

## Child restraint use by children under 5 years, 2012.

The latest annual national survey of child restraint use in New Zealand by children under 5 years old was carried out in October 2012. Children in more than 4,800 cars were observed at 112 sites throughout New Zealand. As in previous years, sites were surveyed during school hours in the school term in order to target pre-schoolers. Results were weighted to reflect the population under five years in each local authority.

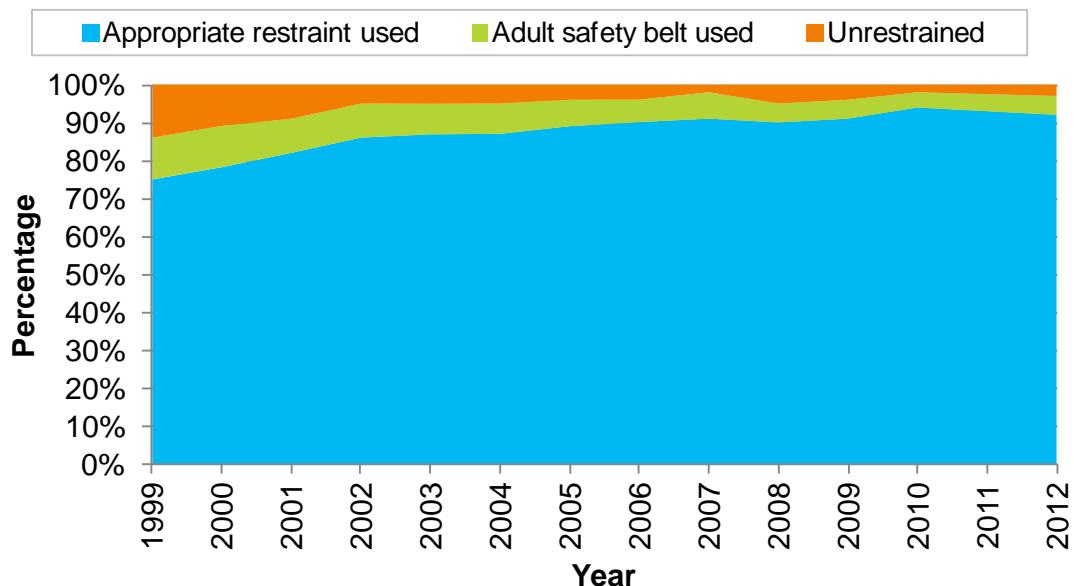
In 2012, **92 percent** of children under 5 years were either in an infant seat, child seat, booster seat, or restrained by a child harness. This is a decrease from 93 percent in 2010, but higher than previous years.

Fifty-two percent of the children in the survey were appropriately restrained in child seats, 19 percent in infant seats, 18 percent in booster seats and 0.7 percent in child harnesses. A further 5 percent were restrained by adult safety belts only. The remaining 2.6 percent were not restrained, including less than 1 percent who were held on the knee of other passengers (see Table 1).

**Table 1: Restraint type used by children under 5 years (%)**

| Category                   | 2001 | 2002 | 2003 <sup>1</sup> | 2004 | 2005 | 2006 <sup>1</sup> | 2007 | 2008 | 2009 | 2010 <sup>1</sup> | 2012 |
|----------------------------|------|------|-------------------|------|------|-------------------|------|------|------|-------------------|------|
| Appropriate restraint used | 82   | 86   | 86                | 87   | 89   | 91                | 91   | 90   | 91   | 93                | 92   |
| Adult safety belt used     | 9    | 9    | 8                 | 8    | 7    | 6                 | 7    | 5    | 5    | 4                 | 5    |
| Unrestrained               | 9    | 5    | 5                 | 5    | 4    | 4                 | 2    | 5    | 4    | 2                 | 3    |

**Figure 1: National restraint use patterns for children under 5 years**



In this report, changes have been commented on when the change is considered to be statistically significant<sup>2</sup>; that is, the change in the wearing rate observed in the survey is likely to reflect a real change in the wearing rate.

<sup>1</sup> Rounded figures given; actual percentages add to 100%.

<sup>2</sup> Margin of error based on 95 percent confidence interval.

## Regional Wearing Rates

National surveys are designed to provide a consistent measure of child restraint use over time, by surveying the same sites in each region each year. Table 2 shows the child restraint wearing rates by children under five years in each local government region. In 2012 at least 190 children were surveyed in each region, except in Gisborne where 84 were observed, the West Coast where 118 were observed and Otago where 82 were observed.

Table 2 shows that overall, the wearing of child restraints has decreased since 2010. Some regions have shown increases or decreases in wearing rates. For example, child restraint wearing in Wellington is at its highest recorded rate at 98 percent, up from 91 percent in 2010. Wearing rates have decreased by 8 percent in Auckland, and have increased by 4 percent in the Waikato. Wearing rates in all other regions are at similar levels to previous years.

**Table 2: Child restraint wearing rates, by region (%)**

| Local Government Region       | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2012 |
|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Northland                     | 70   | 69   | 85   | 84   | 95   | 98   | 100  | 95   | 88   | 89   | 88   | 91   |
| Auckland                      | 75   | 77   | 83   | 82   | 81   | 86   | 92   | 90   | 90   | 89   | 96   | 88*  |
| Waikato                       | 78   | 81   | 88   | 90   | 87   | 89   | 87   | 89   | 93   | 89   | 90   | 94*  |
| Bay of Plenty                 | 79   | 78   | 87   | 78   | 81   | 91   | 89   | 86   | 87   | 84   | 91   | 94   |
| Gisborne                      | 68   | 79   | 69   | 76   | 88   | 92   | 83   | 100  | 94   | 90   | 85   | 81   |
| Hawke's Bay                   | 67   | 90   | 94   | 83   | 92   | 98   | 89   | 92   | 92   | 94   | 93   | 95   |
| Taranaki                      | 77   | 78   | 95   | 91   | 94   | 87   | 95   | 96   | 96   | 88   | 95   | 95   |
| Manawatu - Wanganui           | 83   | 81   | 84   | 89   | 94   | 91   | 94   | 97   | 95   | 99   | 97   | 99   |
| Wellington                    | 81   | 83   | 82   | 90   | 89   | 91   | 92   | 90   | 81   | 97   | 91   | 98*  |
| Nelson – Marlborough - Tasman | 73   | 79   | 94   | 92   | 93   | 91   | 93   | 91   | 96   | 96   | 93   | 93   |
| West Coast                    | 82   | 84   | 92   | 92   | 92   | 92   | 93   | 96   | 99   | 99   | 96   | 92   |
| Canterbury                    | 88   | 94   | 91   | 93   | 93   | 83   | 85   | 90   | 91   | 94   | 93   | 94   |
| Otago                         | 87   | 97   | 97   | 90   | 95   | 91   | 91   | 98   | 96   | 93   | 96   | 95   |
| Southland                     | 87   | 76   | 81   | 88   | 83   | 94   | 92   | 90   | 95   | 92   | 93   | 91   |
| All NZ                        | 79   | 82   | 86   | 86   | 87   | 89   | 91   | 91   | 90   | 91   | 93   | 92*  |

\* Statistically significant change from previous record.

## Metropolitan Area Wearing Rates

Child restraint wearing rates for selected metropolitan areas are presented in Table 3. Results from the previous cities of North Shore, Waitakere, Auckland and Manukau are now incorporated into Auckland, following their amalgamation in 2010. Auckland has shown a decrease in wearing rate from 96 percent in 2010<sup>32</sup> to 88 percent in 2012. Increased wearing rates were observed in Hamilton<sup>32</sup> from 90 to 99 percent, Tauranga<sup>32</sup> from 85 to 100 percent and Wellington<sup>32</sup> from 93 to 99 percent. Wearing rates have not changed significantly in the other metropolitan areas shown in Table 3.

**Table 3: Child restraint wearing rates, by metropolitan area (%)<sup>\*</sup>**

| Metropolitan areas | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2012  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Auckland           | 75   | 77   | 83   | 82   | 81   | 86   | 92   | 90   | 90   | 89   | 96   | 88**  |
| Hamilton           | 81   | 84   | 90   | 95   | 80   | 94   | 87   | 88   | 96   | 88   | 90   | 99**  |
| Tauranga           |      |      | 88   | 80   | 81   | 87   | 97   | 78   | 86   | 85   | 85   | 100** |
| Wellington         | 91   | 87   | 86   | 84   | 86   | 87   | 87   | 98   | 84   | 97   | 93   | 99**  |
| Christchurch       | 88   | 94   | 90   | 93   | 91   | 77   | 85   | 89   | 98   | 98   | 91   | 92    |
| Dunedin            | 85   | 98   | 99   | 91   | 96   | 91   | 98   | 89   | 97   | 95   | 95   | 92    |

<sup>\*</sup> Prior to 2010, Auckland regional wearing rate shown. Limited historical Tauranga data is available

<sup>\*\*</sup> Statistically significant change from previous record.

## Local Authority Wearing Rates

Child restraint wearing rates at territorial local authority (TLA) level are presented in Table 4. At TLA level, sample sizes are relatively small and results should be treated with caution. For example, with a sample size of 100 and a wearing rate of 75 percent the margin of error<sup>32</sup> is approximately 9 percent. While small samples make it difficult to detect small changes in the wearing rate from year to year, these results are useful to local authorities as an indication of how much improvement is needed. Where fewer than 70 children were sampled in a TLA, neighbouring local bodies have been combined for estimation.

<sup>32</sup> Margin of error based on 95 percent confidence interval.

Table 4: Child restraint wearing rates by territorial local authority, 2012

| Local authority /<br>authorities                  | Children<br>in sample | % in child<br>restraints | Local authority /<br>authorities                 | Children<br>in sample | % in child<br>restraints |
|---|-----------------------|--------------------------|--|-----------------------|--------------------------|
| <i>Northland</i>                                  |                       |                          | <i>Manawatu-Wanganui</i>                         |                       |                          |
| Far North   | 83                    | 83                       | Ruapehu / Rangitikei                             | 102                   | 100                      |
| Far North / Kaipara                               | 104                   | 85                       | Whanganui  | 74                    | 96                       |
| Whangarei   | 130                   | 98                       | Manawatu / Tararua /<br>Horowhenua               | 94                    | 98                       |
| <i>Auckland</i>                                   |                       |                          | Palmerston North                                 | 99                    | 99                       |
| Auckland  | 1164                  | 88                       | <i>Wellington</i>                                |                       |                          |
| <i>Waikato</i>                                    |                       |                          | Kapiti Coast / Porirua                           | 94                    | 98                       |
| Waikato   | 78                    | 87                       | Masterton / Carterton                            | 55                    | Sample<br>too small      |
| Waipa   | 111                   | 95                       | Upper Hutt / Hutt City                           | 190                   | 99                       |
| Matamata – Piako                                  | 77                    | 86                       | Hutt City  | 123                   | 99                       |
| Hamilton  | 167                   | 99                       | Wellington City                                  | 257                   | 99                       |
| Taupo / South<br>Waikato                          | 221                   | 92                       | <i>Nelson / Marlborough / Tasman</i>             |                       |                          |
| <i>Bay of Plenty</i>                              |                       |                          | Nelson / Tasman                                  | 162                   | 97                       |
| Tauranga  | 95                    | 100                      | Tasman   | 98                    | 99                       |
| Rotorua   | 121                   | 98                       | Marlborough /<br>Kaikoura                        | 77                    | 87                       |
| Whakatane / Kawerau<br>/ Western Bay of<br>Plenty | 131                   | 83                       | <i>West Coast</i>                                |                       |                          |
| <i>Gisborne</i>                                   |                       |                          | Westland / Buller /<br>Grey                      | 118                   | 92                       |
| Gisborne  | 84                    | 81                       | <i>Canterbury</i>                                |                       |                          |
| <i>Hawke's Bay</i>                                |                       |                          | Christchurch                                     | 243                   | 92                       |
| Napier  | 85                    | 96                       | Christchurch /<br>Waimakariri                    | 279                   | 93                       |
| Wairoa / Hastings /<br>Central Hawke's Bay        | 109                   | 95                       | Ashburton  | 75                    | 96                       |
| <i>Taranaki</i>                                   |                       |                          | Ashburton / Timaru                               | 143                   | 97                       |
| New Plymouth                                      | 129                   | 96                       | <i>Otago</i>                                     |                       |                          |
| Stratford / South<br>Taranaki                     | 105                   | 93                       | Waitaki / Central<br>Otago / Clutha /<br>Dunedin | 117                   | 95                       |
|   |                       |                          | <i>Southland</i>                                 |                       |                          |
|   |                       |                          | Gore   | 73                    | 89                       |
|   |                       |                          | Invercargill                                     | 110                   | 90                       |

## Police District Wearing Rates

National surveys are designed to provide a consistent measure of child restraint use over time, by surveying the same sites in each police district each year. Child restraint use in Waikato has increased from 89 percent in 2010 to 94 percent in 2012 and in Wellington from 91 percent in 2010 to 98 percent in 2012. Use has decreased in Waitemata from 97 to 92 percent, Auckland from 98 to 87 percent and Counties–Manukau from 94 to 84 percent. Wearing rates have not changed significantly in the other police districts, as shown in Table 5.

In 2012, at least 300 children were surveyed in each district, except in Northland (where 234 children were surveyed), Auckland (227 children) and Eastern (278 children).

**Table 5: Percentage of children in child restraints, by police district (%)**

| Police District  | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2012 |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Northland        | 70   | 69   | 85   | 84   | 95   | 98   | 100  | 95   | 88   | 89   | 88   | 91   |
| Waitemata        | 84   | 82   | 83   | 91   | 89   | 93   | 93   | 90   | 87   | 97   | 97   | 92*  |
| Auckland         | 81   | 82   | 88   | 86   | 88   | 86   | 84   | 89   | 95   | 99   | 98   | 87*  |
| Counties–Manukau | 64   | 69   | 75   | 69   | 68   | 86   | 97   | 91   | 87   | 83   | 94   | 84*  |
| Waikato          | 80   | 83   | 87   | 91   | 86   | 90   | 86   | 87   | 93   | 89   | 89   | 94*  |
| Bay of Plenty    | 77   | 76   | 88   | 78   | 83   | 90   | 90   | 87   | 88   | 85   | 92   | 94   |
| Eastern          | 68   | 86   | 88   | 81   | 91   | 96   | 87   | 94   | 92   | 94   | 91   | 92   |
| Central          | 80   | 80   | 88   | 90   | 93   | 90   | 94   | 95   | 95   | 95   | 97   | 98   |
| Wellington       | 81   | 84   | 80   | 90   | 89   | 91   | 92   | 91   | 81   | 97   | 91   | 98*  |
| Tasman           | 75   | 80   | 94   | 92   | 93   | 91   | 93   | 92   | 97   | 96   | 94   | 93   |
| Canterbury       | 88   | 94   | 90   | 93   | 93   | 83   | 85   | 90   | 91   | 94   | 93   | 94   |
| Southern         | 87   | 89   | 93   | 89   | 91   | 92   | 92   | 95   | 96   | 92   | 94   | 93   |
| All NZ           | 79   | 82   | 86   | 86   | 87   | 89   | 91   | 91   | 90   | 91   | 93   | 92*  |

\* Statistically significant change from previous record.

## Police Area Wearing Rates

Child restraint wearing rates at police area level are presented in Table 6. At police area level, sample sizes are relatively small and results should be treated with caution. For example, with a sample size of 100 and a wearing rate of 75 percent the margin of error<sup>4</sup> is approximately 9 percent. While small samples make it difficult to detect small changes in the wearing rate from year to year, these results are useful to local police as an indication of how much improvement is needed. Where fewer than 70 children were sampled in a police area, neighbouring local areas have been combined for estimation.

<sup>4</sup> Margin of error based on a 95 percent confidence interval.

**Table 6: Child restraint wearing rates by police area, 2012**

| <b>Police Area</b>                  | <b>Children<br/>in sample</b> | <b>% in child<br/>restraints</b> | <b>Police Area</b>                            | <b>Children<br/>in sample</b> | <b>% in child<br/>restraints</b> |
|-------------------------------------|-------------------------------|----------------------------------|---|-------------------------------|----------------------------------|
| <i>Northland</i>                    |                               |                                  | <i>Eastern cont</i>                           |                               |                                  |
| Far North                           | 83                            | 83                               | Hastings                                      | 95                            | 96                               |
| Whangarei                           | 151                           | 97                               | <i>Central</i>                                |                               |                                  |
| <i>Waitemata</i>                    |                               |                                  | New Plymouth                                  | 129                           | 96                               |
| Rodney / North Shore                | 294                           | 95                               | Taranaki Rural                                | 105                           | 93                               |
| North Shore                         | 229                           | 96                               | Whanganui                                     | 108                           | 97                               |
| Waitakere                           | 225                           | 88                               | Ruapehu                                       | 68                            | Sample too small                 |
| <i>Auckland</i>                     |                               |                                  | Palmerston North Rural                        | 120                           | 99                               |
| Auckland West /<br>Auckland East    | 227                           | 87                               | Palmerston North City                         | 99                            | 99                               |
| Auckland East                       | 159                           | 86                               | <i>Wellington</i>                             |                               |                                  |
| <i>Counties / Manukau</i>           |                               |                                  | Kapiti - Mana                                 | 193                           | 97                               |
| Counties-Manukau<br>West            | 126                           | 80                               | Wellington                                    | 219                           | 100                              |
| Counties-Manukau<br>East            | 157                           | 85                               | Lower Hutt                                    | 123                           | 99                               |
| Counties-Manukau<br>Central / South | 135                           | 89                               | Upper Hutt / Lower Hutt                       | 190                           | 99                               |
| <i>Waikato</i>                      |                               |                                  | Wairarapa                                     | 55                            | Sample too small                 |
| Hamilton                            | 167                           | 99                               | <i>Tasman</i>                                 |                               |                                  |
| Waikato East                        | 77                            | 86                               | Nelson Bays                                   | 162                           | 97                               |
| Waikato West                        | 189                           | 92                               | Marlborough                                   | 77                            | 87                               |
| <i>Bay of Plenty</i>                |                               |                                  | West Coast                                    | 118                           | 92                               |
| Taupo                               | 221                           | 95                               | <i>Canterbury</i>                             |                               |                                  |
| Western Bay of Plenty               | 159                           | 99                               | Northern Canterbury                           | 143                           | 95                               |
| Eastern Bay of Plenty               | 67                            | Sample too small                 | Northern Canterbury /<br>Christchurch Central | 195                           | 91                               |
| Rotorua                             | 121                           | 98                               | Mid-South Canterbury                          | 84                            | 98                               |
| <i>Eastern</i>                      |                               |                                  | Southern Canterbury                           | 143                           | 97                               |
| Gisborne                            | 98                            | 82                               | <i>Southern</i>                               |                               |                                  |
| Napier                              | 85                            | 96                               | Dunedin                                       | 73                            | 93                               |
|                                     |                               |                                  | Dunedin / Otago Rural                         | 117                           | 95                               |
|                                     |                               |                                  | Southland                                     | 183                           | 90                               |

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