



## Child restraint use by children under 5 years: Results of national survey, 2010.

The latest annual national survey of child restraint use in New Zealand by children under 5 years old was carried out in October 2010. Children in more than 5,300 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.

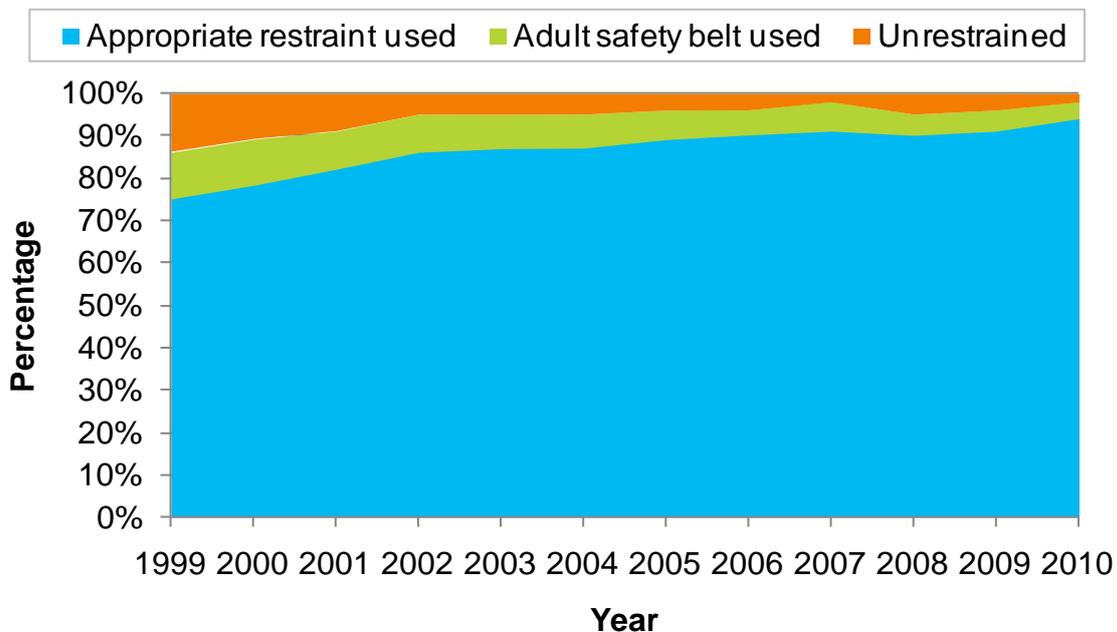
Child restraint use by children under 5 years has increased. In 2010, **93 percent** of children under 5 years were either in an infant seat, child seat, booster seat, or restrained by a child harness. This is an increase from 91 percent in 2009.

Fifty-five percent of the children in the survey were appropriately restrained in child seats, 18 percent in booster seats, 20 percent in infant seats and half a percent in child harnesses. A further 4 percent were restrained by adult safety belts only. The remaining 2 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	2000	2001	2002	2003 <sup>1</sup>	2004	2005	2006 <sup>1</sup>	2007	2008	2009	2010 <sup>1</sup>
Appropriate restraint used	79	82	86	86	87	89	91	91	90	91	93
Adult safety belt used	11	9	9	8	8	7	6	7	5	5	4
Unrestrained	11	9	5	5	5	4	4	2	5	4	2

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



In this report, changes from previous years have been commented on in the text only if statistically significant at the 5 percent level.

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

## 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 2010 at least 190 children were surveyed in each region, except in Gisborne where 117 were observed and the West Coast where 84 were observed.

Table 2 shows that overall, the wearing of child restraints has increased since 2009. Some regions have shown increases or decreases in wearing rates. For example, child restraint wearing in Wellington has returned to 91 percent as in 2005, from 97 percent in 2009. Child restraint use observed in Gisborne has fallen over the last 4 years, from 100 percent wearing rate in 2007 to 85 percent in 2010. Wearing rates have increased by 7 percent in Auckland, Bay of Plenty and Taranaki. 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
Northland	70	69	85	84	95	98	100	95	88	89	88
Auckland	75	77	83	82	81	86	92	90	90	89	96*
Waikato	78	81	88	90	87	89	87	89	93	89	90
Bay of Plenty	79	78	87	78	81	91	89	86	87	84	91*
Gisborne	68	79	69	76	88	92	83	100	94	90	85
Hawke's Bay	67	90	94	83	92	98	89	92	92	94	93
Taranaki	77	78	95	91	94	87	95	96	96	88	95*
Manawatu - Wanganui	83	81	84	89	94	91	94	97	95	99	97
Wellington	81	83	82	90	89	91	92	90	81	97	91*
Nelson – Marlborough - Tasman	73	79	94	92	93	91	93	91	96	96	93
West Coast	82	84	92	92	92	92	93	96	99	99	96
Canterbury	88	94	91	93	93	83	85	90	91	94	93
Otago	87	97	97	90	95	91	91	98	96	93	96
Southland	87	76	81	88	83	94	92	90	95	92	93
All NZ	79	82	86	86	87	89	91	91	90	91	93*

\* Statistically significant change from previous year.

## 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 an increase in wearing rate from 89 percent in 2009, to 96 percent in 2010. Wellington and Christchurch metropolitan areas have decreased wearing rates from previous years, decreasing from 97 percent in 2009 to 93 percent for Wellington, and 98 percent in 2009 to 91 percent for Christchurch. Wearing rates have not changed significantly in the other metropolitan areas shown in Table 3.

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

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

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

\*\* Statistically significant change from previous year.

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

**Table 4: Child restraint wearing rates by territorial local authority, 2010**

Local authority / authorities	Children in sample	% in child restraints	Local authority / authorities	Children in sample	% in child restraints
<i>Northland</i>			<i>Manawatu-Wanganui</i>		
Far North / Kaipara	93	84	Ruapehu / Rangitikei	190	99
Whangarei	99	93	Whanganui	114	98
<i>Auckland</i>			Manawatu / Tararua / Horowhenua	99	94
Auckland	1888	96	Manawatu / Palmerston North	152	98
<i>Waikato</i>			Palmerston North	83	99
Waikato	92	79	<i>Wellington</i>		
Waipa	133	92	Kapiti Coast / Porirua	106	90
Matamata – Piako / Waipa	204	90	Masterton / Carterton	33	<i>Sample too small</i>
South Waikato	190	96	Upper Hutt / Hutt City	133	93
Hamilton	150	90	Hutt City	87	94
Taupo / South Waikato	248	98	Wellington City	343	93
<i>Bay of Plenty</i>			<i>Nelson / Marlborough / Tasman</i>		
Tauranga	114	85	Nelson / Tasman	165	98
Western Bay of Plenty	140	94	Tasman	104	96
Rotorua	174	95	Marlborough / Kaikoura	72	83
Whakatane / Kawerau / Western Bay of Plenty	183	95	<i>West Coast</i>		
<i>Gisborne</i>			Westland / Buller / Grey	84	96
Gisborne	117	85	<i>Canterbury</i>		
<i>Hawke's Bay</i>			Christchurch	289	91
Wairoa / Hastings	171	92	Waimakariri	52	<i>Sample too small</i>
Napier	102	96	Ashburton	82	98
Hastings	101	91	Timaru	147	97
Hastings / Central Hawke's Bay	117	91	<i>Otago</i>		
<i>Taranaki</i>			Waitaki / Central Otago	140	96
New Plymouth	156	96	Clutha / Dunedin	124	95
Stratford / South Taranaki	135	94	<i>Southland</i>		
South Taranaki	75	93	Gore	103	91
			Invercargill	145	93

## 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 Counties/Manukau and Bay of Plenty have increased from 83 percent and 85 percent in 2009 to 94 percent and 92 percent in 2010 respectively. Wellington has returned to 2005–2007 levels at 91 percent after 97 percent in 2009. The other police districts are maintaining the levels observed previously, as shown in Table 5.

In 2010, at least 300 children were surveyed in each district, except in Northland (where 192 children were surveyed) and in Auckland (205 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
Northland	70	69	85	84	95	98	100	95	88	89	88
Waitemata	84	82	83	91	89	93	93	90	87	97	97
Auckland	81	82	88	86	88	86	84	89	95	99	98
Counties – Manukau	64	69	75	69	68	86	97	91	87	83	94*
Waikato	80	83	87	91	86	90	86	87	93	89	89
Bay of Plenty	77	76	88	78	83	90	90	87	88	85	92*
Eastern	68	86	88	81	91	96	87	94	92	94	91
Central	80	80	88	90	93	90	94	95	95	95	97
Wellington	81	84	80	90	89	91	92	91	81	97	91*
Tasman	75	80	94	92	93	91	93	92	97	96	94
Canterbury	88	94	90	93	93	83	85	90	91	94	93
Southern	87	89	93	89	91	92	92	95	96	92	94
All NZ	79	82	86	86	87	89	91	91	90	91	93*

\* Statistically significant change from previous year.

## 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>3</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>3</sup> Margin of error based on a 95 percent confidence interval.

Table 6: Child restraint wearing rates by police area, 2010

Police Area	Children in sample	% in child restraints
<i>Northland</i>		
Far North	76	80
Whangarei	116	94
<i>Waitemata</i>		
Rodney / North Shore	225	98
North Shore	184	99
Waitakere	141	96
<i>Auckland</i>		
Auckland West / Auckland East	205	98
Auckland East	153	98
<i>Counties / Manukau</i>		
Counties-Manukau West	83	90
Counties-Manukau East	98	96
Counties-Manukau Central / South	122	94
<i>Waikato</i>		
Hamilton	150	90
Waikato East	71	87
Waikato West	225	87
<i>Bay of Plenty</i>		
Taupo	248	98
Western Bay of Plenty	254	87
Eastern Bay of Plenty	43	<i>Sample too small</i>
Rotorua	174	95
<i>Eastern</i>		
Gisborne	187	87
Napier	102	96
<i>Police Area</i>		
<i>Eastern cont</i>		
Hastings	117	91
<i>Central</i>		
New Plymouth	156	96
Taranaki Rural	135	94
Whanganui	204	98
Ruapehu	100	100
Palmerston North Rural	148	95
Palmerston North City	83	99
<i>Wellington</i>		
Kapiti - Mana	125	89
Wellington	296	93
Lower Hutt	87	94
Upper Hutt / Lower Hutt	133	93
Wairarapa	33	<i>Sample too small</i>
<i>Tasman</i>		
Nelson Bays	165	98
Marlborough	72	83
West Coast	84	96
<i>Canterbury</i>		
Northern Canterbury / Christchurch Central	279	92
Southern Canterbury / Mid-South Canterbury	291	94
<i>Southern</i>		
Dunedin	124	95
Otago Rural	140	96
Southland	248	92

More information is available from [www.transport.govt.nz](http://www.transport.govt.nz)