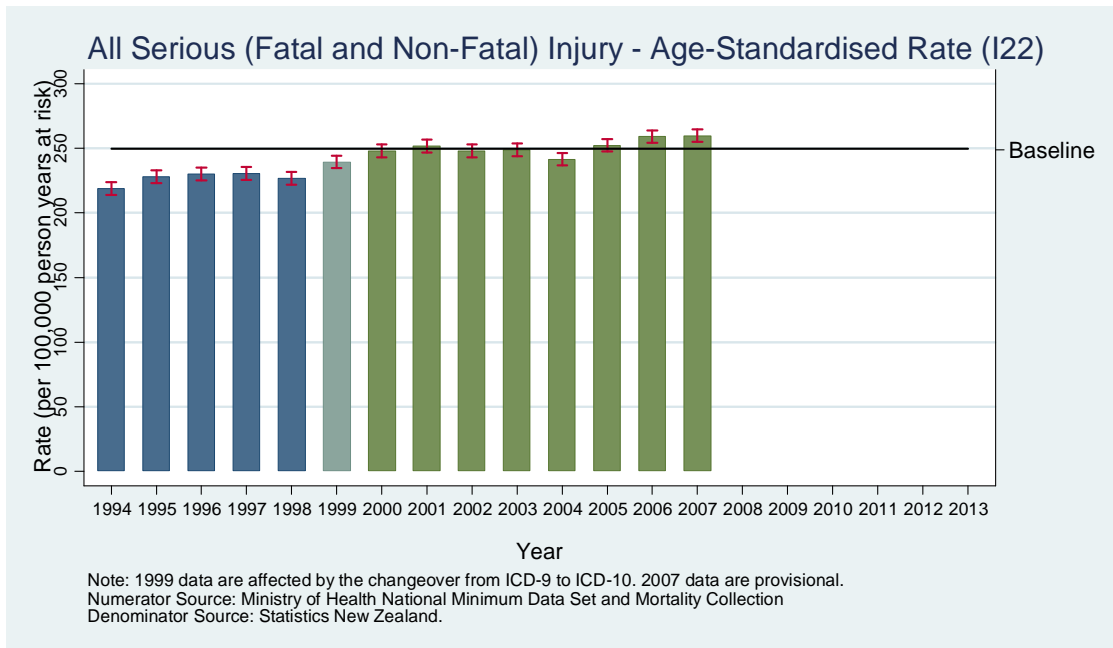
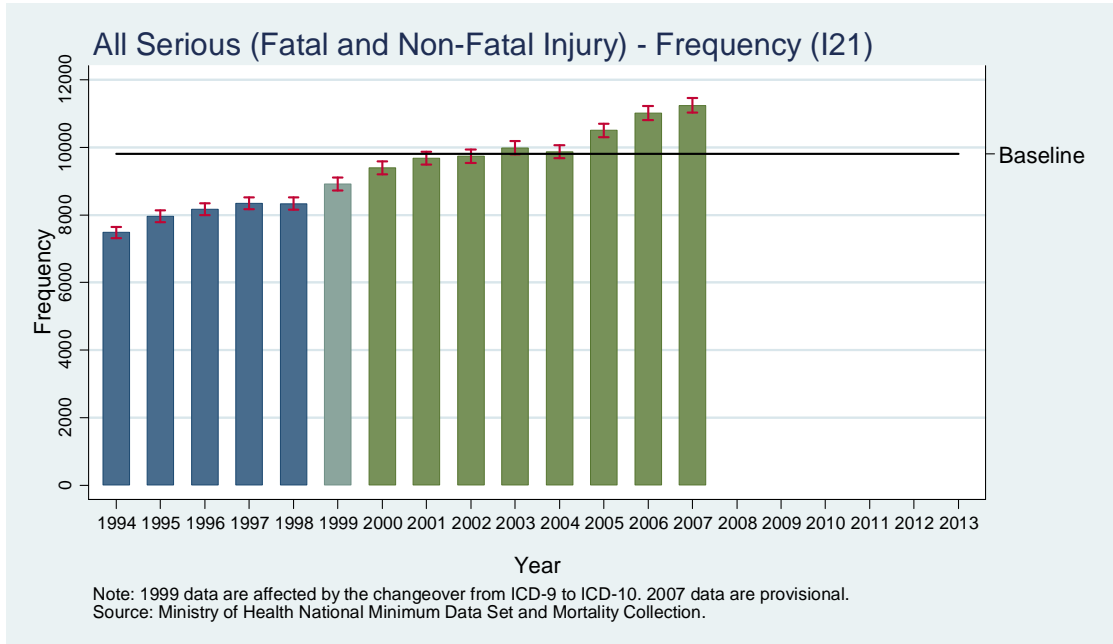
Note: 1999 data are affected by the changeover from ICD-9 to ICD-10. 2009 data are provisional.
 Source: Ministry of Health National Minimum Data Set.

All Serious Non-Fatal Injury - Age-Standardised Rate (I02)



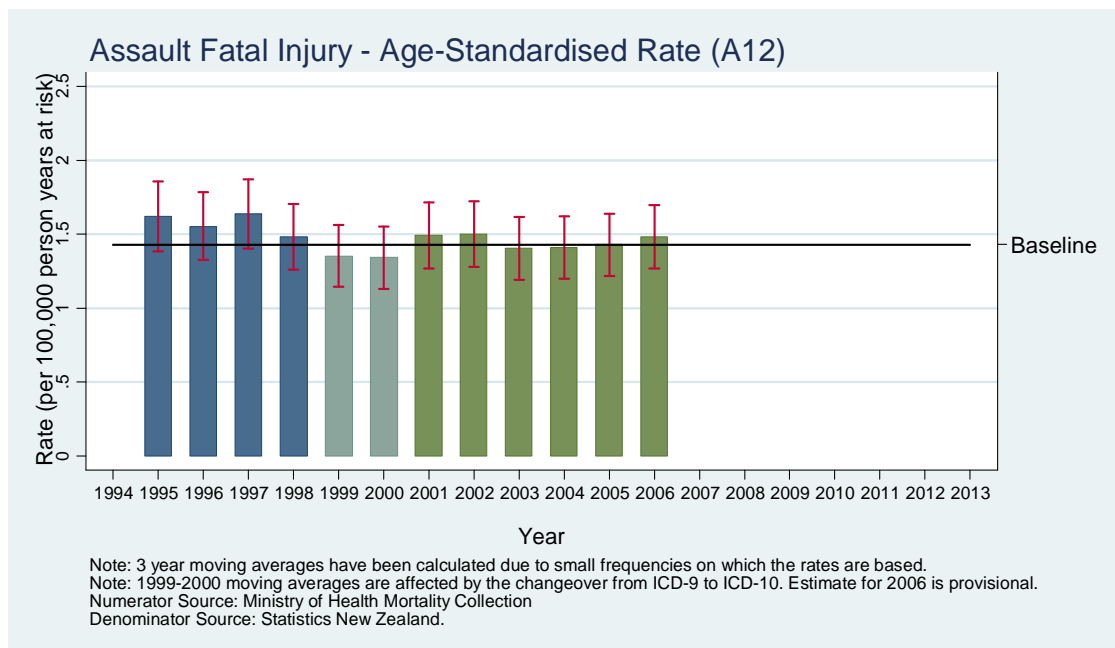
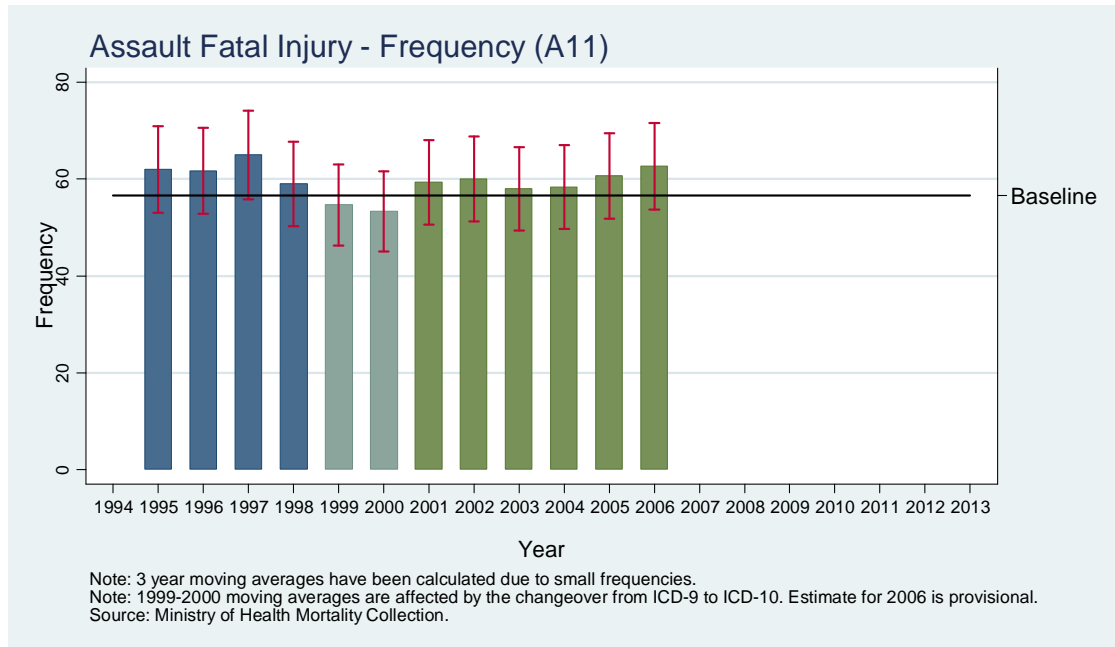
Note: 1999 data are affected by the changeover from ICD-9 to ICD-10. 2009 data are provisional.
 Numerator Source: Ministry of Health National Minimum Data Set
 Denominator Source: Statistics New Zealand.

Since 2004, there has been a steady increase in the frequency of serious non-fatal injury. This trend is also reflected in the rates of injury; the frequencies and rates of serious non-fatal injury have clearly increased from baseline levels.

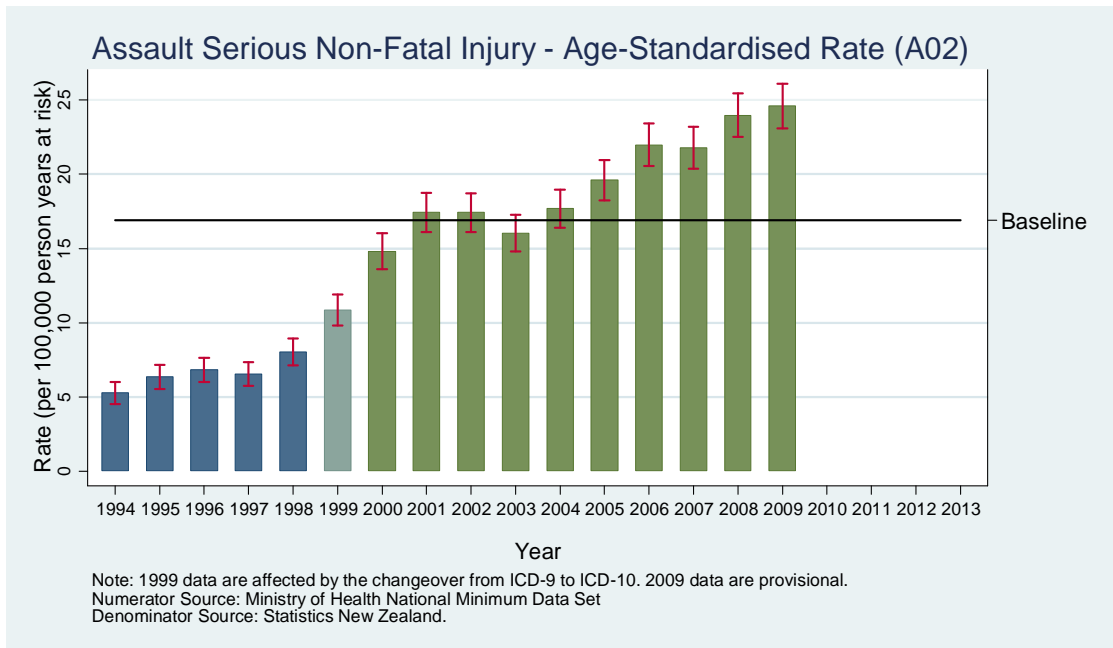
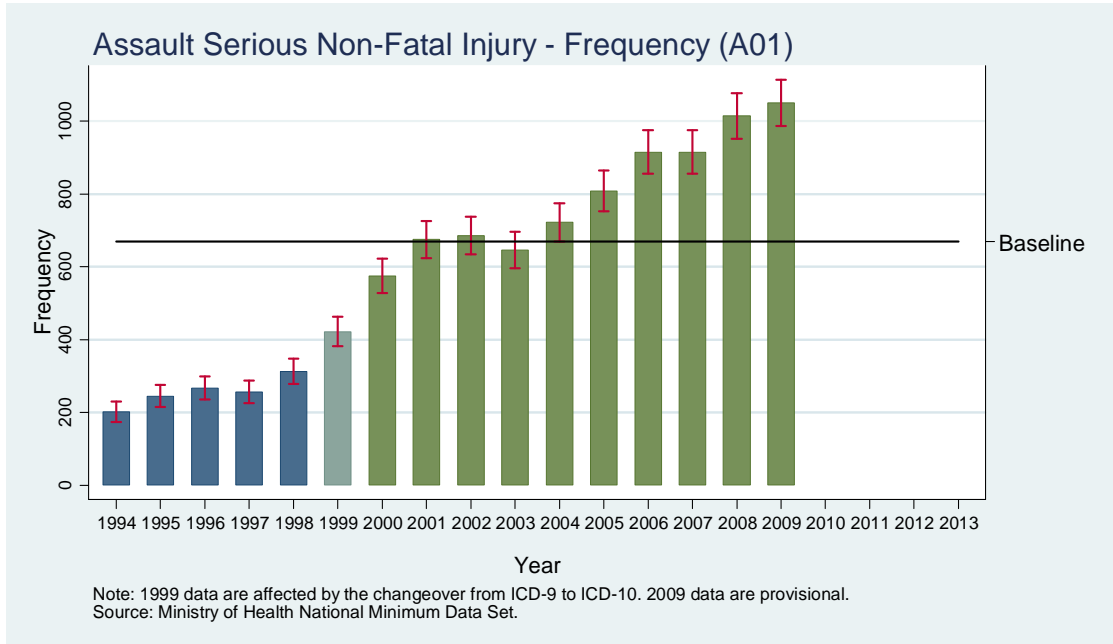


There was an increase from baseline in the 2005-2007 frequencies (I21) and the 2006 and 2007 rates of serious (fatal and non-fatal) injury (I22).

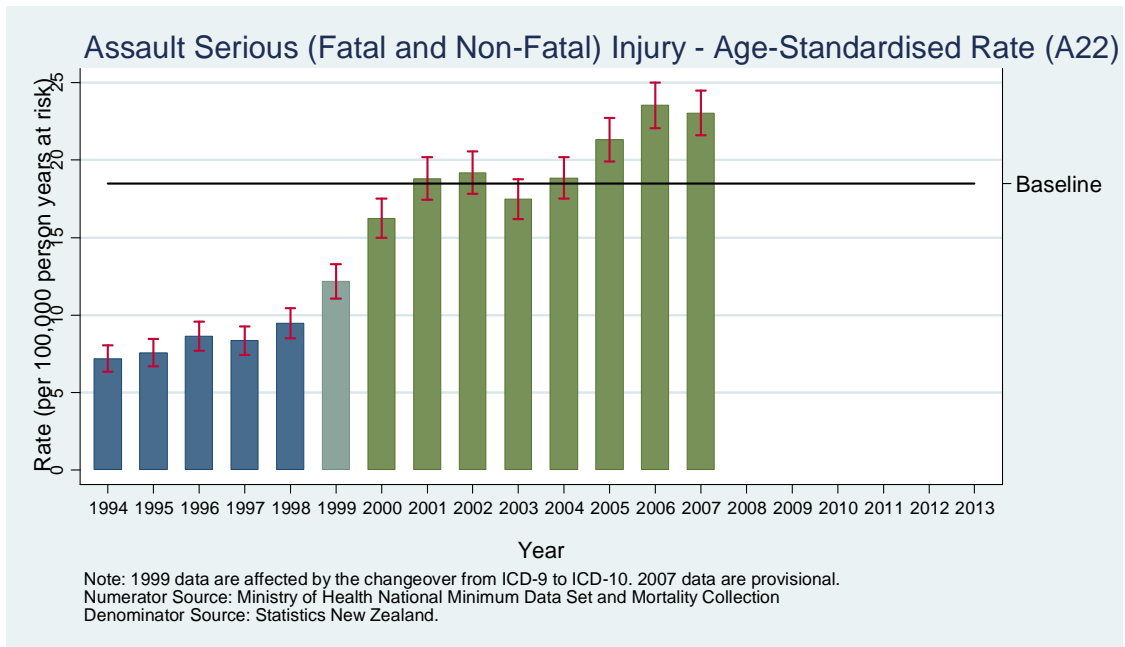
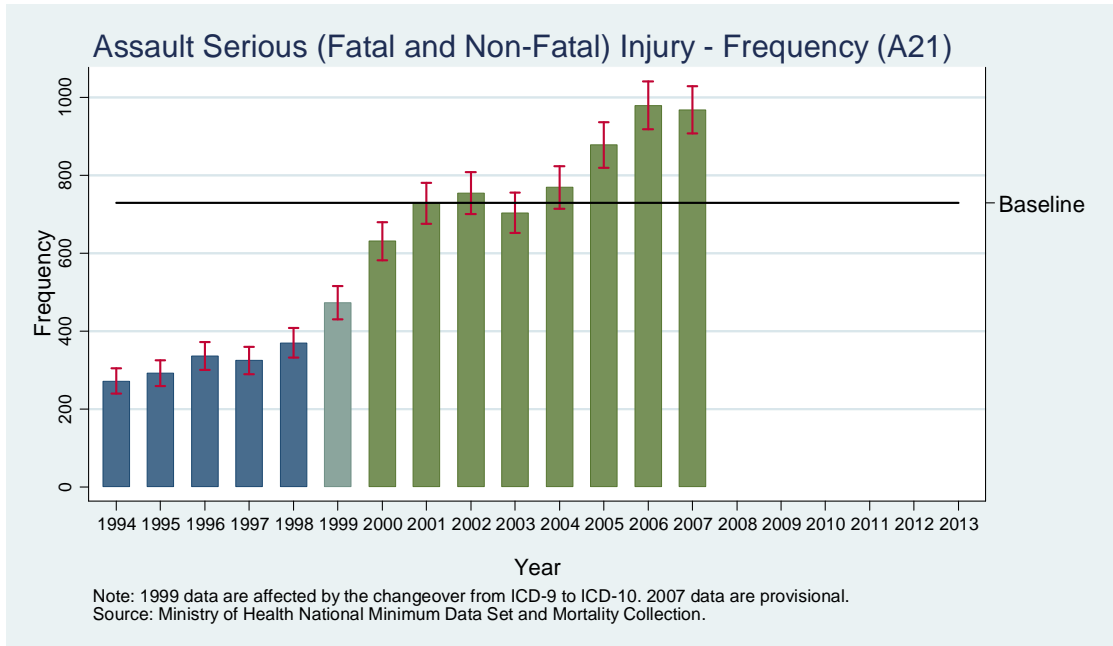
2.2 Assault



There is no evidence of change from baseline in either the frequencies (A11) or rates (A12) of fatal assaultive injuries.

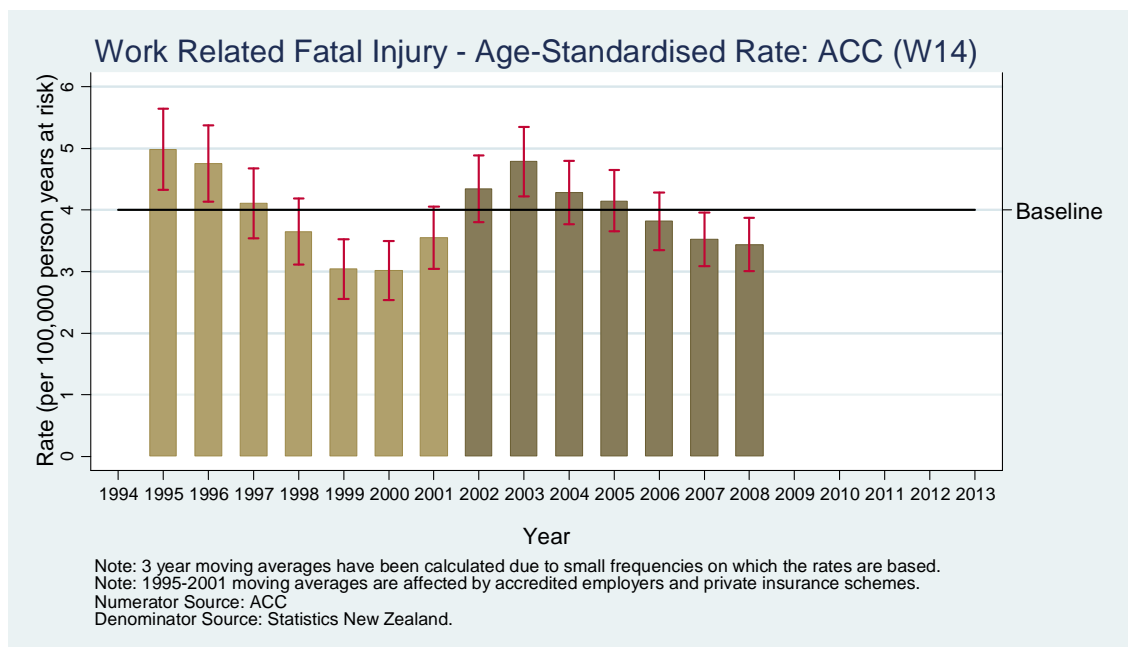
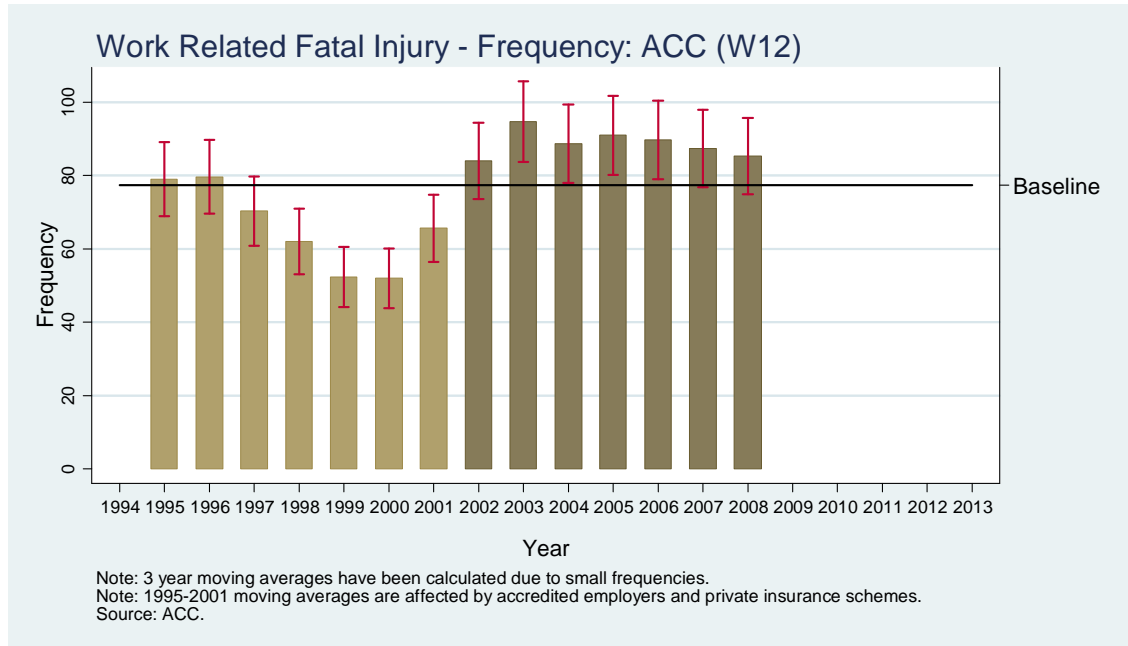


There is a clear increasing trend in the frequencies (A01) and rates (A02) of serious non-fatal assaultive injury since 2004.

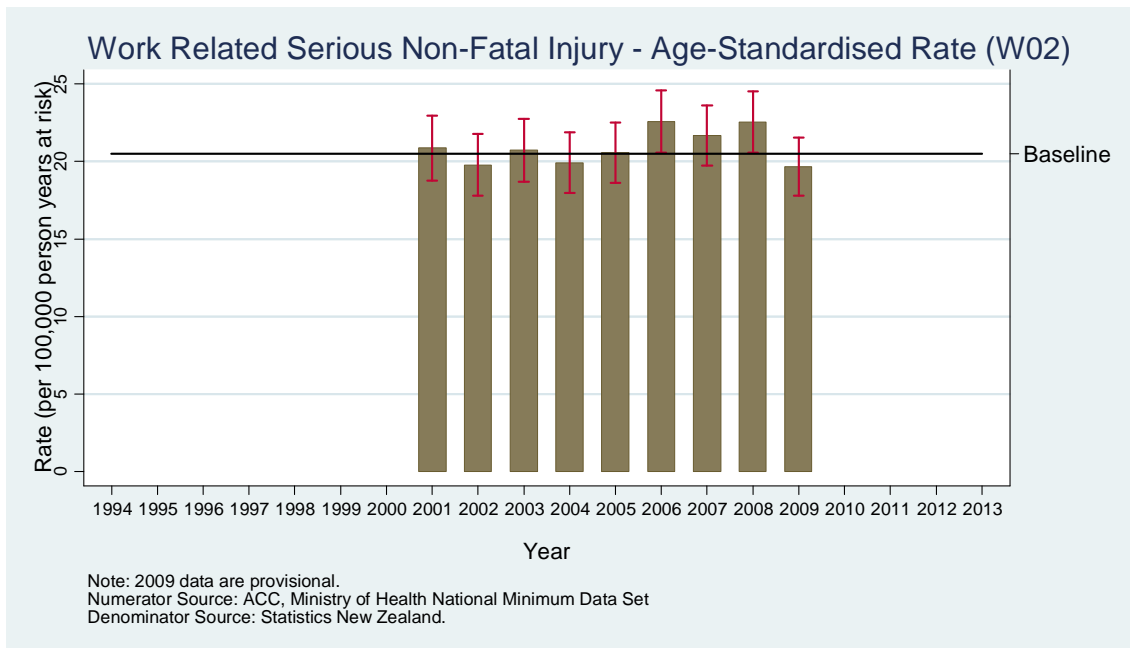
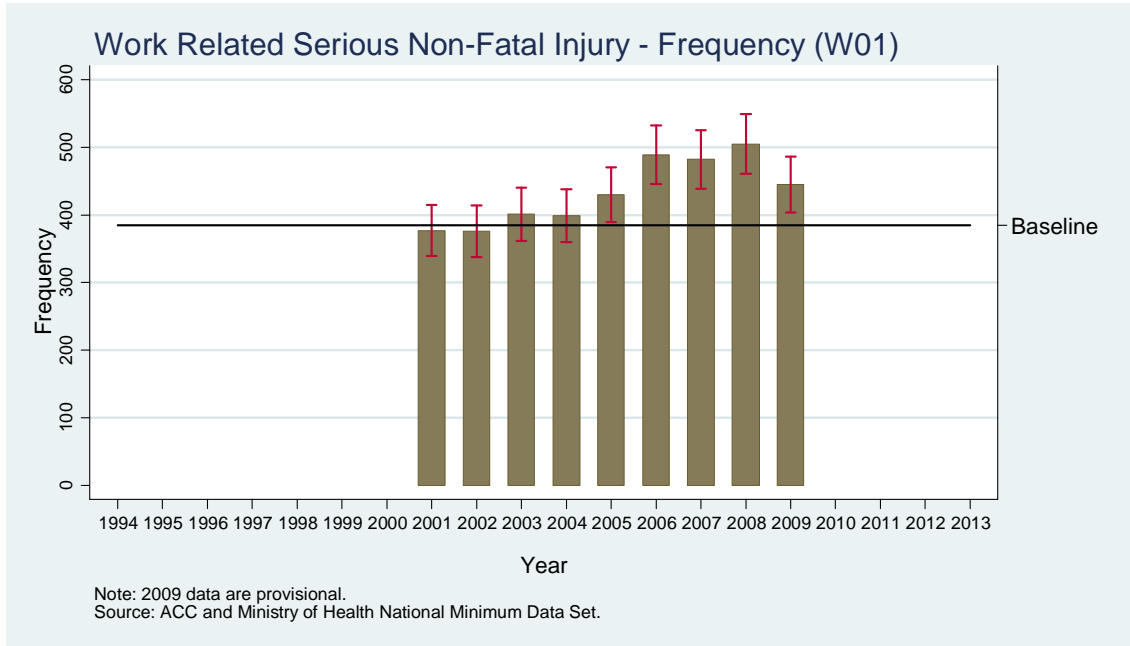


There is an increase in the frequencies (A21) and rates (A22) of serious (fatal and non-fatal) assault injury from baseline for 2005-2007.

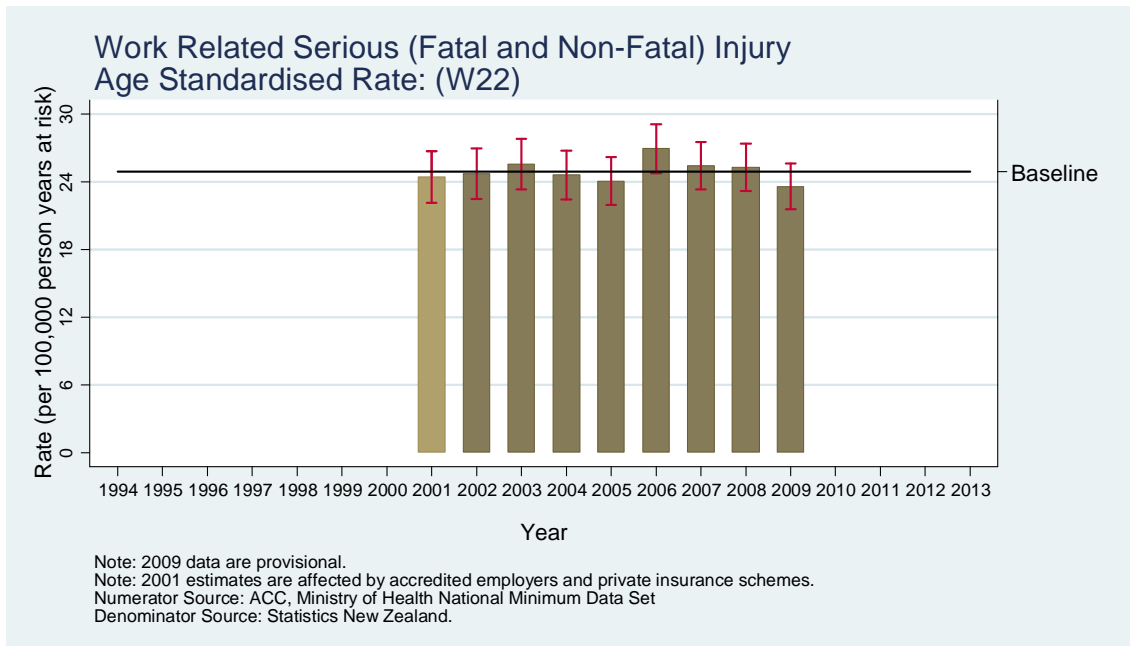
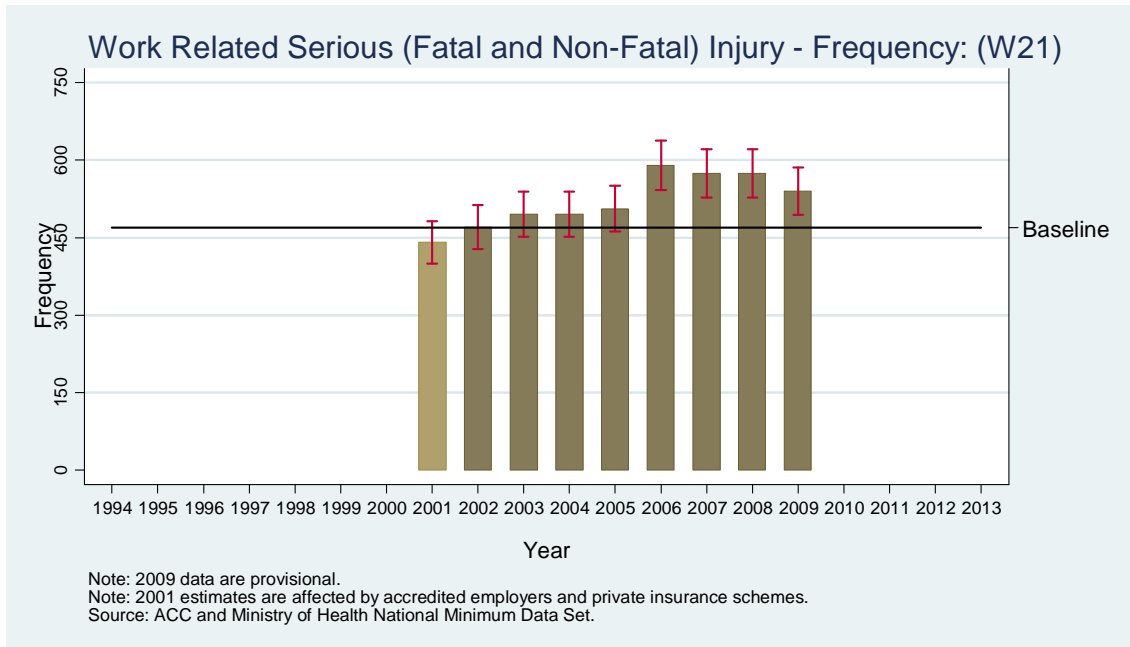
2.3 Work related injury



There was no detectable change from baseline in the moving average estimate of the annual frequency (W12) of ACC fatal work related injuries in 2008, although there was a decrease from baseline in the rate of ACC fatal work related injuries.

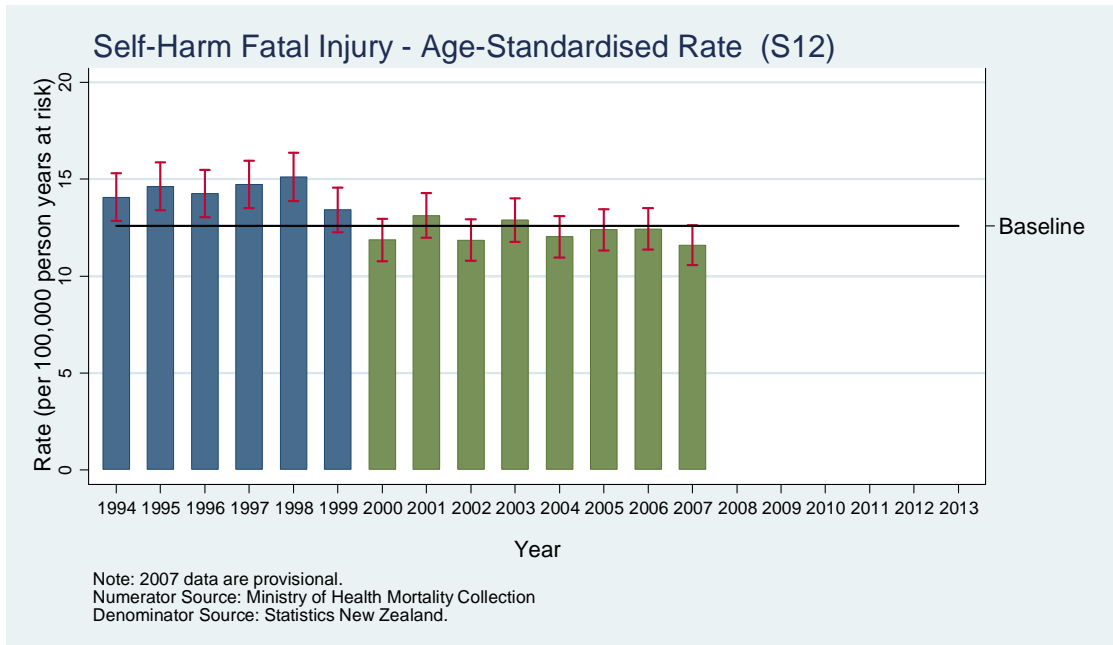
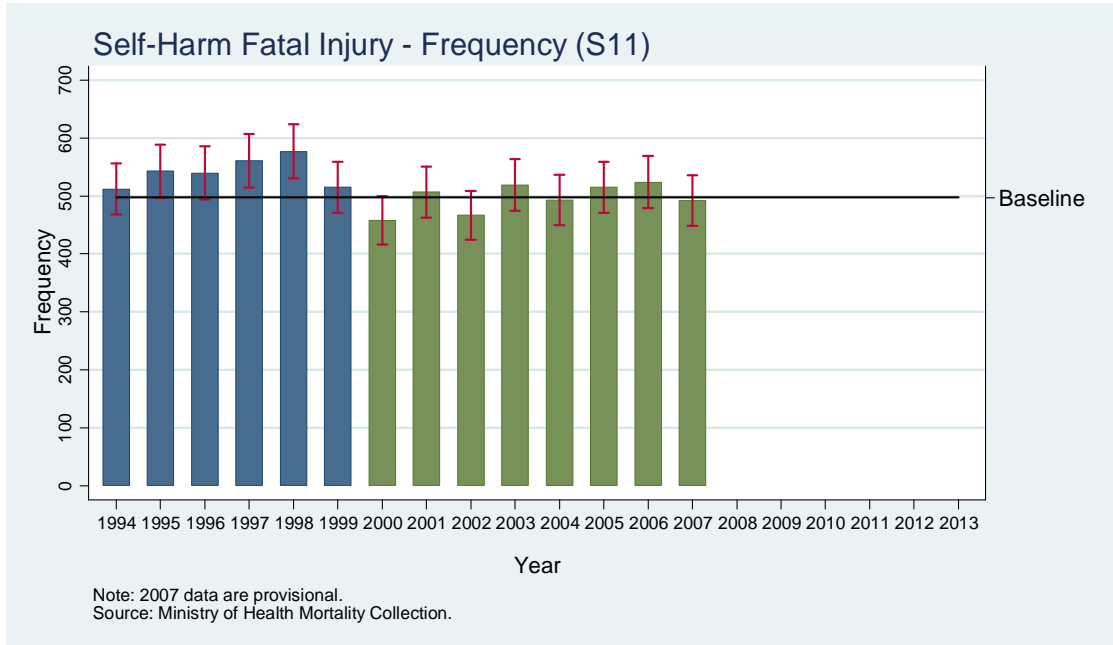


It is apparent that between 2006 and 2009, there has been an increase from baseline in the frequency of work related serious non-fatal injuries (W01). There is no detectable change from baseline in the rates of work related serious non-fatal injury (W02).



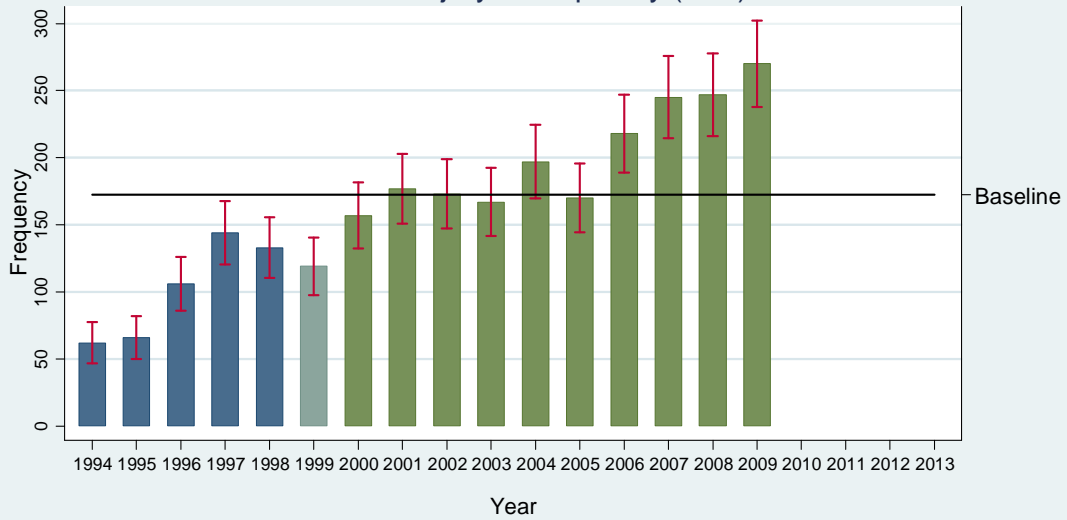
Between 2006 and 2009, the frequencies of serious (fatal and non-fatal) work related injuries (W21) have been above the baseline. There is no detectable change from the baseline in the annual rates of serious (fatal and non-fatal) work related injury (W22).

2.4 Intentional self-harm



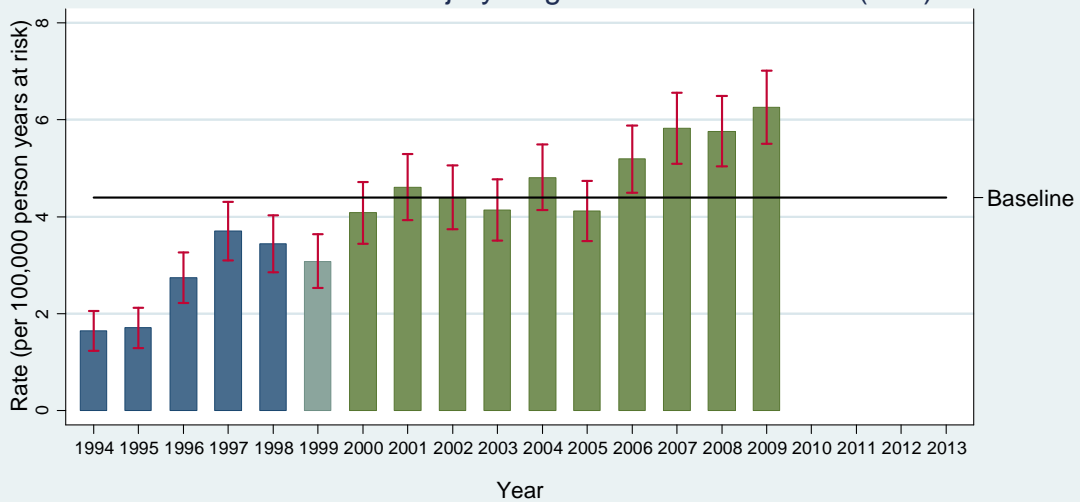
There is no evidence of a trend in the frequencies (S11) of fatal self-harm injuries. There is weak evidence of a reduction from baseline in the rate (S12) of fatal self-harm injuries for 2007.

Self-Harm Serious Non-Fatal Injury - Frequency (S01)



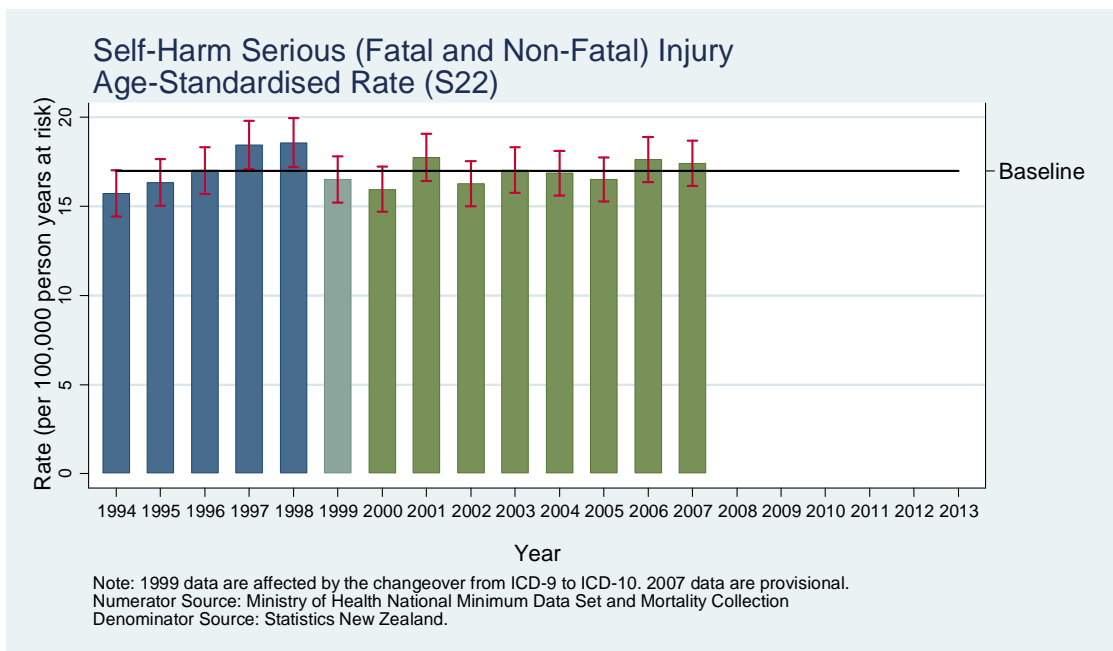
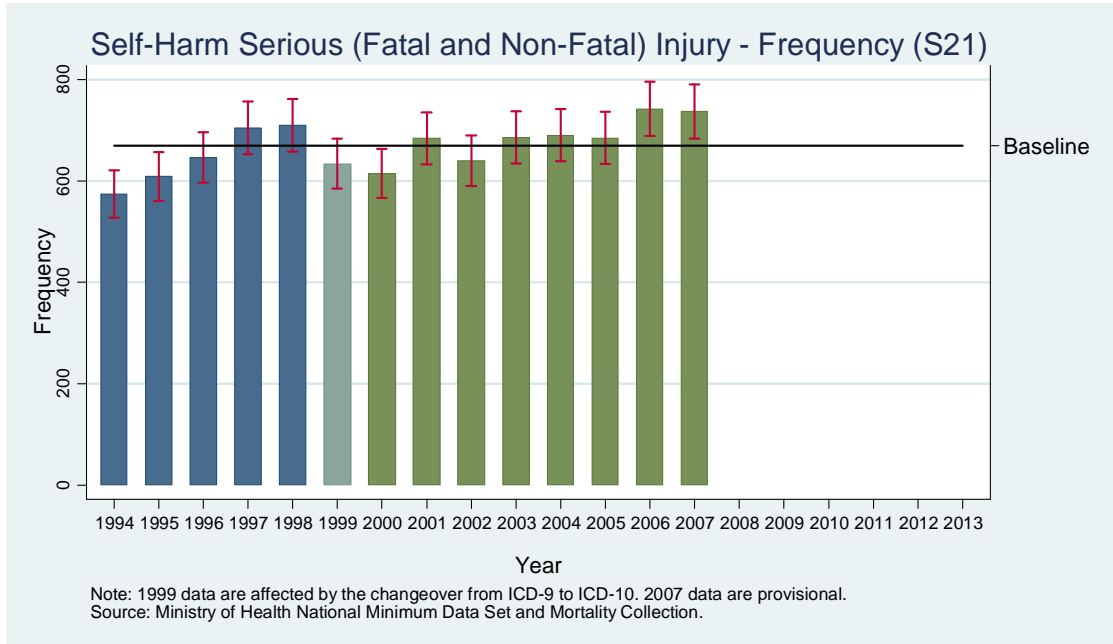
Note: 1999 data are affected by the changeover from ICD-9 to ICD-10. 2009 data are provisional.
Source: Ministry of Health National Minimum Data Set.

Self-Harm Serious Non-Fatal Injury - Age-Standardised Rate (S02)



Note: 1999 data are affected by the changeover from ICD-9 to ICD-10. 2009 data are provisional.
Numerator Source: Ministry of Health National Minimum Data Set
Denominator Source: Statistics New Zealand.

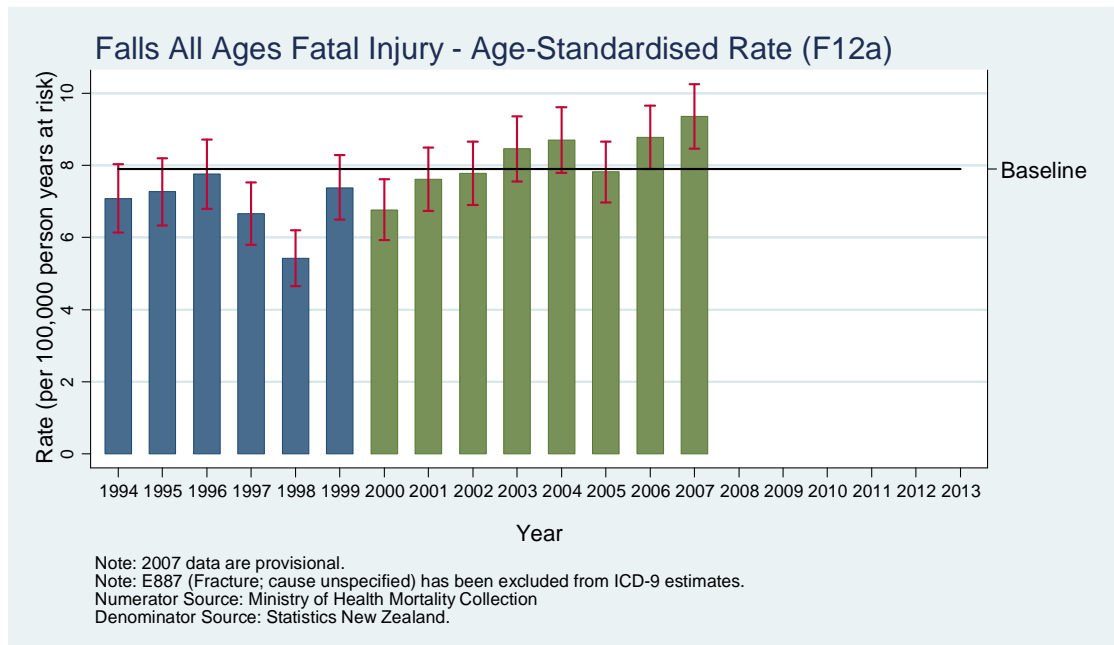
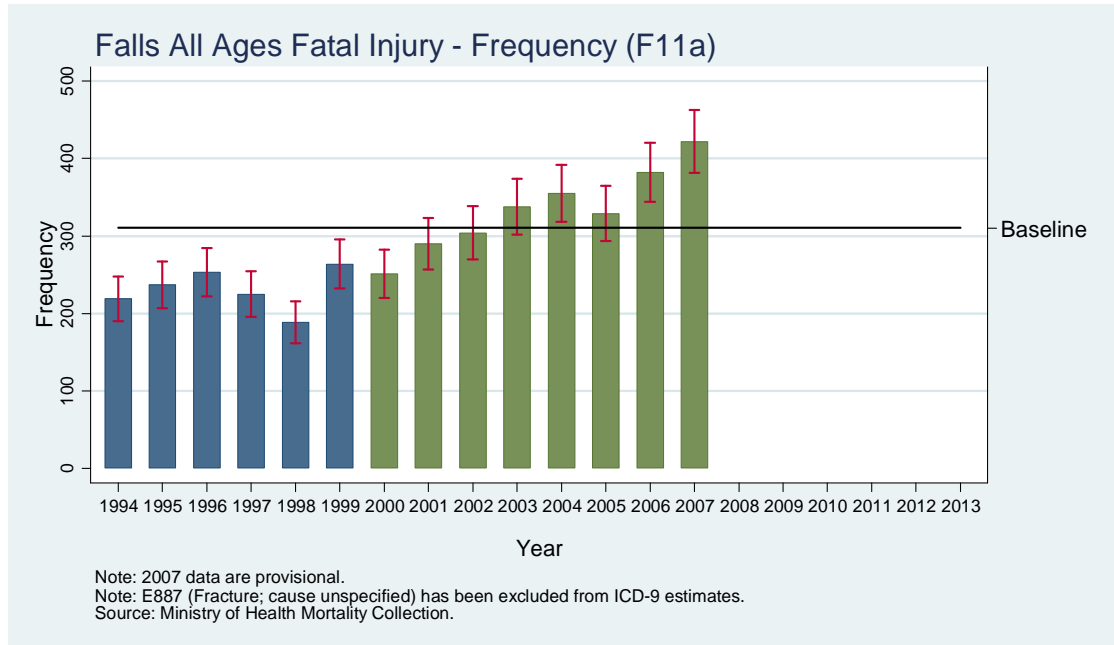
From 2006, the frequencies (S01) and rates (S02) of serious non-fatal self harm injury have both been consistently higher than baseline.



The frequencies (S21) in 2006 and 2007 are significantly higher than baseline; however, for the rates (S22), there is no evidence of a change from baseline.

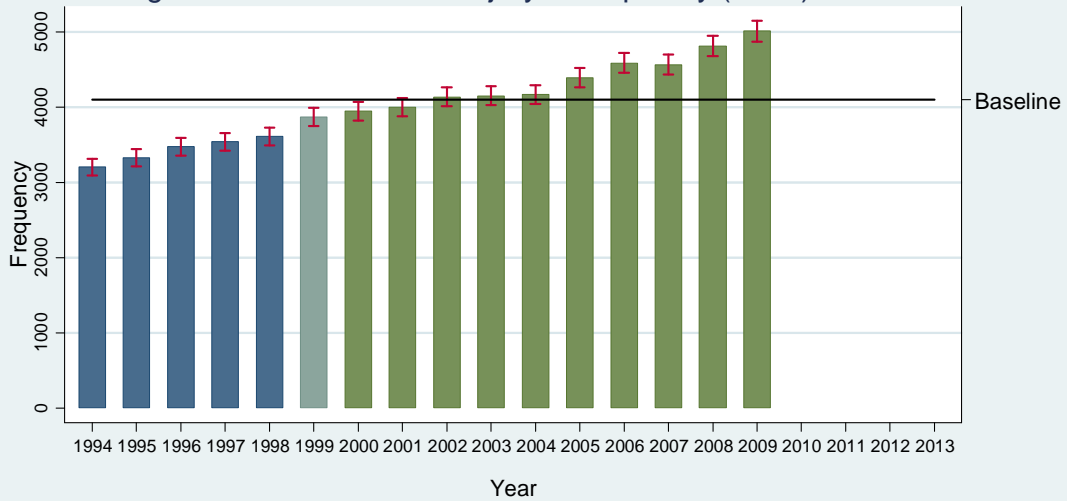
2.5 Falls

All ages



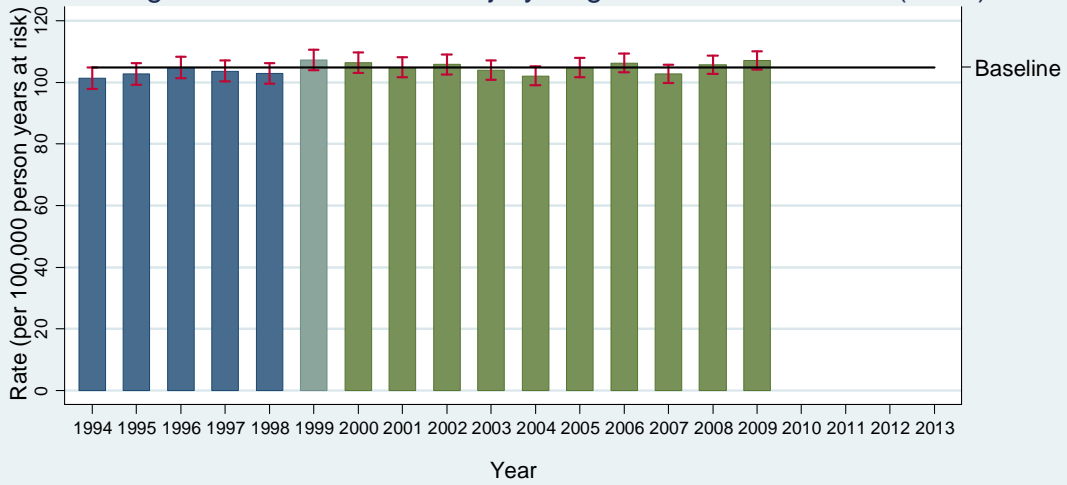
In 2006 and 2007, there has been an increase from baseline in the frequencies (F11a) and rates (F12a) of fatal falls for all ages.

Falls All Ages Serious Non-Fatal Injury - Frequency (F01a)



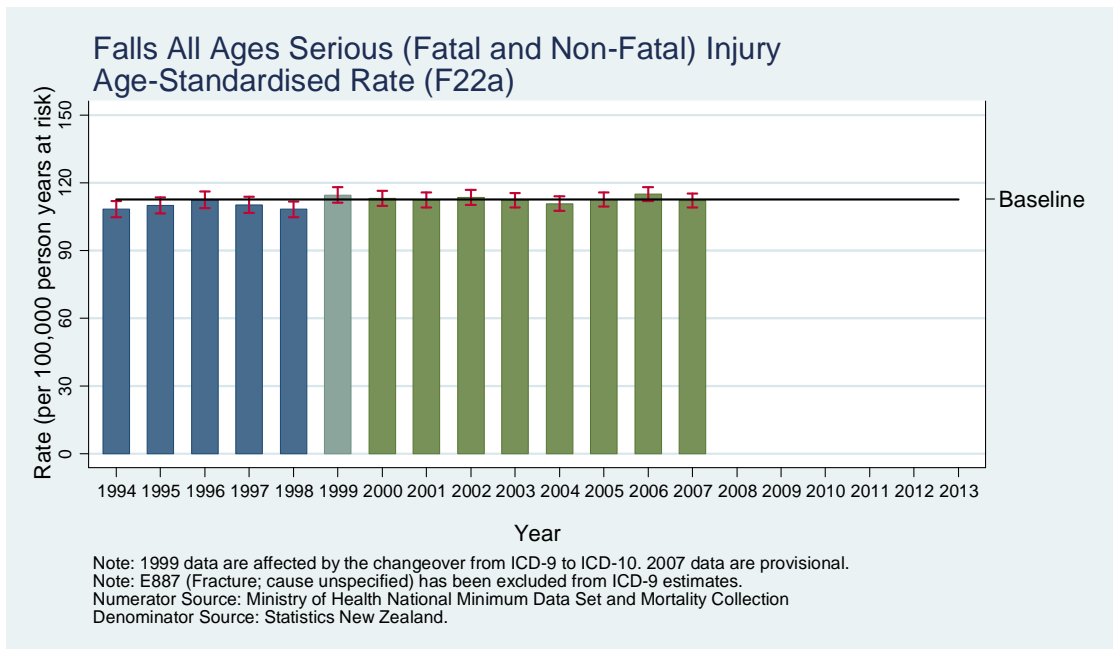
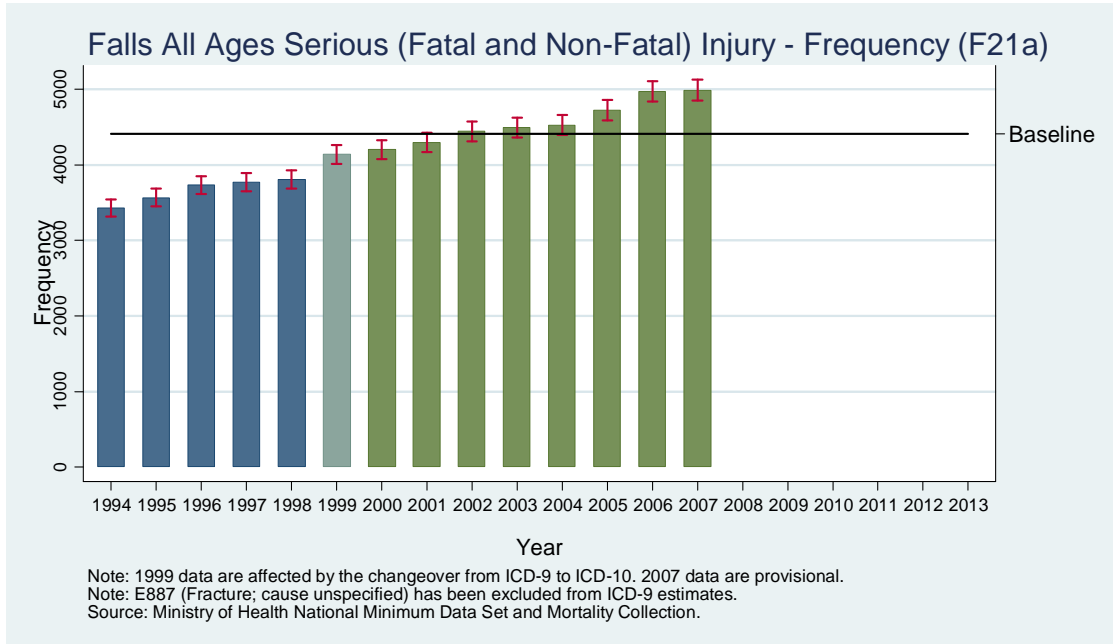
Note: 1999 data are affected by the changeover from ICD-9 to ICD-10. 2009 data are provisional.
 Note: E887 (Fracture; cause unspecified) has been excluded from ICD-9 estimates.
 Source: Ministry of Health National Minimum Data Set.

Falls All Ages Serious Non-Fatal Injury - Age-Standardised Rate (F02a)



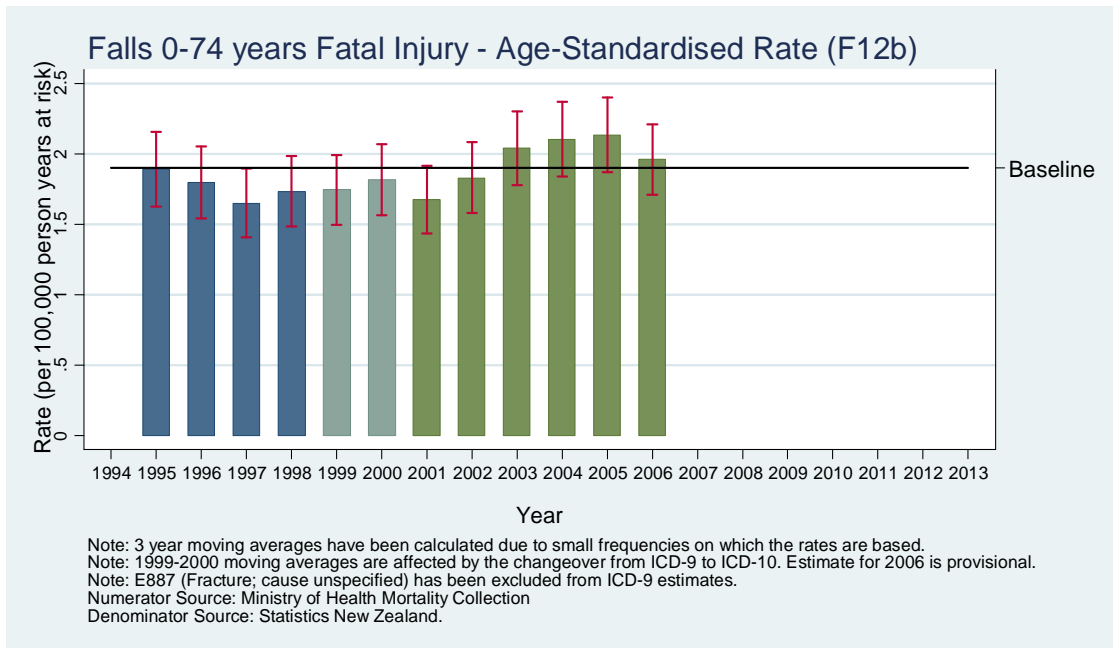
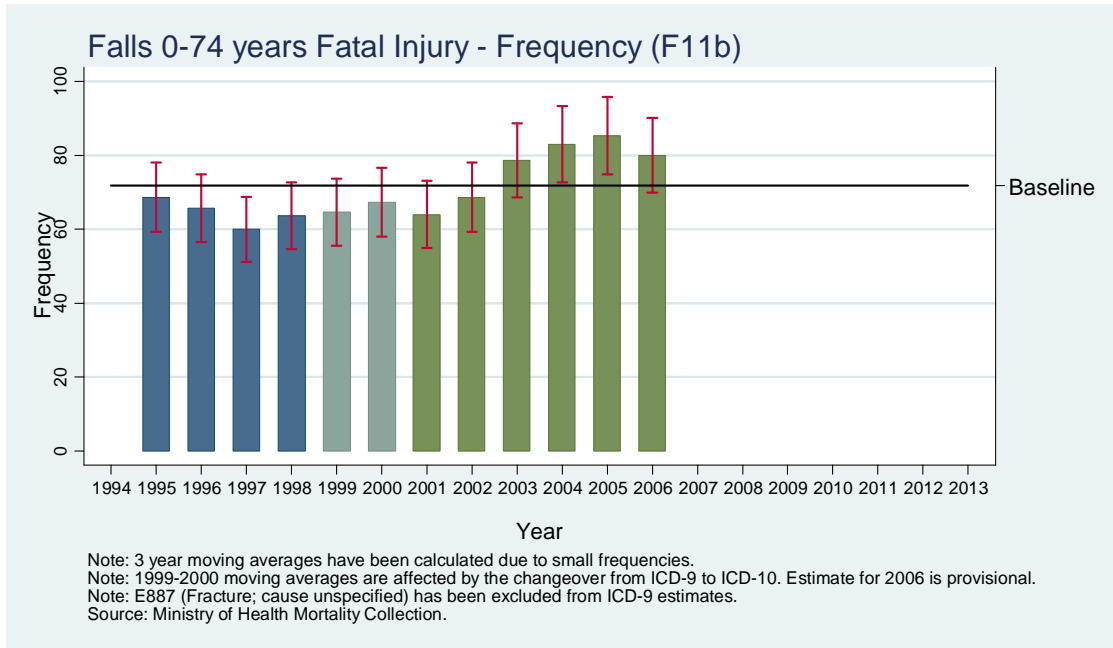
Note: 1999 data are affected by the changeover from ICD-9 to ICD-10. 2009 data are provisional.
 Note: E887 (Fracture; cause unspecified) has been excluded from ICD-9 estimates.
 Numerator Source: Ministry of Health National Minimum Data Set
 Denominator Source: Statistics New Zealand.

For the period 2005-2009, there has been an increasing trend from baseline in the annual frequencies (F01a) of falls for all ages. There is no evidence of an increasing or decreasing trend in the rates of falls (F02a) for all ages.



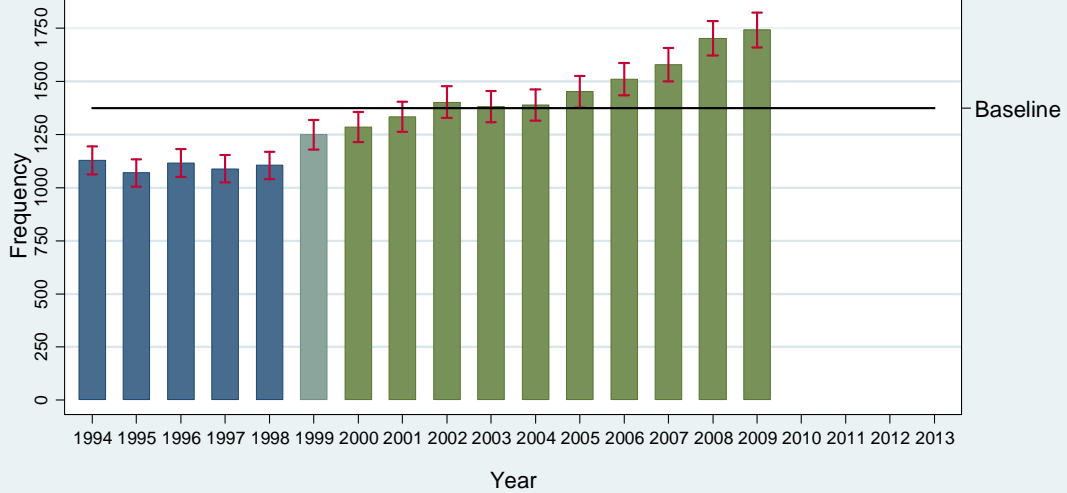
Between 2000 and 2007, there was an increasing trend in the frequency of serious (fatal and non-fatal) falls (F21a) for all ages. The frequencies in 2005-2007 had clearly increased from the baseline. There was no detectable change in the rates of serious (fatal and non-fatal) falls (F22a) for all ages over the same time period.

Aged 0-74 years



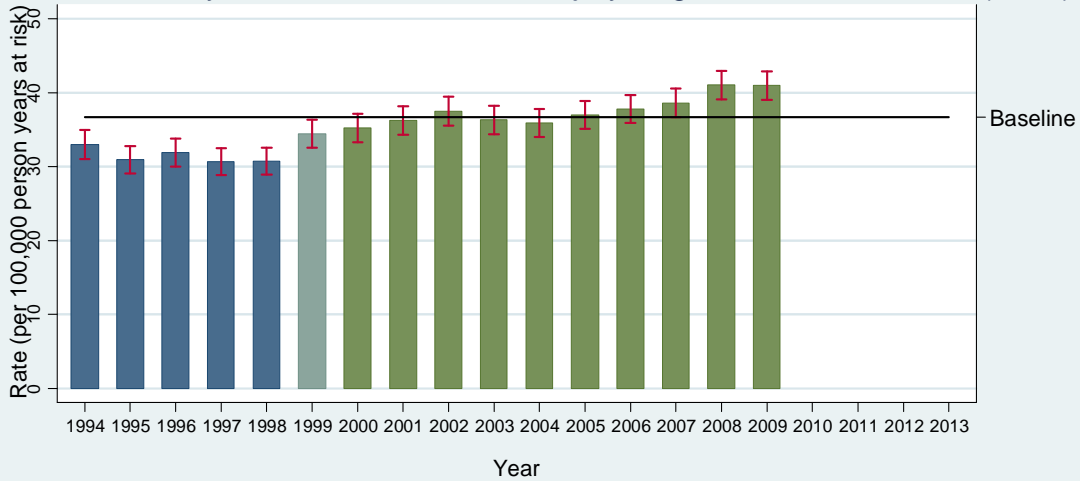
When compared to baseline, there is evidence of an increase in the 2004 and 2005 moving average frequencies of fatal falls injury for those aged 0-74 years. There is no clear evidence of a change from baseline in either the frequency or rate for 2006.

Falls 0-74 years Serious Non-Fatal Injury - Frequency (F01b)



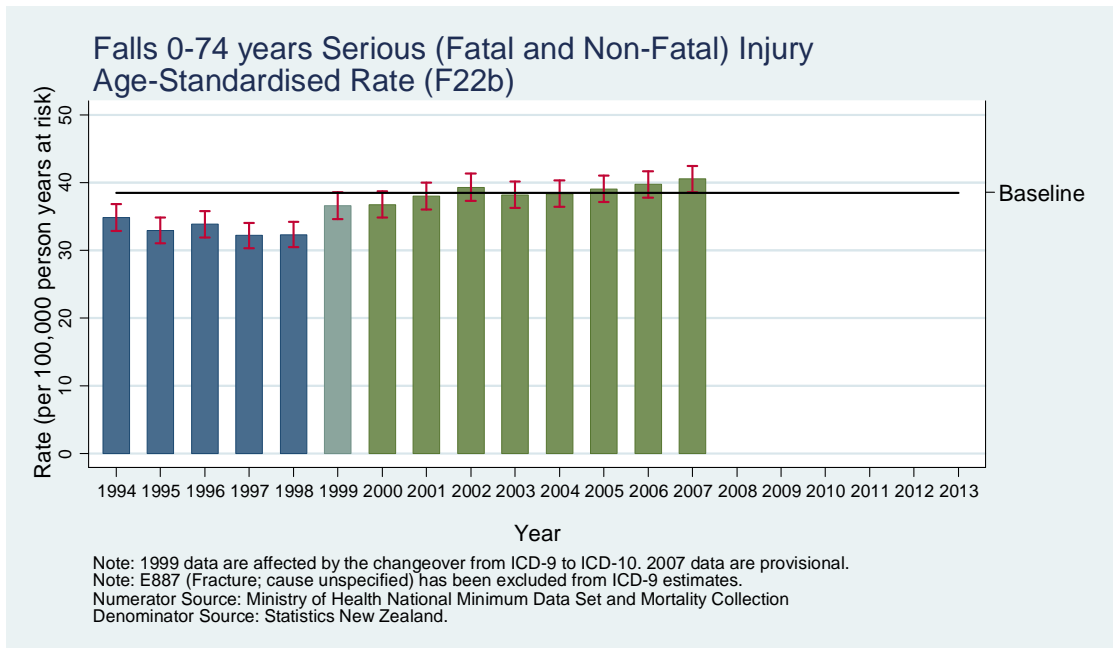
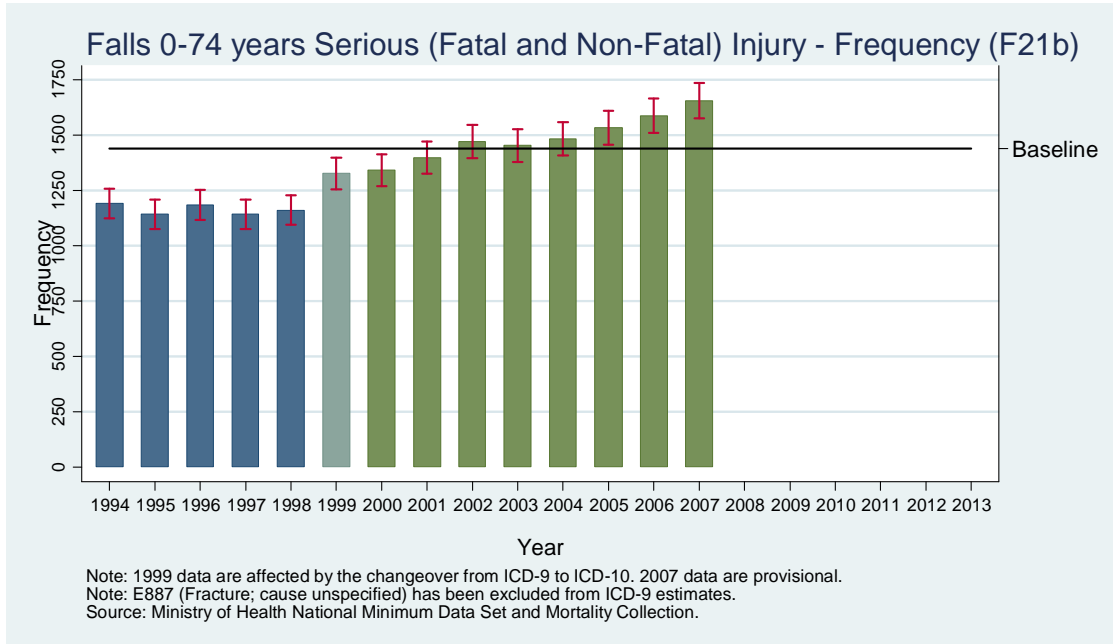
Note: 1999 data are affected by the changeover from ICD-9 to ICD-10. 2009 data are provisional.
 Note: E887 (Fracture; cause unspecified) has been excluded from ICD-9 estimates.
 Source: Ministry of Health National Minimum Data Set.

Falls 0-74 years Serious Non-Fatal Injury - Age-Standardised Rate (F02b)



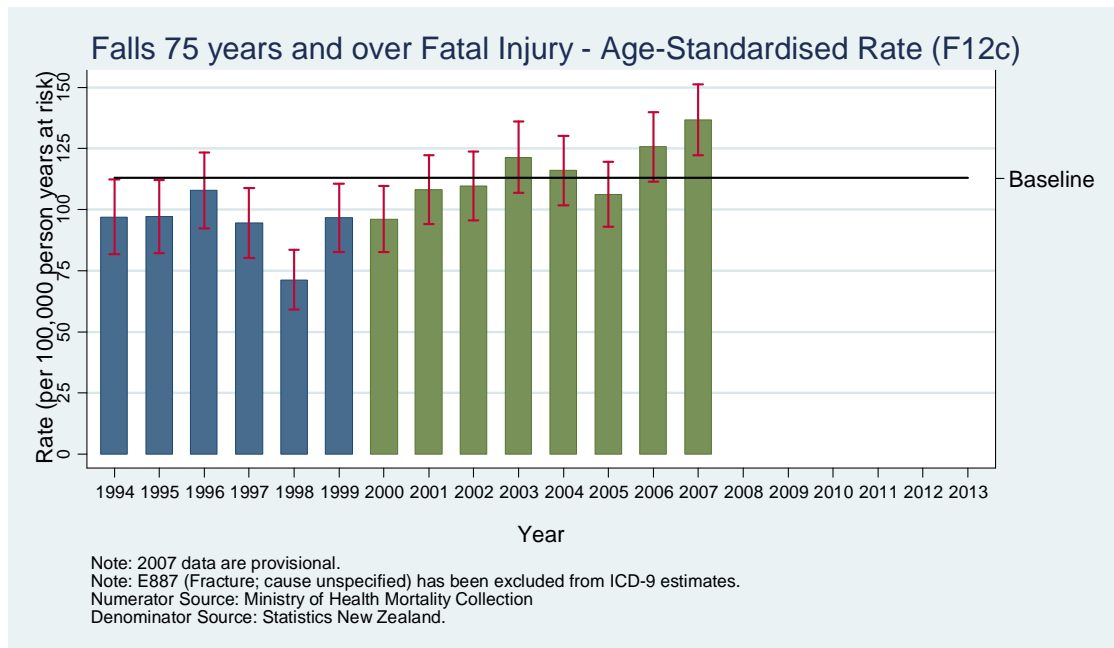
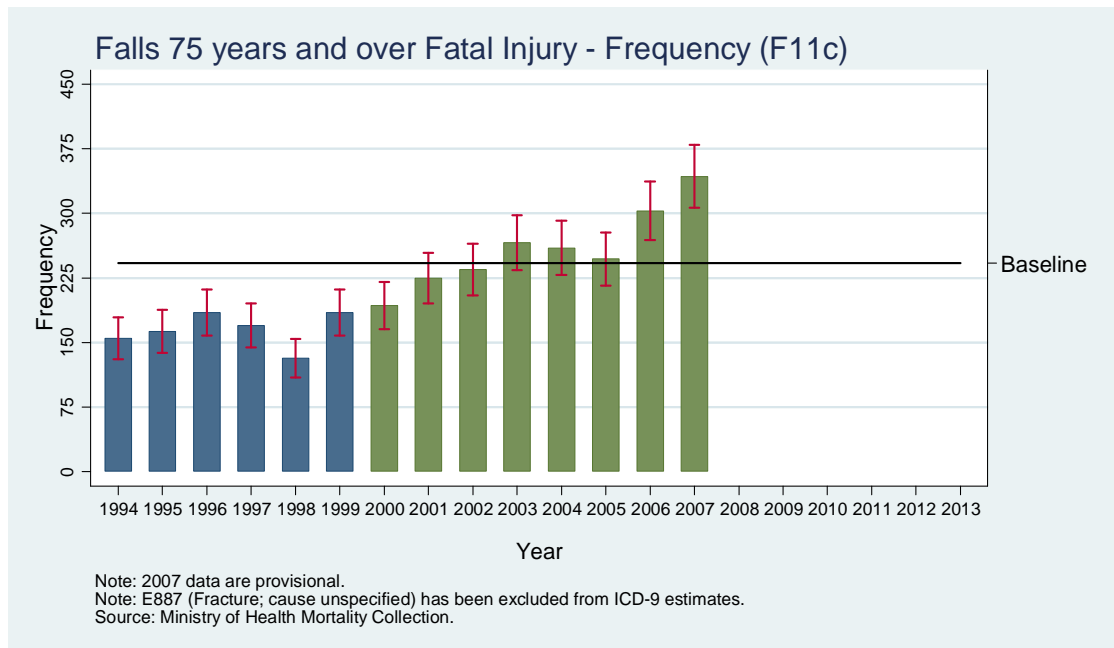
Note: 1999 data are affected by the changeover from ICD-9 to ICD-10. 2009 data are provisional.
 Note: E887 (Fracture; cause unspecified) has been excluded from ICD-9 estimates.
 Numerator Source: Ministry of Health National Minimum Data Set
 Denominator Source: Statistics New Zealand.

The annual frequencies (F01b) have increased steadily from baseline since 2004 for those aged 0-74 years. More recently, the rates (F02b) of falls for those aged 0-74 years have also increased from baseline.



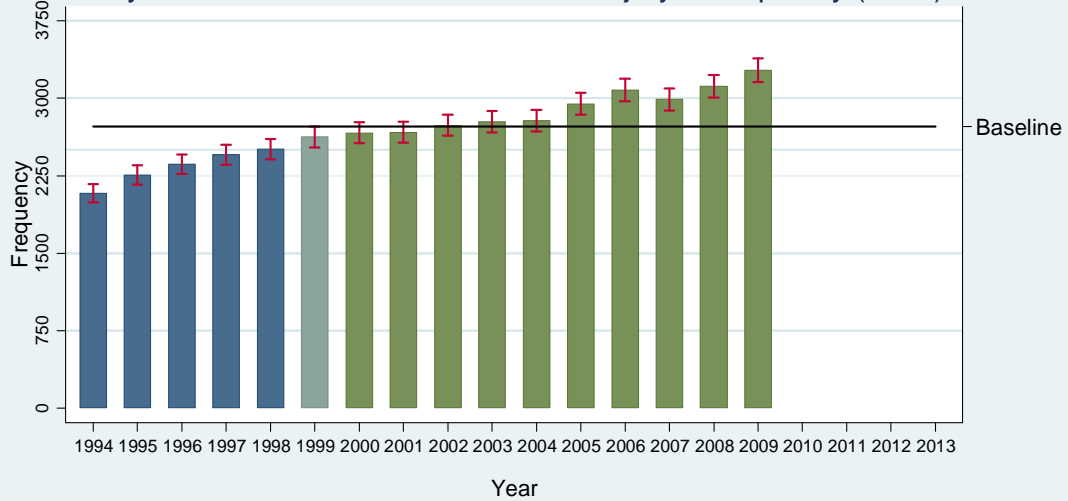
Between 2000 and 2007, the annual frequencies of serious (fatal and non-fatal) falls (F21b) for the 0-74 age group increased. In 2005-2007 the frequency was significantly above the baseline. In 2007, there was weak evidence of an increase from baseline in the rate of serious (fatal and non-fatal) falls (F22b) for the 0-74 age group.

Aged 75 years and over



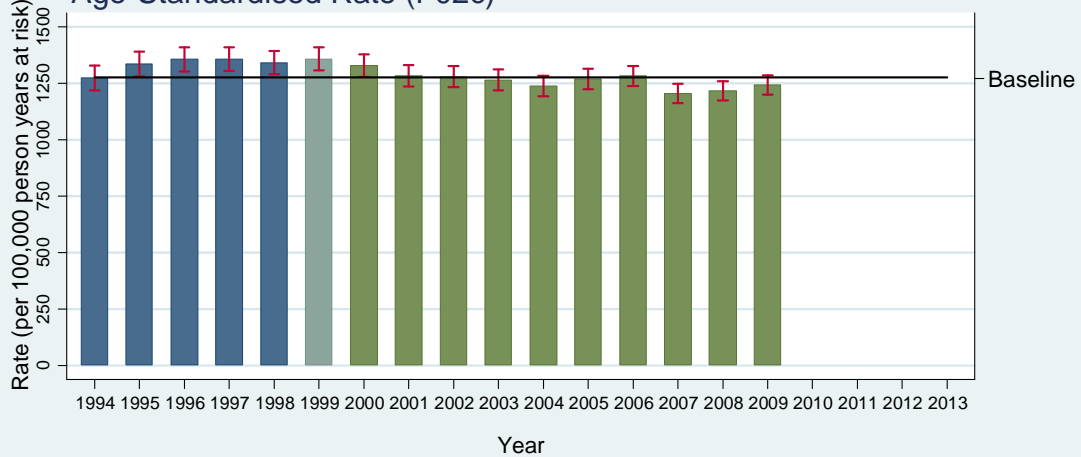
In 2006 and 2007, there was a clear increase from baseline in the frequency (F11c) of fatal falls injury for the 75+ age group. In 2007, there was also evidence of an increase from baseline in the rate (F12c).

Falls 75 years and over Serious Non-Fatal Injury - Frequency (F01c)



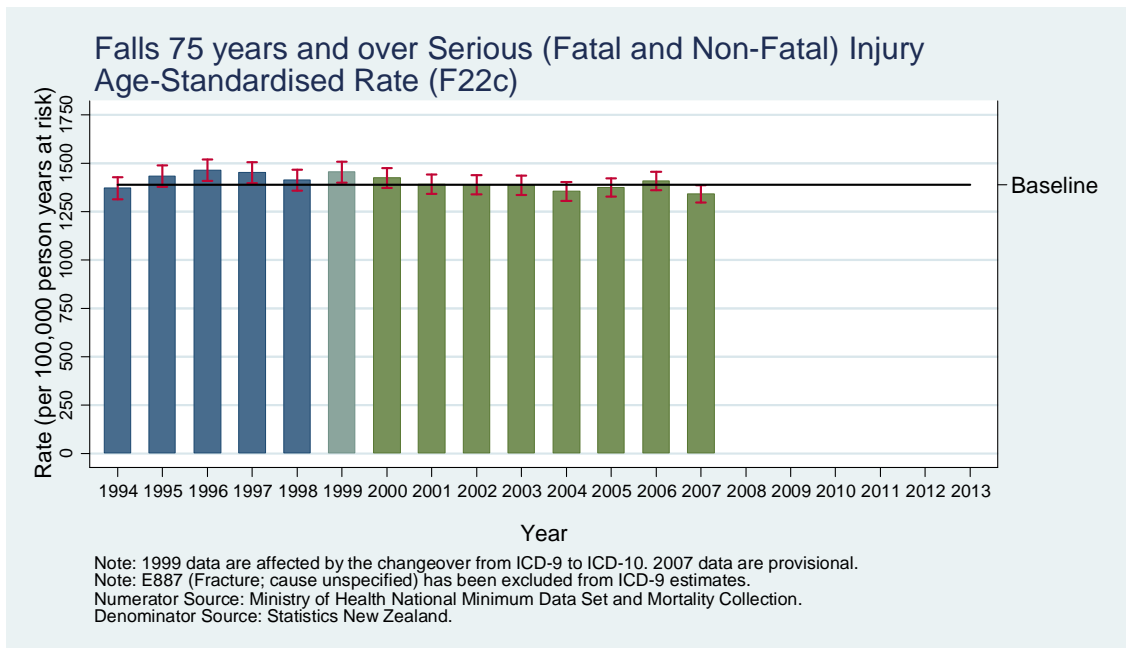
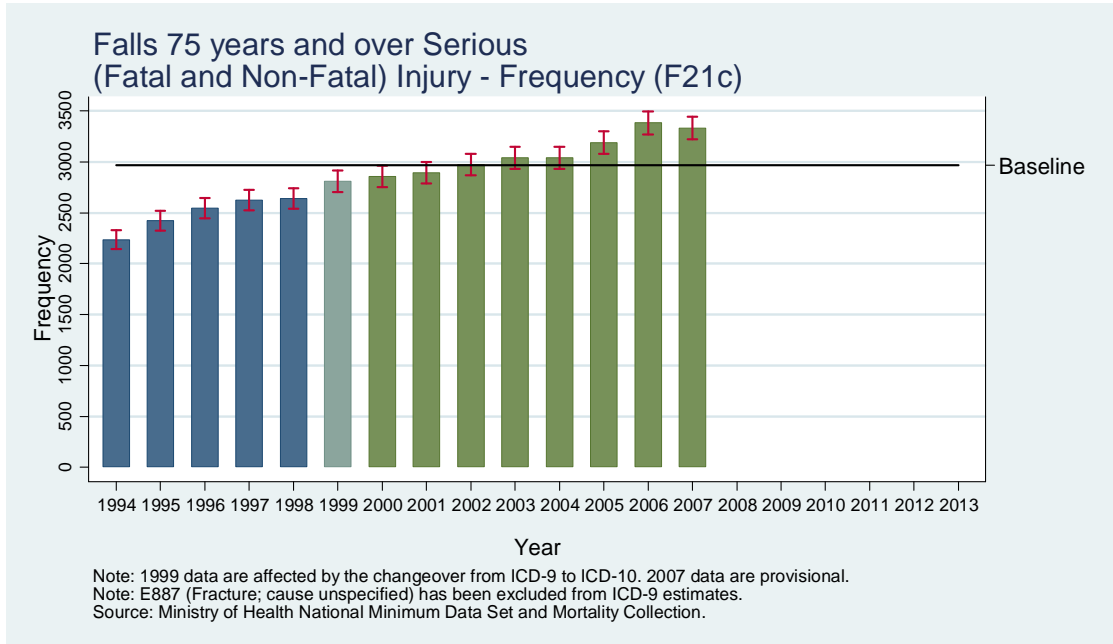
Note: 1999 data are affected by the changeover from ICD-9 to ICD-10. 2009 data are provisional.
 Note: E887 (Fracture; cause unspecified) has been excluded from ICD-9 estimates.
 Source: Ministry of Health National Minimum Data Set.

Falls 75 years and over Serious Non-Fatal Injury Age-Standardised Rate (F02c)



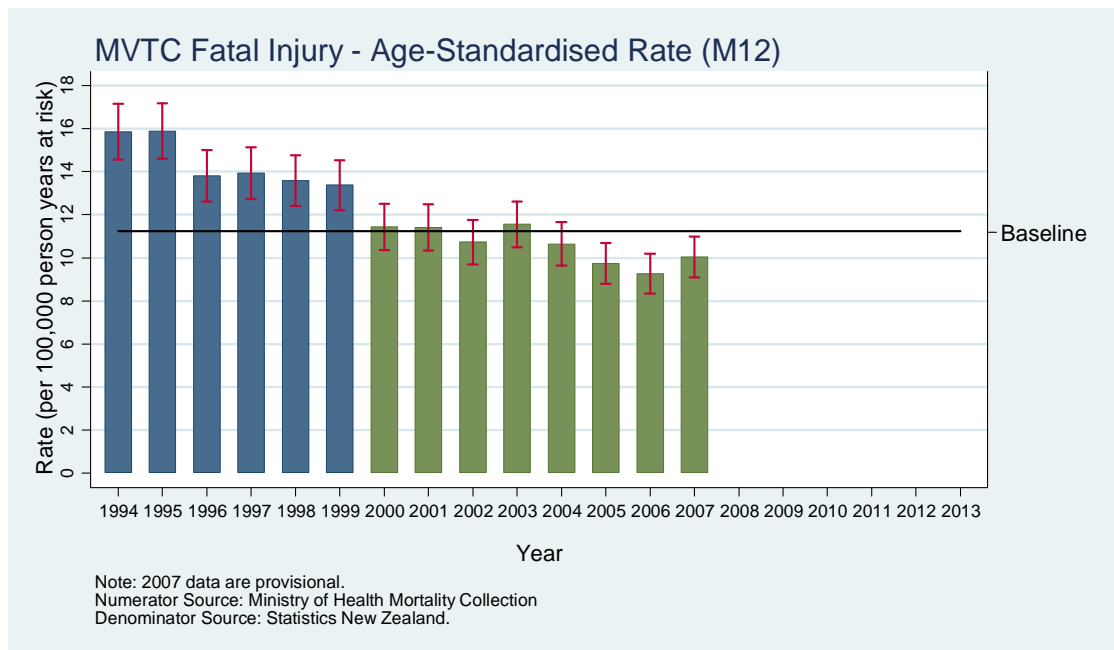
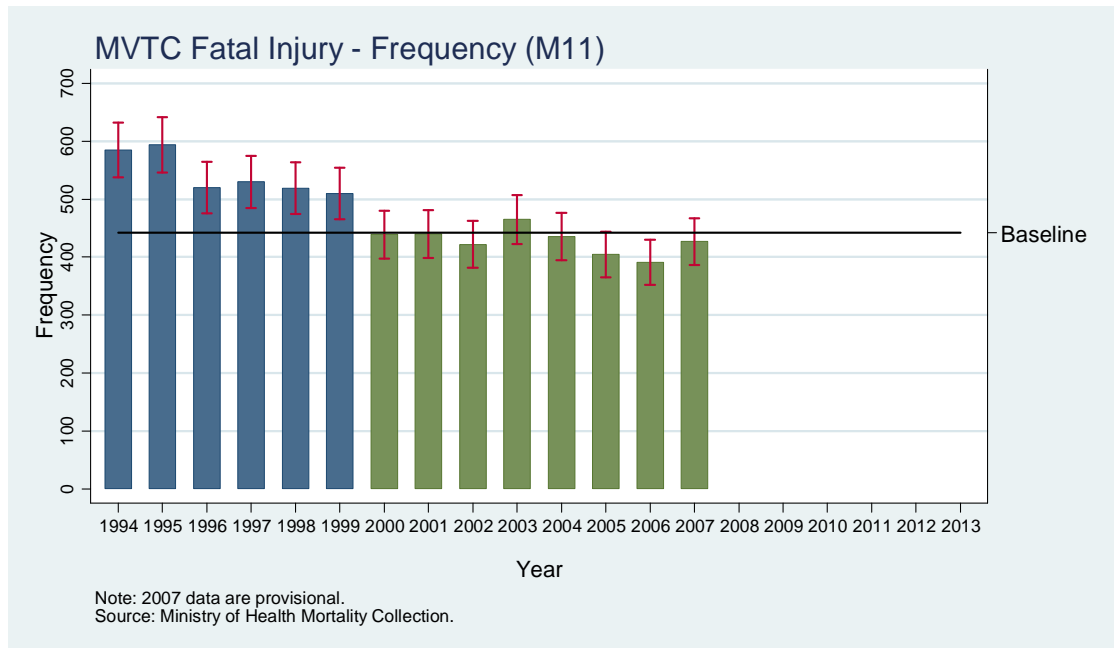
Note: 1999 data are affected by the changeover from ICD-9 to ICD-10. 2009 data are provisional.
 Note: E887 (Fracture; cause unspecified) has been excluded from ICD-9 estimates.
 Numerator Source: Ministry of Health National Minimum Data Set
 Denominator Source: Statistics New Zealand.

In the period 2005-2009, the annual frequencies of falls (F01c) for those aged 75 years and over has clearly been above the baseline. For 2007 and 2008 there is evidence of a reduction from baseline in the rates of falls (F02c) injury for those aged 75 years and over; in 2009 there was no detectable difference from baseline.

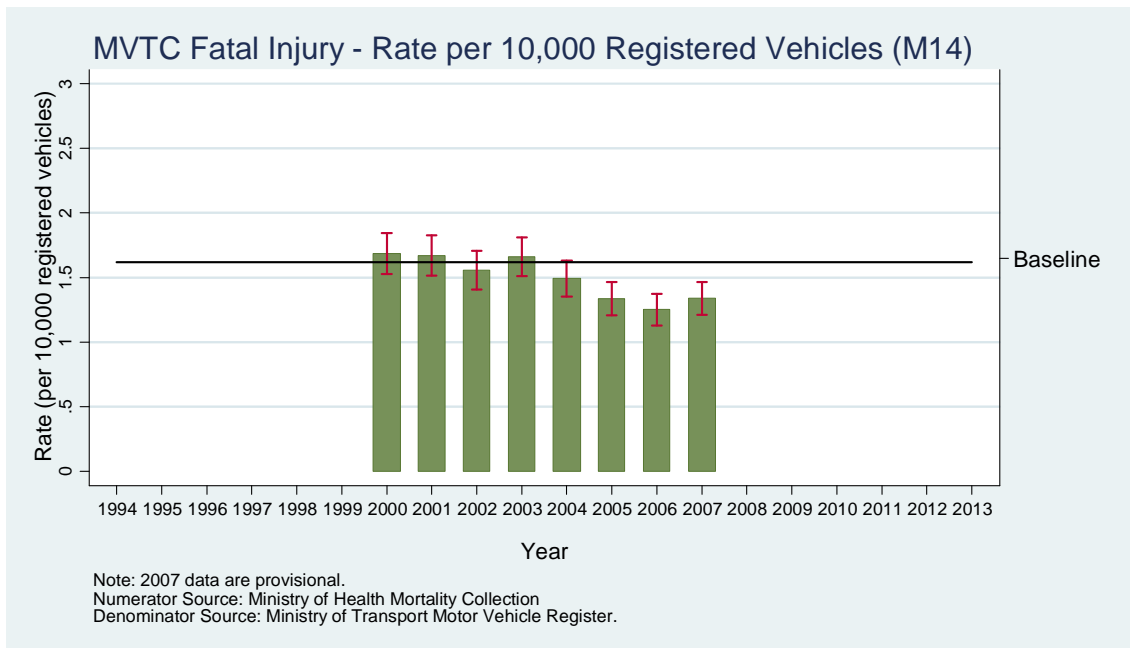
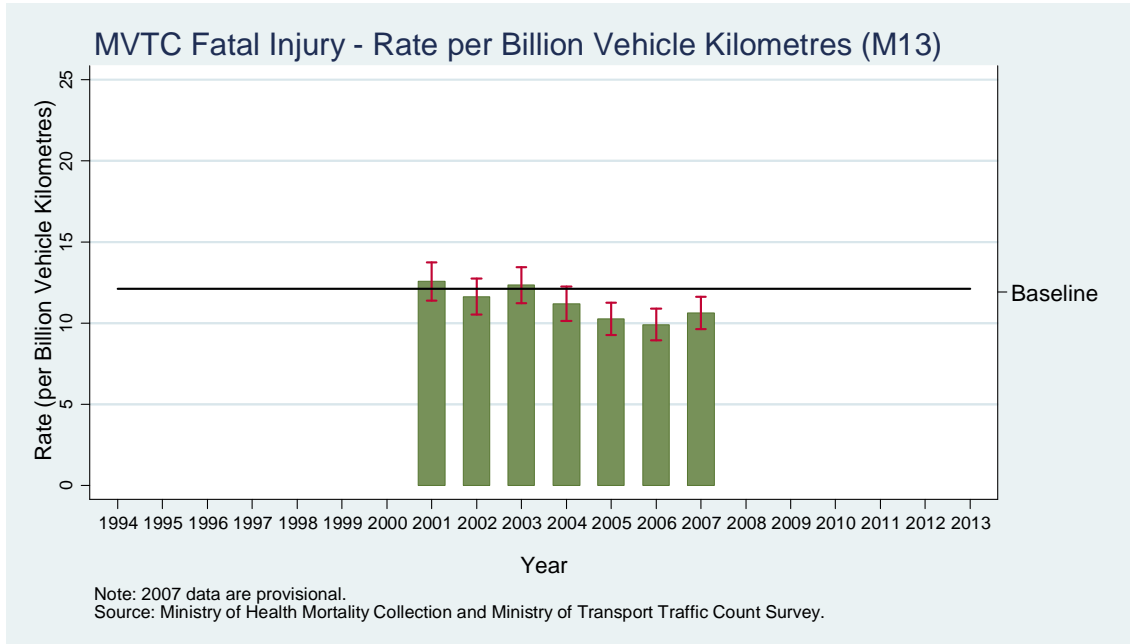


Between 2000 and 2006, there was a trend of increasing frequency of serious (fatal and non-fatal) falls (F21c) for the 75+ age group. In 2005-2007, the frequency of falls (F21c) was clearly above the baseline. There is weak evidence of a decrease from baseline in the rate of serious (fatal and non-fatal) falls injury (F22c) for the 75+ age group for 2007.

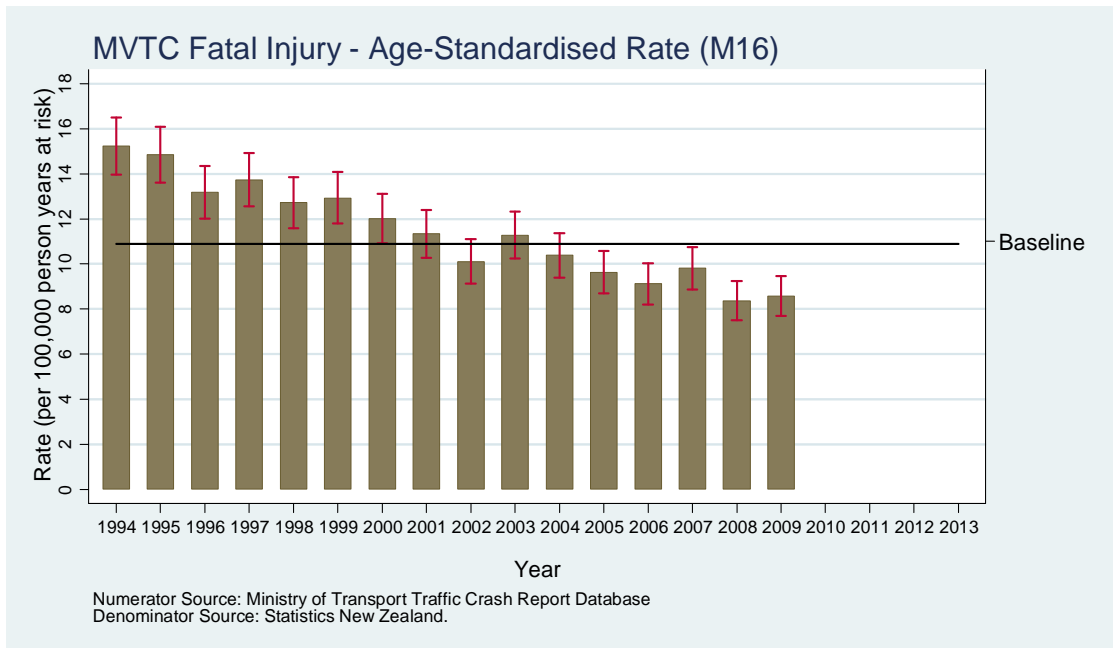
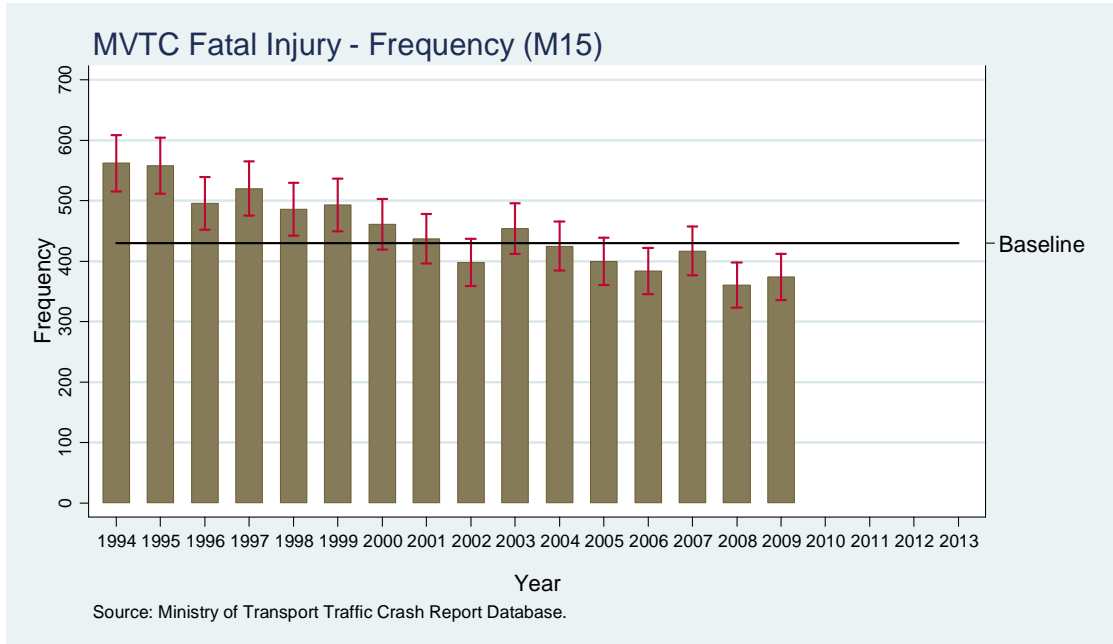
2.6 Motor vehicle traffic crashes (MVTC)



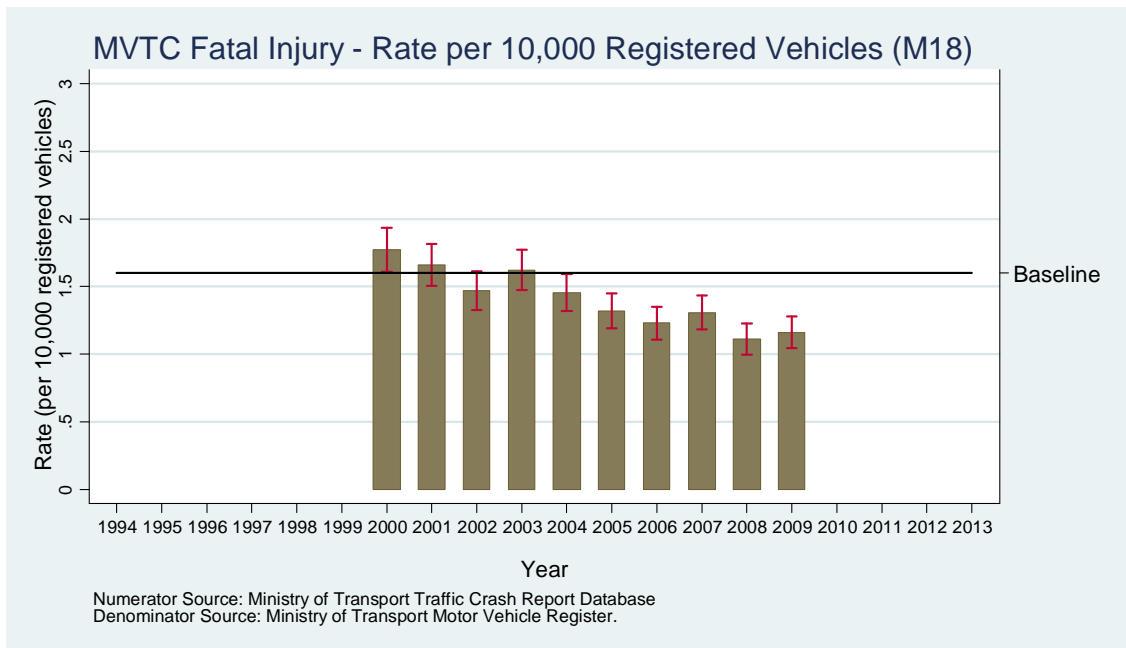
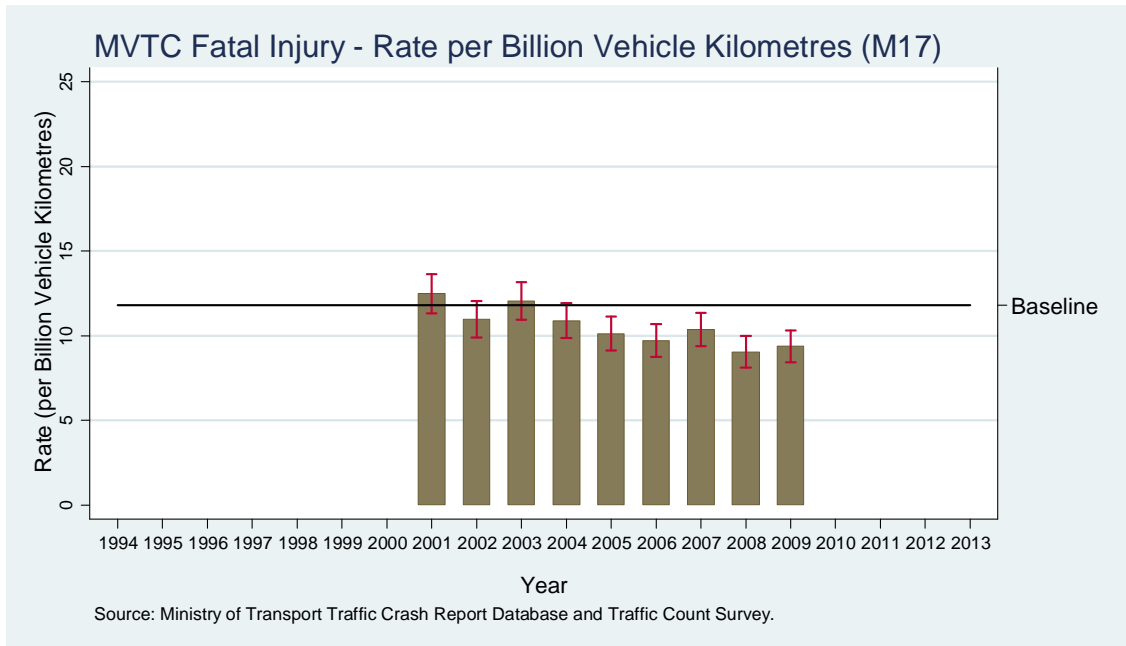
Mortality Collection based fatal MVTC injury indicators for 2007 show no detectable change from baseline in the frequency (M11) in 2007. There has been a clear reduction in the rate (M12) of fatal MVTC from baseline for 2005-2007.



Mortality Collection based fatal MVTC injury indicators for 2005-2007 show a substantial reduction from baseline in the rate of fatal injury per billion vehicle kilometres travelled (M13) and per 10,000 registered vehicles (M14).

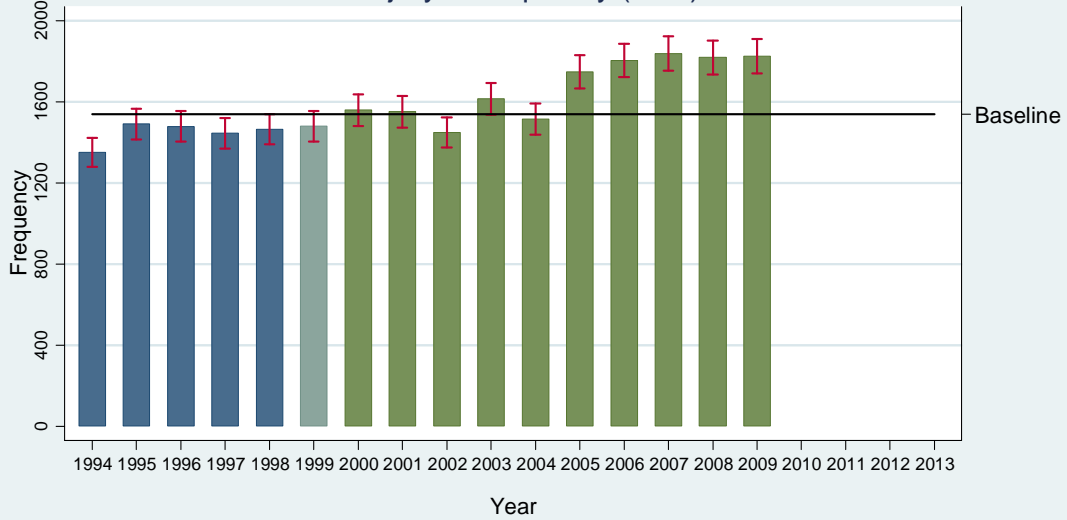


For 2008 and 2009, the frequencies (M15) and rates (M16) of MoT based fatal MVTC injury were clearly below baseline.



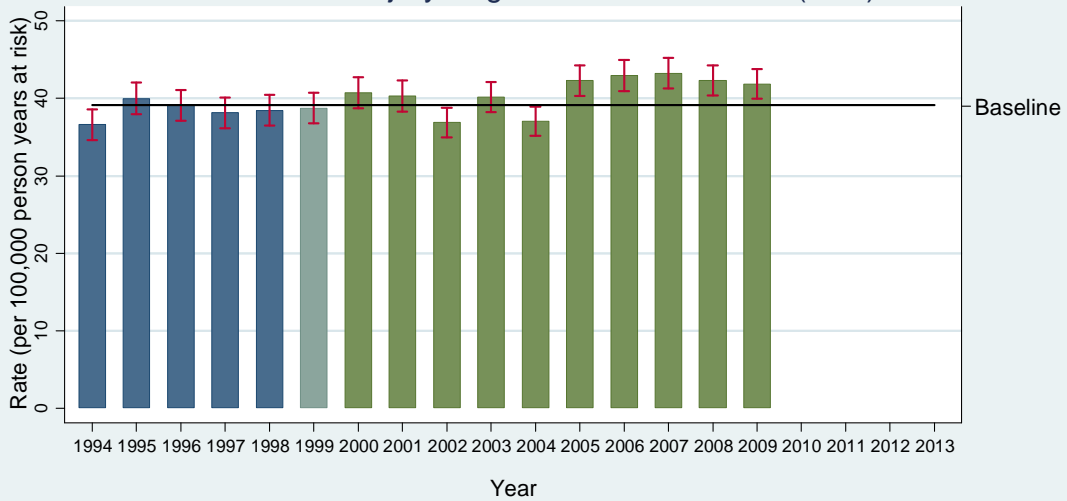
Since 2004, there has been evidence of a decrease from baseline in the rates of MoT based fatal MVTC injury per billion vehicle kilometres (M17) and per 10,000 registered vehicles (M18).

MVTC Serious Non-Fatal Injury - Frequency (M01)



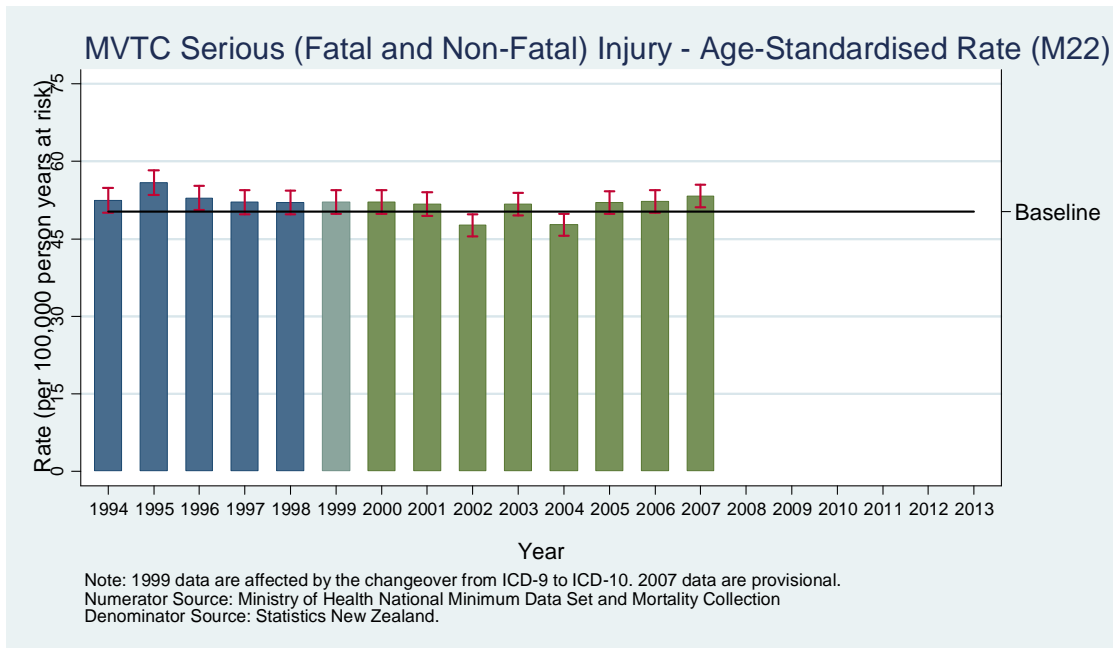
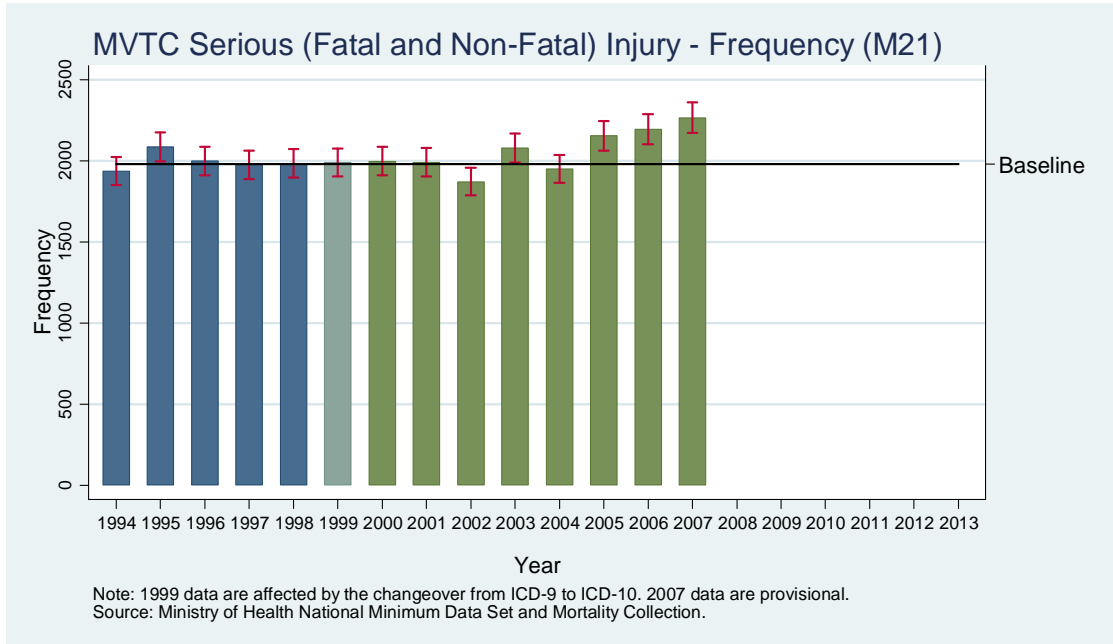
Note: 1999 data are affected by the changeover from ICD-9 to ICD-10. 2009 data are provisional.
 Source: Ministry of Health National Minimum Data Set.

MVTC Serious Non-Fatal Injury - Age-Standardised Rate (M02)



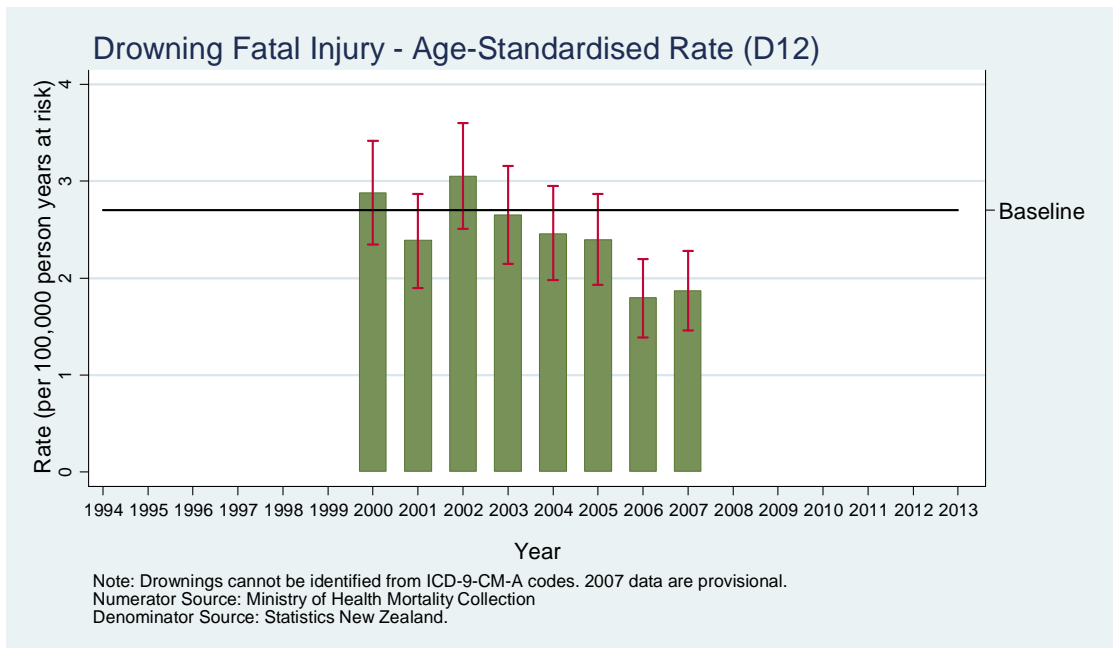
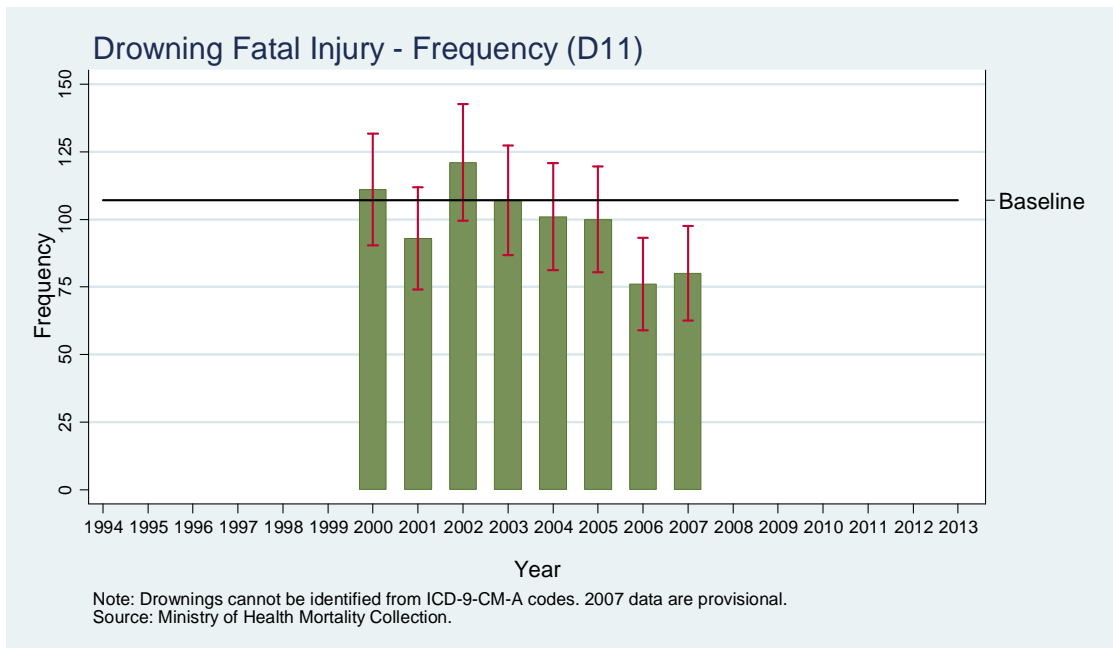
Note: 1999 data are affected by the changeover from ICD-9 to ICD-10. 2009 data are provisional.
 Numerator Source: Ministry of Health National Minimum Data Set
 Denominator Source: Statistics New Zealand.

Compared to baseline, there has been an increase in both the frequencies (M01) and the rates (M02) of serious non-fatal MTVCs during 2005-2009.

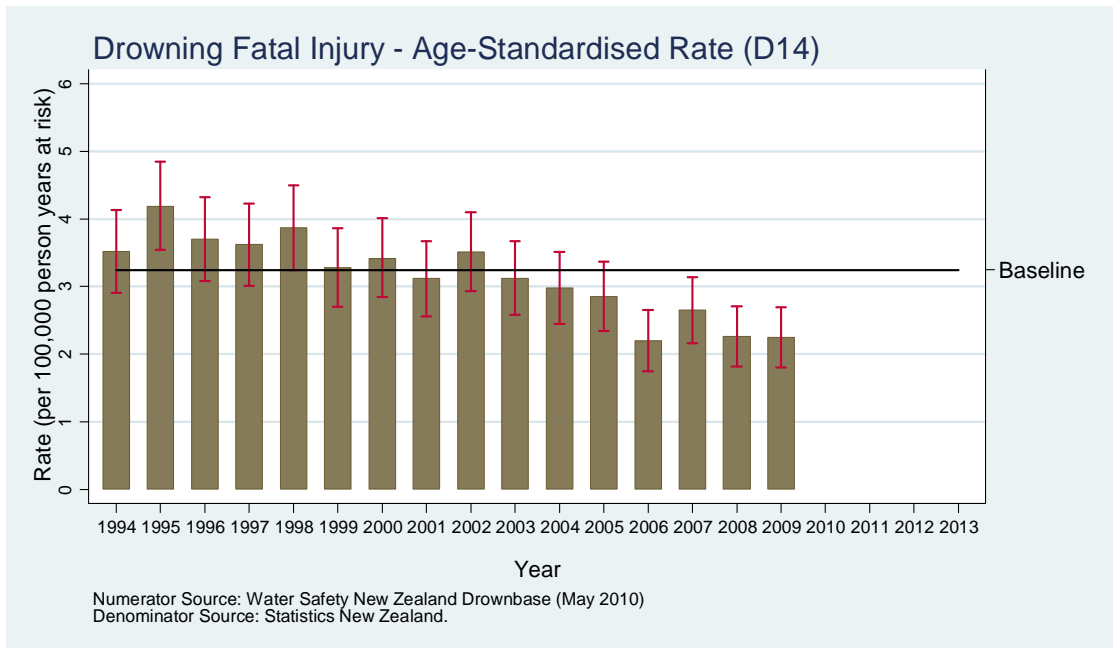
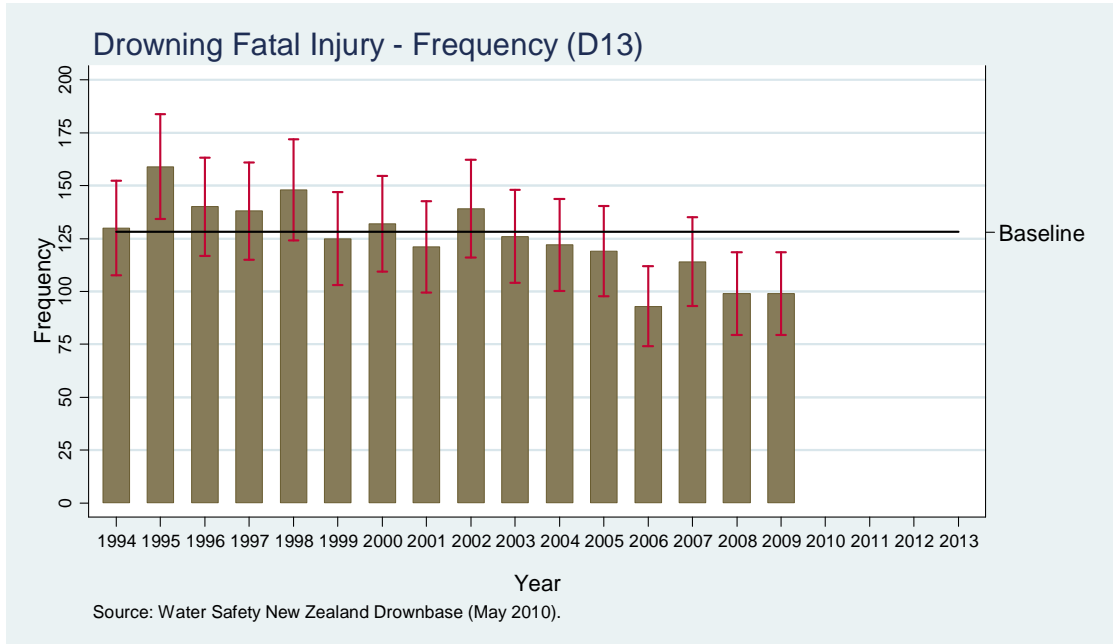


For 2005-2007, there was an increase from baseline in the frequencies of serious (fatal and non-fatal) MVTC injury (M21). There is evidence of an increase from baseline in the rate of serious (fatal and non-fatal) MVTC injury in 2007.

2.7 Drowning



In 2006 and 2007, the frequencies (D11) and rates (D12) of Mortality Collection based fatal drowning injury were clearly lower than baseline.



For 2006, 2008 and 2009, the frequencies (D13) and rates (D14) of drowning, derived from Drownbase, were below the baseline.

References

1. Cryer C, Langley J, Stephenson S. Developing Valid Injury Outcome Indicators: A report for the New Zealand Injury Prevention Strategy. Dunedin: University of Otago, 2004:1-141.
2. Ministry of Health. Mortality Collection Data Dictionary: Version 1.3. Wellington: Ministry of Health, July 2009.
3. Ministry of Health. National Minimum Data Set (Hospital Events). Version 7.1 ed. Wellington: National Health Board Business Unit, Ministry of Health, January 2010.
4. World Health Organization. ICD-10 International Statistical Classification of Diseases and Related Health Problems: Volume 1. Geneva: World Health Organization, 1992:1-1243.
5. Anderson R, Minino A, Hoyert D, Rosenberg H. Comparability of cause of death between ICD-9 and ICD-10: preliminary estimates. *National Vital Statistics Reports* 2001;49(2):1-32.

Appendix: Tables

Year	Frequency			Age standardised rates (per 100,000 person years)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
<i>All injury</i>						
Fatal: I11			I12			
1994	1722	1641	1803	48	46	51
1995	1788	1705	1871	49	47	51
1996	1714	1633	1795	47	44	49
1997	1755	1673	1837	47	45	49
1998	1640	1561	1719	43	41	46
1999	1646	1566	1726	44	41	46
2000	1580	1502	1658	41	39	43
2001	1618	1539	1697	42	40	44
2002	1664	1584	1744	42	40	44
2003	1766	1684	1848	44	42	46
2004	1682	1602	1762	41	39	43
2005	1678	1598	1758	40	38	42
2006	1700	1619	1781	40	38	42
2007	1791	1708	1874	42	40	44
Baseline = 1683			Baseline = 42			
Serious non-fatal: I01			I02			
1994	5756	5607	5905	171	166	175
1995	6174	6020	6328	179	175	184
1996	6451	6294	6608	184	179	188
1997	6584	6425	6743	184	179	188
1998	6694	6534	6854	183	179	188
1999	7269	7102	7436	196	191	200
2000	7814	7641	7987	207	202	211
2001	8059	7883	8235	210	205	214
2002	8071	7895	8247	206	201	210
2003	8221	8043	8399	205	201	209
2004	8184	8007	8361	200	196	205
2005	8820	8636	9004	212	207	216
2006	9318	9129	9507	219	215	224
2007	9454	9263	9645	218	214	223
2008	9900	9705	10095	224	220	229
2009	10314	10115	10513	230	225	234
Baseline = 8117			Baseline = 207			

Year	Frequency			Age standardised rates (per 100,000 person years)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
	<i>All injury</i>					
	Serious (fatal and non-fatal): I21			I22		
1994	7478	7309	7647	219	214	224
1995	7962	7787	8137	228	223	233
1996	8165	7988	8342	230	225	235
1997	8339	8160	8518	231	226	236
1998	8334	8155	8513	227	222	232
1999	8915	8730	9100	239	235	244
2000	9394	9204	9584	248	243	253
2001	9677	9484	9870	252	247	257
2002	9735	9542	9928	248	243	253
2003	9987	9791	10183	249	244	254
2004	9866	9671	10061	241	237	246
2005	10498	10297	10699	252	247	257
2006	11018	10812	11224	259	254	264
2007	11245	11037	11453	260	255	264
	Baseline = 9800			Baseline = 250		

Year	Frequency			Age standardised rates (per 100,000 person years)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
	<i>Assault</i>					
	Fatal: A11			A12		
1994						
1995	62.0	53.1	70.9	1.6	1.4	1.9
1996	61.7	52.8	70.6	1.6	1.3	1.8
1997	65.0	55.9	74.1	1.6	1.4	1.9
1998	59.0	50.3	67.7	1.5	1.3	1.7
1999	54.7	46.3	63.0	1.4	1.1	1.6
2000	53.3	45.1	61.6	1.3	1.1	1.6
2001	59.3	50.6	68.0	1.5	1.3	1.7
2002	60.0	51.2	68.8	1.5	1.3	1.7
2003	58.0	49.4	66.6	1.4	1.2	1.6
2004	58.3	49.7	67.0	1.4	1.2	1.6
2005	60.7	51.9	69.5	1.4	1.2	1.6
2006	62.7	53.7	71.6	1.5	1.3	1.7
2007						
	Baseline = 56.6			Baseline = 1.4		
	Serious non-fatal: A01			A02		
1994	202	174	230	5	5	6
1995	245	214	276	6	6	7
1996	267	235	299	7	6	8
1997	256	225	287	7	6	7
1998	313	278	348	8	7	9
1999	422	382	462	11	10	12
2000	575	528	622	15	14	16
2001	675	624	726	17	16	19
2002	686	635	737	17	16	19
2003	646	596	696	16	15	17
2004	722	669	775	18	16	19
2005	808	752	864	20	18	21
2006	915	856	974	22	21	23
2007	915	856	974	22	20	23
2008	1014	952	1076	24	23	25
2009	1050	986	1114	25	23	26
	Baseline = 669			Baseline = 17		

Year	Frequency			Age standardised rates (per 100,000 person years)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
	<i>Assault</i>					
	Serious (fatal and non-fatal):					
	A21			A22		
1994	272	240	304	7	6	8
1995	292	259	325	8	7	8
1996	336	300	372	9	8	10
1997	325	290	360	8	7	9
1998	370	332	408	9	9	10
1999	473	430	516	12	11	13
2000	631	582	680	16	15	18
2001	728	675	781	19	17	20
2002	755	701	809	19	18	21
2003	704	652	756	17	16	19
2004	769	715	823	19	18	20
2005	878	820	936	21	20	23
2006	980	919	1041	24	22	25
2007	968	907	1029	23	22	24
	Baseline = 729			Baseline = 18		

Year	Frequency			Age standardised rates (per 100,000 person years)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
	<i>Work related</i>					
	<hr/>			<hr/>		
	Fatal: W12 (Moving averages)			W14 (Moving averages)		
1994						
1995	79.0	68.9	89.1	5.0	4.3	5.6
1996	79.7	69.6	89.8	4.8	4.1	5.4
1997	70.3	60.8	79.8	4.1	3.5	4.7
1998	62.0	53.1	70.9	3.6	3.1	4.2
1999	52.3	44.1	60.5	3.0	2.6	3.5
2000	52.0	43.8	60.2	3.0	2.5	3.5
2001	65.7	56.5	74.8	3.5	3.0	4.1
2002	84.0	73.6	94.4	4.3	3.8	4.9
2003	94.7	83.7	105.7	4.8	4.2	5.4
2004	88.7	78.0	99.3	4.3	3.8	4.8
2005	91.0	80.2	101.8	4.1	3.7	4.6
2006	89.7	79.0	100.4	3.8	3.4	4.3
2007	87.3	76.8	97.9	3.5	3.1	4.0
2008	85.3	74.9	95.8	3.4	3.0	3.9
2009						
	<hr/>			<hr/>		
	Baseline = 77			Baseline = 4.0		
	<hr/>			<hr/>		
	Serious non-fatal: W01			W02		
2001	377	339	415	21	19	23
2002	376	338	414	20	18	22
2003	401	362	440	21	19	23
2004	399	360	438	20	18	22
2005	430	389	471	21	19	23
2006	489	446	532	23	21	25
2007	482	439	525	22	20	24
2008	505	461	549	23	21	25
2009	445	404	486	20	18	22
	<hr/>			<hr/>		
	Baseline = 385			Baseline = 21		
	<hr/>			<hr/>		

	Serious (fatal and non-fatal): W21		
2001	441	400	482
2002	470	428	512
2003	495	451	539
2004	495	451	539
2005	506	462	550
2006	590	542	638
2007	574	527	621
2008	574	527	621
2009	540	494	586
	Baseline = 469		

	W22		
	24	22	27
	25	23	27
	26	23	28
	25	22	27
	24	22	26
	27	25	29
	25	23	28
	25	23	27
	24	22	26
	Baseline = 25		

Year	Frequency			Age standardised rates (per 100,000 person years)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
	<i>Self harm</i>					
	<hr/>			<hr/>		
	Fatal: S11			S12		
1994	512	468	556	14	13	15
1995	543	497	589	15	13	16
1996	540	494	586	14	13	15
1997	561	515	607	15	14	16
1998	577	530	624	15	14	16
1999	515	471	559	13	12	15
2000	458	416	500	12	11	13
2001	507	463	551	13	12	14
2002	467	425	509	12	11	13
2003	519	474	564	13	12	14
2004	493	449	537	12	11	13
2005	515	471	559	12	11	13
2006	524	479	569	12	11	14
2007	492	449	535	12	11	13
	<hr/>			<hr/>		
	Baseline = 498			Baseline = 13		
	<hr/>			<hr/>		
	Serious non-fatal: S01			S02		
1994	62	47	77	1.7	1.2	2.1
1995	66	50	82	1.7	1.3	2.1
1996	106	86	126	2.7	2.2	3.3
1997	144	120	168	3.7	3.1	4.3
1998	133	110	156	3.4	2.9	4.0
1999	119	98	140	3.1	2.5	3.6
2000	157	132	182	4.1	3.4	4.7
2001	177	151	203	4.6	3.9	5.3
2002	173	147	199	4.4	3.7	5.1
2003	167	142	192	4.1	3.5	4.8
2004	197	169	225	4.8	4.1	5.5
2005	170	144	196	4.1	3.5	4.7
2006	218	189	247	5.2	4.5	5.9
2007	245	214	276	5.8	5.1	6.6
2008	247	216	278	5.8	5.0	6.5
2009	270	238	302	6.3	5.5	7.0
	<hr/>			<hr/>		
	Baseline = 172			Baseline = 4.4		

Year	Frequency			Age standardised rates (per 100,000 person years)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
	<i>Self harm</i>					
	Serious (fatal and non-fatal): S21			S22		
1994	574	527	621	16	14	17
1995	609	561	657	16	15	18
1996	646	596	696	17	16	18
1997	705	653	757	18	17	20
1998	710	658	762	19	17	20
1999	634	585	683	17	15	18
2000	615	566	664	16	15	17
2001	684	633	735	18	16	19
2002	640	590	690	16	15	18
2003	686	635	737	17	16	18
2004	690	639	741	17	16	18
2005	685	634	736	17	15	18
2006	742	689	795	18	16	19
2007	737	684	790	17	16	19
	Baseline = 670			Baseline = 17		

Year	Frequency			Age standardised rates (per 100,000 person years)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
<i>Falls - all ages</i>						
	Fatal: F11a			F12a		
1994	219	190	248	7.1	6.1	8.0
1995	237	207	267	7.3	6.3	8.2
1996	253	222	284	7.8	6.8	8.7
1997	225	196	254	6.7	5.8	7.5
1998	189	162	216	5.4	4.7	6.2
1999	264	232	296	7.4	6.5	8.3
2000	251	220	282	6.8	5.9	7.6
2001	290	257	323	7.6	6.7	8.5
2002	304	270	338	7.8	6.9	8.7
2003	338	302	374	8.5	7.6	9.4
2004	355	318	392	8.7	7.8	9.6
2005	329	293	365	7.8	7.0	8.7
2006	382	344	420	8.8	7.9	9.7
2007	422	382	462	9.4	8.5	10.3
	Baseline = 311			Baseline = 7.9		
	Serious non-fatal:F01a			F02a		
1994	3209	3098	3320	101	98	105
1995	3329	3216	3442	103	99	106
1996	3478	3362	3594	105	101	108
1997	3542	3425	3659	104	100	107
1998	3613	3495	3731	103	100	106
1999	3873	3751	3995	107	104	111
2000	3949	3826	4072	106	103	110
2001	4003	3879	4127	105	102	108
2002	4140	4014	4266	106	103	109
2003	4155	4029	4281	104	101	107
2004	4170	4043	4297	102	99	105
2005	4396	4266	4526	105	102	108
2006	4589	4456	4722	106	103	109
2007	4567	4435	4699	103	100	106
2008	4819	4683	4955	106	103	109
2009	5013	4874	5152	107	104	110
	Baseline = 4099			Baseline = 105		

Year	Frequency			Age standardised rates (per 100,000 person years)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
<i>Falls - all ages</i>						
Serious (fatal and non-fatal):F21a				F22a		
1994	3428	3313	3543	108	105	112
1995	3566	3449	3683	110	106	114
1996	3731	3611	3851	113	109	116
1997	3767	3647	3887	110	107	114
1998	3802	3681	3923	108	105	112
1999	4137	4011	4263	115	111	118
2000	4200	4073	4327	113	110	117
2001	4293	4165	4421	112	109	116
2002	4444	4313	4575	114	110	117
2003	4493	4362	4624	112	109	116
2004	4525	4393	4657	111	108	114
2005	4725	4590	4860	113	109	116
2006	4971	4833	5109	115	112	118
2007	4989	4851	5127	112	109	115
Baseline = 4410				Baseline = 113		

Year	Frequency			Age standardised rates (per 100,000 person years)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
<i>Falls - 0-74 years</i>						
Fatal: F11b				F12b		
1994						
1995	68.7	59.3	78.0	1.9	1.6	2.2
1996	65.7	56.5	74.8	1.8	1.5	2.1
1997	60.0	51.2	68.8	1.7	1.4	1.9
1998	63.7	54.6	72.7	1.7	1.5	2.0
1999	64.7	55.6	73.8	1.7	1.5	2.0
2000	67.3	58.0	76.6	1.8	1.6	2.1
2001	64.0	54.9	73.1	1.7	1.4	1.9
2002	68.7	59.3	78.0	1.8	1.6	2.1
2003	78.7	68.6	88.7	2.0	1.8	2.3
2004	83.0	72.7	93.3	2.1	1.8	2.4
2005	85.3	74.9	95.8	2.1	1.9	2.4
2006	80.0	69.9	90.1	2.0	1.7	2.2
2007						
Baseline = 71.8				Baseline = 1.9		
Serious non-fatal: F01b				F02b		
1994	1127	1061	1193	33	31	35
1995	1069	1005	1133	31	29	33
1996	1116	1051	1181	32	30	34
1997	1088	1023	1153	31	29	33
1998	1104	1039	1169	31	29	33
1999	1248	1179	1317	34	33	36
2000	1284	1214	1354	35	33	37
2001	1333	1261	1405	36	34	38
2002	1402	1329	1475	37	36	39
2003	1381	1308	1454	36	34	38
2004	1388	1315	1461	36	34	38
2005	1451	1376	1526	37	35	39
2006	1509	1433	1585	38	36	40
2007	1577	1499	1655	39	37	41
2008	1702	1621	1783	41	39	43
2009	1741	1659	1823	41	39	43
Baseline = 1372				Baseline = 37		

Year	Frequency			Age standardised rates (per 100,000 person years)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
<i>Falls - 0-74 years</i>						
Serious (fatal and non-fatal): F21b				F22b		
1994	1191	1123	1259	35	33	37
1995	1143	1077	1209	33	31	35
1996	1184	1117	1251	34	32	36
1997	1143	1077	1209	32	30	34
1998	1161	1094	1228	32	30	34
1999	1327	1256	1398	37	35	39
2000	1342	1270	1414	37	35	39
2001	1398	1325	1471	38	36	40
2002	1471	1396	1546	39	37	41
2003	1453	1378	1528	38	36	40
2004	1483	1408	1558	38	36	40
2005	1533	1456	1610	39	37	41
2006	1588	1510	1666	40	38	42
2007	1656	1576	1736	41	39	43
Baseline = 1441				Baseline = 39		

Year	Frequency			Age standardised rates (per 100,000 person years)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
<i>Falls - 75+ years</i>						
Fatal: F11c				F12c		
1994	155	131	179	97	82	112
1995	163	138	188	97	82	112
1996	185	158	212	108	92	123
1997	170	144	196	95	80	109
1998	132	109	155	71	59	84
1999	185	158	212	97	83	111
2000	193	166	220	96	83	110
2001	225	196	254	108	94	122
2002	235	205	265	110	96	124
2003	266	234	298	121	107	136
2004	260	228	292	116	102	130
2005	247	216	278	106	93	119
2006	303	269	337	126	112	140
2007	343	307	379	137	122	151
Baseline = 242				Baseline = 113		
Serious non-fatal: F01c				F02c		
1994	2082	1993	2171	1275	1221	1330
1995	2260	2167	2353	1337	1282	1391
1996	2362	2267	2457	1357	1302	1411
1997	2454	2357	2551	1358	1305	1411
1998	2509	2411	2607	1342	1290	1394
1999	2625	2525	2725	1359	1307	1410
2000	2665	2564	2766	1329	1279	1379
2001	2670	2569	2771	1284	1236	1332
2002	2738	2635	2841	1280	1233	1328
2003	2774	2671	2877	1265	1219	1312
2004	2782	2679	2885	1239	1194	1285
2005	2945	2839	3051	1271	1225	1316
2006	3080	2971	3189	1283	1238	1328
2007	2990	2883	3097	1206	1163	1248
2008	3117	3008	3226	1218	1175	1260
2009	3272	3160	3384	1244	1202	1287
Baseline = 2727				Baseline = 1277		

Year	Frequency			Age standardised rates (per 100,000 person years)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
	<i>Falls - 75+ years</i>					
	Serious (fatal and non-fatal): F21c			F22c		
1994	2237	2144	2330	1372	1316	1429
1995	2423	2327	2519	1434	1377	1490
1996	2547	2448	2646	1465	1408	1521
1997	2624	2524	2724	1452	1397	1508
1998	2641	2540	2742	1414	1360	1467
1999	2810	2706	2914	1455	1402	1508
2000	2858	2753	2963	1425	1374	1477
2001	2895	2790	3000	1392	1342	1442
2002	2973	2866	3080	1390	1341	1439
2003	3040	2932	3148	1387	1338	1436
2004	3042	2934	3150	1355	1307	1403
2005	3192	3081	3303	1377	1330	1424
2006	3383	3269	3497	1409	1362	1456
2007	3333	3220	3446	1342	1297	1387
	Baseline = 2969			Baseline = 1390		

	Frequency			Age standardised rates (per 100,000 person years)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
<i>MVTC</i>						
	Fatal: M11			M12		
1994	585	538	632	16	15	17
1995	594	546	642	16	15	17
1996	520	475	565	14	13	15
1997	530	485	575	14	13	15
1998	519	474	564	14	12	15
1999	510	466	554	13	12	15
2000	439	398	480	11	10	13
2001	440	399	481	11	10	12
2002	422	382	462	11	10	12
2003	465	423	507	12	11	13
2004	436	395	477	11	10	12
2005	405	366	444	10	9	11
2006	391	352	430	9	8	10
2007	427	386	468	10	9	11
	Baseline = 442			Baseline = 11		
	Fatal (per billion vehicle Kilometres): M13			Fatal (per 10,000 Vehicles): M14		
1994						
1995						
1996						
1997						
1998						
1999						
2000				1.7	1.5	1.8
2001	13	11	14	1.7	1.5	1.8
2002	12	11	13	1.6	1.4	1.7
2003	12	11	13	1.7	1.5	1.8
2004	11	10	12	1.5	1.4	1.6
2005	10	9	11	1.3	1.2	1.5
2006	10	9	11	1.3	1.1	1.4
2007	11	10	12	1.3	1.2	1.5
	Baseline = 12			Baseline = 1.6		

	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
<i>MVTC</i>						
<hr/>				<hr/>		
	TCR Fatal Frequency: M15			TCR Fatal Age Standardised Rate (per 100,000 person years): M16		
1994	562	516	608	15	14	17
1995	558	512	604	15	14	16
1996	496	452	540	13	12	14
1997	520	475	565	14	13	15
1998	486	443	529	13	12	14
1999	493	449	537	13	12	14
2000	461	419	503	12	11	13
2001	437	396	478	11	10	12
2002	398	359	437	10	9	11
2003	454	412	496	11	10	12
2004	425	385	465	10	9	11
2005	400	361	439	10	9	11
2006	384	346	422	9	8	10
2007	417	377	457	10	9	11
2008	361	324	398	8	8	9
2009	374	336	412	9	8	9
	<hr/>			<hr/>		
	Baseline = 430			Baseline = 11		
<hr/>				<hr/>		
	TCR Fatal per billion Vehicle Kms: M17			TCR Fatal per 10,000 Vehicles: M18		
1994						
1995						
1996						
1997						
1998						
1999						
2000				1.8	1.6	1.9
2001	12	11	14	1.7	1.5	1.8
2002	11	10	12	1.5	1.3	1.6
2003	12	11	13	1.6	1.5	1.8
2004	11	10	12	1.5	1.3	1.6
2005	10	9	11	1.3	1.2	1.4
2006	10	9	11	1.2	1.1	1.4
2007	10	9	11	1.3	1.2	1.4
2008	9	8	10	1.1	1.0	1.2
2009	9	8	10	1.2	1.0	1.3
	<hr/>			<hr/>		
	Baseline = 12			Baseline = 1.6		
<hr/>				<hr/>		

	Estimate	Lower CI	Upper CI		Estimate	Lower CI	Upper CI
<i>MVTC</i>							
Serious non-fatal: M01				M02			
1994	1351	1279	1423	37	35	39	
1995	1491	1415	1567	40	38	42	
1996	1479	1404	1554	39	37	41	
1997	1445	1370	1520	38	36	40	
1998	1465	1390	1540	38	36	40	
1999	1480	1405	1555	39	37	41	
2000	1559	1482	1636	41	39	43	
2001	1551	1474	1628	40	38	42	
2002	1449	1374	1524	37	35	39	
2003	1615	1536	1694	40	38	42	
2004	1515	1439	1591	37	35	39	
2005	1749	1667	1831	42	40	44	
2006	1804	1721	1887	43	41	45	
2007	1839	1755	1923	43	41	45	
2008	1819	1735	1903	42	40	44	
2009	1825	1741	1909	42	40	44	
Baseline = 1538				Baseline = 39			
Serious (fatal and non-fatal): M21				M22			
1994	1936	1850	2022	52	50	55	
1995	2085	1996	2174	56	53	58	
1996	1999	1911	2087	53	51	55	
1997	1975	1888	2062	52	50	54	
1998	1984	1897	2071	52	50	54	
1999	1990	1903	2077	52	50	54	
2000	1998	1910	2086	52	50	54	
2001	1991	1904	2078	52	49	54	
2002	1871	1786	1956	48	45	50	
2003	2080	1991	2169	52	49	54	
2004	1951	1864	2038	48	46	50	
2005	2154	2063	2245	52	50	54	
2006	2195	2103	2287	52	50	54	
2007	2266	2173	2359	53	51	55	
Baseline = 1981				Baseline = 50			

	Frequency			Age standardised rates (per 100,000 person years)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
<i>Drowning</i>						
<hr/>						
Fatal: D11						
2000	111	90	132	2.9	2.4	3.4
2001	93	74	112	2.4	1.9	2.9
2002	121	99	143	3.1	2.5	3.6
2003	107	87	127	2.7	2.2	3.2
2004	101	81	121	2.5	2.0	3.0
2005	100	80	120	2.4	1.9	2.9
2006	76	59	93	1.8	1.4	2.2
2007	80	62	98	1.9	1.5	2.3
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Baseline = 107						
<hr/>						
Drownbase Fatal: D13						
1994	130	108	152	3.5	2.9	4.1
1995	159	134	184	4.2	3.5	4.9
1996	140	117	163	3.7	3.1	4.3
1997	138	115	161	3.6	3.0	4.2
1998	148	124	172	3.9	3.2	4.5
1999	125	103	147	3.3	2.7	3.9
2000	132	109	155	3.4	2.8	4.0
2001	121	99	143	3.1	2.6	3.7
2002	139	116	162	3.5	2.9	4.1
2003	126	104	148	3.1	2.6	3.7
2004	122	100	144	3.0	2.5	3.5
2005	119	98	140	2.9	2.3	3.4
2006	93	74	112	2.2	1.8	2.7
2007	114	93	135	2.7	2.2	3.1
2008	99	79	119	2.3	1.8	2.7
2009	99	79	119	2.3	1.8	2.7
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Baseline = 129						
<hr/>						
Drownbase Rates: D14						
1994	130	108	152	3.5	2.9	4.1
1995	159	134	184	4.2	3.5	4.9
1996	140	117	163	3.7	3.1	4.3
1997	138	115	161	3.6	3.0	4.2
1998	148	124	172	3.9	3.2	4.5
1999	125	103	147	3.3	2.7	3.9
2000	132	109	155	3.4	2.8	4.0
2001	121	99	143	3.1	2.6	3.7
2002	139	116	162	3.5	2.9	4.1
2003	126	104	148	3.1	2.6	3.7
2004	122	100	144	3.0	2.5	3.5
2005	119	98	140	2.9	2.3	3.4
2006	93	74	112	2.2	1.8	2.7
2007	114	93	135	2.7	2.2	3.1
2008	99	79	119	2.3	1.8	2.7
2009	99	79	119	2.3	1.8	2.7
<hr/>						
Baseline = 3.2						
<hr/>						