



Council of Ambulance Authorities Patient Satisfaction Survey 2012

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EXECUTIVE SUMMARY

This report details the service quality and satisfaction ratings of ambulance services across Australia and New Zealand in 2012. The purpose of this research was to measure the quality of ambulance services, as perceived by its customers. The ratings were also compared over time as the research has been running since 2002 in Australia and since 2008 in New Zealand.

The survey asked patients to evaluate their experience of using ambulance services on a number of dimensions: timeliness, treatment received, the way paramedics looked after them and the quality of the journey. Overall, the majority of patients were satisfied or very satisfied with only minor variations between the various aspects on the patient experience, between years and ambulance services.

There were demographic factors that could drive differences in proportions. For example, the survey could be completed by either the patients themselves or by carers, such as family members.

Generally, carers are slightly more negative in their appraisal than patients. Based on such pattern, ambulance services with different proportions of patients/carers who completed the survey might show some small variations.

The following tables show the summarised results for total Australia and New Zealand.

Total Australia

Table 1 presents the Australia's results across all the service dimensions measured. The results for total Australia were weighted to match the total road and air patient population in 2010/2011 of each state/territory. The results are presented as the proportion of customers who in 2012 were: *very dissatisfied or dissatisfied* (column 2), *neither satisfied nor dissatisfied* (column 3), and *satisfied or very satisfied* (column 4). The table shows a comparison to the proportion of *satisfied or very satisfied* customers in 2011 (column 5) and indicates statistically significant changes over time (column 6).

Table 1: Service dimensions – Australia

Service dimensions	Very dissatisfied or dissatisfied %	Neither satisfied nor dissatisfied %	Satisfied or very satisfied		Change 2011-2012
			2012 %	2011 %	
Call response time (I)	1	1	98	97	↑
Communication staff assistance (I)	1	1	98	98	↔
Paramedics care (I)	1	1	98	99	↓
Treatment satisfaction (I)	1	1	98	98	↔
Overall satisfaction (I)	1	1	98	98	↔
Ambulance paramedics (II)	1	2	97 #	96	↑
Ambulance response time (III)	2	3	95 ##	94	↔
Trip/ride satisfaction (III)	2	4	94 ##	95	↔

Service dimensions are listed in descending order according to satisfied or very satisfied customers in 2012.

- Indicate service dimensions that differ from others, based on the proportion of satisfied or very satisfied customers (statistically significant $p < 0.05$).

(I), (II), (III), etc - These signs indicate the rank each service dimension achieved according to its performance in 2012 (statistically significant at $p < 0.05$).

↔ ↑ ↓ - These signs indicate change in the results for satisfied or very satisfied customers from 2011 to 2012 (statistically significant at $p < 0.05$).

Satisfaction scores across Australia were high and mostly consistent over time. The *Overall satisfaction* score was 98%, what was consistent with previous years. However, there were some changes for *satisfied or very satisfied* scores between 2011 and 2012:

- *Call response time* increased from 97% in 2011 to 98% in 2012;
- *Paramedics care* decreased from 99% in 2011 to 98% in 2012; and
- *Ambulance paramedics* increased from 96% in 2011 to 97% in 2012.

These changes mean that these three scores went back to the same level as they were in 2010.

Similar to scores in previous years, *Ambulance response time* and *Trip/ride satisfaction* scored lower than all other service dimensions.

Respondents were also asked to state their views on how long it should take for an ambulance to respond to an urgent call. The expected reasonable time for an ambulance to arrive in an emergency situation was: 49% believed it should arrive in 10 minutes or less, 30% thought 11 to 15 minutes was the ideal time and 21% expected it in 16 minutes or more.

New Zealand

Results across all the service dimensions measured in New Zealand are presented in Table 2. The results for total New Zealand in 2012 were weighted to match the total road and air patient population in 2010/2011 of the two ambulance services analysed.¹ Comparisons were made between New Zealand scores for 2012 and 2011 (column 6) as well as with the scores for total Australia in 2012 (column 7) – where these were statistically significant.

Table 2: Service dimensions – New Zealand

Service dimensions	Very dissatisfied or dissatisfied %	Neither satisfied nor dissatisfied %	Satisfied or very satisfied		Change 2011-2012	Compared to Australia
			2012 %	2011 %		
Communication staff assistance (I)	0	1	99	98	↔	↔
Treatment satisfaction (I)	0	1	99	99	↔	↔
Call response time (I)	0	2	98	99	↔	↔
Paramedics care (I)	1	1	98	99	↔	↔
Overall satisfaction (II)	1	2	97 #	98	↔	↔
Ambulance paramedics (II)	1	3	96 #	97	↔	↔
Ambulance response time (II)	2	3	95 #	98	↓	↔
Trip/ride satisfaction (III)	2	4	94 ##	95	↔	↔

Service dimensions are listed in descending order according to satisfied or very satisfied customers in 2012.

- Indicate service dimensions that differ from others, based on the proportion of satisfied or very satisfied customers (statistically significant $p < 0.05$).

(I), (II), (III), etc - These signs indicate the rank each service dimension achieved according to its performance in 2012 (statistically significant at $p < 0.05$).

↔ ↑ ↓ - These signs indicate change in the results for satisfied or very satisfied customers between 2011 and 2012, and also differences in the service dimensions in New Zealand in 2012 compared to Australia in the same period (statistically significant at $p < 0.05$).

Similar to the scores for Australia, New Zealand's *Overall satisfaction* score was high at 97%. This was consistent with previous years. Most service dimensions for New Zealand in 2012 scored similar compared to 2011 and to Australia in 2012. The only change was for *Ambulance response time*, which had a significantly decreased from 98% in 2011 to 95% in 2012. Similar to the Australian results, *Trip/ride satisfaction* scored lower than the other dimensions.

Regarding the expected reasonable time for an ambulance to arrive in an emergency situation, the answers in New Zealand were: 50% believed it should arrive in 10 minutes or less, 26% thought 11 to 15 minutes was the ideal time and 24% expected it in 16 minutes or more. This was broadly in line with the total Australia results.

¹ This year, for the first time, New Zealand included two ambulance services: St John New Zealand (as previous years) and Wellington Free Ambulance (new addition).

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RESEARCH OBJECTIVES & METHODOLOGY

The key purpose of the Patient Satisfaction Survey 2012 was to track perceived service quality and customer satisfaction across patient segments in Australia (states/territories based) and New Zealand. Previous studies, conducted in Australia annually from 2002 to 2007 and in both Australia and New Zealand from 2008 to 2011, provided benchmarks for comparison with the 2012 results. This year, for the first time, New Zealand included two ambulance services: St John New Zealand (as previous years) and Wellington Free Ambulance (new addition).

To match the total road and air patient population in 2010/2011 of each state/territory, this analysis included a weight for Victoria overall, total Australia and total New Zealand. In doing that, the results of some states/territories were weighted up and others weighted down to match the population in the analysed period. This was the same process employed in the 2011 report. The following example explains the process:

- **Victoria overall:**
Due to the amalgamation of Victoria's metropolitan and rural ambulance services, an overall result for Victoria was incorporated. The overall result was weighted by metropolitan/rural criteria in line with the percentage of emergency and urgent patients transported in 2010/2011 (70% for metropolitan and 30% for rural).
- **Total Australia:**
The 2010/2011 road and air population for New South Wales was 521,122. This corresponds to 32% of the total road and air population in Australia.
In 2012, there were 458 respondents in the sample from New South Wales. This accounts for 11% of the total sample in Australia.
Therefore, to match up the sample with the population, New South Wales was weighted up in the combined Australia result. In doing that the results were based on the population figure instead of the sample size.
- **The same rationale was applied to total New Zealand:**
The 2010/2011 road and air population for St John New Zealand was 261,441. This corresponds to 91% of the total road and air population in New Zealand.
In 2012, there were 385 respondents in the sample from St John New Zealand. This accounts for 53% of the total sample in New Zealand.
Therefore, to match up the sample with the population, St John New Zealand was weighted up in the total New Zealand result.

The sample

The data was collected by each ambulance service, using the same core questionnaire. Each state/territory was responsible for the mailing, collection and data entry of its patient survey. The individual service providers sent the data to The Council of Ambulance Authorities. The results were combined and reported by the Ehrenberg-Bass Institute. The Institute, as an independent research body, drew together this report, analysed the Australian and New Zealand data, and discussed any differences between patient segments as well as comparisons with previous year's results.

In 2012, eight Australian states/territories based patient segments were investigated. Victoria included the results from rural, metropolitan and overall. In addition, two New Zealand patient segments were included in the sample. The overall result for New Zealand and the total result for Australia were also incorporated. Therefore, the fourteen segments were:

1. Australian Capital Territory
2. New South Wales
3. Northern Territory
4. Queensland
5. South Australia
6. Tasmania
7. Western Australia
8. Victoria metropolitan
9. Victoria rural
10. Victoria overall
11. Total Australia
12. St John New Zealand
13. Wellington Free Ambulance
14. Total New Zealand

A randomly selected sample of 1300 (Code 1 & 2) patients who were transported within two months of the sampling date was used in the Patient Satisfaction Survey. Code 1 relates to an emergency event requiring one or more immediate ambulance responses under light and sirens where the incident is potentially life threatening. Code 2 relates to urgent incidents requiring an undelayed response by one or more ambulances without warning devices, with arrival desirable within thirty minutes.

The instrument

A universal service quality and satisfaction measurement instrument was developed by the Council of Ambulance Authorities (CAA) working group, in consultation with the Ehrenberg-Bass Institute and was used in all patient segments.

Across all patient segments, three service and five satisfaction (including overall satisfaction) ratings were obtained, as well as four patient profile questions. All service quality rating questions used a 5-point Likert scale, where a higher number indicates better-perceived performance.

Non-response

The overall 2010/2011 road and air patient population for the different states/territories was approximately:

New South Wales= 521,122	Tasmania = 43,656
Victoria = 460,656	Northern Territory = 24,656
Queensland = 335,711	Australian Capital Territory = 19,208
Western Australia = 104,813	Australia = 1,647,670
South Australia = 137,848	New Zealand = 287,617

The response rates were calculated based on the number of surveys sent and received.

Table 3: Response rates

Ambulance services	Sent	Received	Response rate %
TAS	1,300	555	43
VIC – rural	1,300	523	40
SA	1,475	579	39
ACT	1,300	478	37
VIC – metropolitan	1,300	473	36
NSW	1,300	458	35
QLD	1,300	453	35
WA	1,300	406	31
NT	1,300	198	15
Victoria overall	2,600	996	38
Total Australia	11,875	4,123	35
SJNZ	1,300	385	30
WFA	1,300	341	26
Total New Zealand	2,600	726	28
Total in 2012	14,475	4,849	33

States/territories are listed in descending order according to the proportion for response rate.

The response rate achieved in 2012 in Australia was 35%, what was consistent with previous years. New Zealand had a response rate of 28%, which was lower than in 2011, when it accomplished 35%. The addition of the Wellington service, which achieved a lower response rate, lowered the response rate for the whole New Zealand sample.

Northern Territory had the lowest response rate: 15%. This was consistent with the results from previous studies. A low response rate leads to the likelihood of non-response bias in their results and less accuracy when comparing with the other states/territories and over different periods of time.

Approach to analysis

The data was collected, entered and cleaned by each state/territory and then pooled and converted to SPSS, software utilised for analysis by Ehrenberg-Bass Institute researchers. For each patient segment, descriptive statistics were used to uncover the proportion of people who were *very dissatisfied or dissatisfied*, *neither satisfied nor dissatisfied*, and *satisfied or very satisfied* for the various satisfaction and service quality attributes. *Unsure* and *not applicable* responses were not included in the analysis due to the very low incidence and low managerial implications from them.

In all the tables, state/territory ambulance services were listed in a descending order according to the proportion of patients who said that they were *satisfied or very satisfied* with a certain element or service. In some cases differences in scores between states/territories were not statistically significant (i.e. arose from random sampling fluctuations), which means that, regardless of the order, all states/territories can be considered equal in performance.

There were also demographic factors that could drive the differences in proportions. For example, patients are more likely to provide higher scores for *Ambulance response time* than carers or relatives (when they complete the questionnaire on behalf of the patient). This pattern is obvious because many patients are unable to judge the response time accurately when they need urgent medical help. Based on such patterns, a state/territory that appears to have a higher proportion of carers than other states/territories could acquire a lower percentage for *Ambulance response time*. So the differences in performance may be attributable to these demographic biases rather than real differences between two equivalent populations. These differences were reported in the *Respondents' profile* section as well as throughout the report.

Additional analyses were conducted to test whether differences between states/territories were statistically significant at $p < 0.05$. Where there were differences, the score was marked with the sign #. In front of the state/territory name there is a rank (or place) that the state/territory achieved according to its performance in 2012. (I) indicates a better result than (II), (II) is better than (III) and so on.

Comparison with 2011 results was provided for all states/territories based on the percentage of respondents who were *satisfied or very satisfied* with each of the dimensions. The last column in each table indicates changes over time. The sign \leftrightarrow shows a stable result (not statistically significant at $p < 0.05$), \uparrow shows a statistically significant increase at $p < 0.05$, and \downarrow shows a statistically significant decrease at $p < 0.05$. In some cases while no significant differences were observed on state/territory level (due to restricted sample sizes), the overall score can produce statistically significant difference, as the aggregated sample has higher statistical power.

FINDINGS

Call response time

Respondents were asked about their satisfaction with the time taken to answer their emergency call.

Table 4: Call response time satisfaction ratings (Q2)

Ambulance services	Very dissatisfied or dissatisfied %	Neither satisfied nor dissatisfied %	Satisfied or very satisfied		Change 2011-2012
			2012 %	2011 %	
ACT (I)	0	1	99	99	↔
TAS (I)	0	1	99	99	↔
NSW (I)	1	0	99	97	↑
WA (I)	0	2	98	97	↔
VIC – rural (I)	1	1	98	97	↔
SA (I)	2	0	98	97	↔
NT (I)	1	2	97	97	↔
QLD (II)	1	2	97 #	98	↔
VIC – metropolitan (II)	1	2	97 #	97	↔
Victoria overall	1	1	98	97	↔
Total Australia	1	1	98	97	↑
SJNZ (I)	0	2	98	99	↔
WFA (I)	1	0	99	n/a	n/a
Total New Zealand	0	2	98	99	↔

Ambulance services are listed in descending order according to satisfied or very satisfied customers in 2012.

- Indicate ambulance services that differ from others, based on the proportion of satisfied or very satisfied customers (statistically significant at $p<0.05$).

(I), (II), (III), etc - Indicate the rank each ambulance service achieved according to its performance in 2012 (statistically significant at $p<0.05$).

↔ ↑ ↓ - Indicate change in the results for satisfied or very satisfied customers from 2011 to 2012 (statistically significant at $p<0.05$).

On average, 98% of the respondents were *satisfied or very satisfied* with the call response time across Australia and New Zealand. Results for all patient segments were also high. However, Queensland and Victoria metropolitan scored slightly lower than the leading states/territories.

Compared to the results from 2011, the 2012 scores were consistent for most states/territories. However, New South Wales had an increase from 97% to 99%. New South Wales had a higher proportion of older patients and lower proportion of patients who have been transported only once, which tend to provide less critical evaluations. Also, the result across Australia was slightly higher than

in 2011, going back to the same level it was in 2010 (from 98% in 2010 to 97% in 2011 to 98% in 2012).

Communication staff assistance

Respondents were then asked about their level of satisfaction with the operator they spoke to when their emergency phone call was answered.

Table 5: Communication staff assistance satisfaction ratings (Q3)

Ambulance services	Very dissatisfied or dissatisfied %	Neither satisfied nor dissatisfied %	Satisfied or very satisfied		Change 2011-2012
			2012 %	2011 %	
TAS (I)	0	1	99	100	↓
ACT (I)	0	2	98	98	↔
NSW (I)	0	2	98	98	↔
VIC – metropolitan (I)	1	1	98	97	↔
VIC – rural (I)	1	1	98	98	↔
NT (I)	1	2	97	96	↔
QLD (II)	1	2	97 #	98	↔
SA (II)	1	2	97 #	97	↔
WA (II)	1	2	97 #	98	↔
Victoria overall	1	1	98	97	↔
Total Australia	1	1	98	98	↔
SJNZ (I)	0	1	99	98	↔
WFA (I)	0	1	99	n/a	n/a
Total New Zealand	0	1	99	98	↔

Ambulance services are listed in descending order according to satisfied or very satisfied customers in 2012.

- Indicate ambulance services that differ from others, based on the proportion of satisfied or very satisfied customers (statistically significant at $p < 0.05$).

(I), (II), (III), etc - Indicate the rank each ambulance service achieved according to its performance in 2012 (statistically significant at $p < 0.05$).

↔ ↑ ↓ - Indicate change in the results for satisfied or very satisfied customers from 2011 to 2012 (statistically significant at $p < 0.05$).

Across Australia, the overall score of respondents who were *satisfied or very satisfied* with the operator they spoke to when their emergency phone call was answered was high at 98%. New Zealand scored 99% in 2012. The majority of states/territories performed equally well, with the exception of Queensland, South Australia and Western Australia, which achieved a significantly lower result than all other patient segments.

Most ambulance services achieved stable results compared to 2011. However, Tasmania changed over time. It decreased from 100% to 99%. There were no demographic changes over time to explain this variation.

Ambulance response time

Respondents were asked to rate their satisfaction with the time the ambulance took to arrive.

Table 6: Ambulance response time satisfaction ratings (Q4)

Ambulance services	Very dissatisfied or dissatisfied %	Neither satisfied nor dissatisfied %	Satisfied or very satisfied		Change 2011-2012
			2012 %	2011 %	
TAS (I)	1	2	97	96	↔
NSW (I)	1	3	96	94	↔
WA (I)	1	3	96	94	↔
SA (I)	2	2	96	95	↔
QLD (I)	3	1	96	96	↔
ACT (II)	3	3	94 #	95	↔
VIC – rural (II)	3	4	93 #	91	↔
VIC – metropolitan (II)	4	4	92 #	92	↔
NT (II)	4	6	90 #	89	↔
Victoria overall	4	4	92	92	↔
Total Australia	2	3	95	94	↔
SJNZ (I)	2	3	95	98	↓
WFA (II)	3	4	93 #	n/a	n/a
Total New Zealand	2	3	95	98	↓

Ambulance services are listed in descending order according to satisfied or very satisfied customers in 2012.

- Indicate ambulance services that differ from others, based on the proportion of satisfied or very satisfied customers (statistically significant at $p < 0.05$).

(I), (II), (III), etc - Indicate the rank each ambulance service achieved according to its performance in 2012 (statistically significant at $p < 0.05$).

↔ ↑ ↓ - Indicate change in the results for satisfied or very satisfied customers from 2011 to 2012 (statistically significant at $p < 0.05$).

Overall, in 2012 Australia and New Zealand scored 95% for respondents *satisfied or very satisfied* with the time the ambulance took to arrive. The Australian Capital Territory, Wellington Free Ambulance, Victoria metropolitan and rural and Northern Territory scored the lowest on this service dimension. The lower scores for Victoria metropolitan and rural were consistent with 2011. Also, the low scores for the Northern Territory and the Australian Capital Territory were consistent with the previous year and could be explained by some demographic characteristics: both territories had higher proportions of patients who have been transported only once and had a substantially higher proportion of younger patients than other states/territories. These patients tend to provide more critical evaluations.

Compared to 2011, the only changes over time were related to St John New Zealand, which achieved statistically lower results in 2012 (from 98% in 2011 to 95% in 2012). There were no demographic changes over time to explain this variation, thus it was a true change.

Paramedics care

Respondents were asked to rate their satisfaction with the care the ambulance paramedics took when attending them.

Table 7: Paramedics care satisfaction ratings (Q5)

Ambulance services	Very dissatisfied or dissatisfied %	Neither satisfied nor dissatisfied %	Satisfied or very satisfied		Change 2011-2012
			2012 %	2011 %	
NSW (I)	0	1	99	99	↔
TAS (I)	0	1	99	99	↔
VIC – rural (I)	1	0	99	98	↔
QLD (I)	1	1	98	99	↔
NT (I)	2	0	98	99	↔
SA (I)	2	0	98	98	↔
WA (II)	1	2	97 #	98	↔
VIC – metropolitan (II)	1	2	97 #	98	↔
ACT (II)	2	2	96 #	96	↔
Victoria overall	1	2	97	98	↔
Total Australia	1	1	98	99	↓
SJNZ (I)	1	1	98	99	↔
WFA (I)	0	1	99	n/a	n/a
Total New Zealand	1	1	98	99	↔

Ambulance services are listed in descending order according to satisfied or very satisfied customers in 2012.

- Indicate ambulance services that differ from others, based on the proportion of satisfied or very satisfied customers (statistically significant at $p < 0.05$).

(I), (II), (III), etc - Indicate the rank each ambulance service achieved according to its performance in 2012 (statistically significant at $p < 0.05$).

↔ ↑ ↓ - Indicate change in the results for satisfied or very satisfied customers from 2011 to 2012 (statistically significant at $p < 0.05$).

The 2012 overall rating related to the care the ambulance paramedics took when attending to the respondents was high at 98% in Australia and also in New Zealand. Western Australia, Victoria metropolitan and the Australian Capital Territory achieved lower scores compared to the leading patient segments. The lowest result for the Australian Capital Territory results was consistent with previous years.

Overall, Australia's score decreased slightly since 2011 (from 99% in 2011 to 98% in 2012), going back to the same level as 2010.¹ There were no other statistical significant changes over time.

¹ Although there were no statistical significant decreases for *Paramedics care*, on the aggregate level there was a statistical significant decrease for total Australia.

Treatment satisfaction

Respondents were asked about their satisfaction with the standard of treatment they received from the ambulance paramedics.

Table 8: Treatment satisfaction ratings (Q6)

Ambulance services	Very dissatisfied or dissatisfied %	Neither satisfied nor dissatisfied %	Satisfied or very satisfied		Change 2011-2012
			2012 %	2011 %	
NSW (I)	0	1	99	99	↔
VIC – rural (I)	0	1	99	98	↔
QLD (I)	1	1	98	99	↔
SA (I)	1	1	98	98	↔
TAS (I)	1	1	98	99	↔
VIC – metropolitan (I)	1	1	98	97	↔
WA (I)	2	0	98	98	↔
NT (I)	1	2	97	100	↓
ACT (II)	2	1	97 #	96	↔
Victoria overall	1	1	98	98	↔
Total Australia	1	1	98	98	↔
SJNZ (I)	0	1	99	99	↔
WFA (I)	1	0	99	n/a	n/a
Total New Zealand	0	1	99	99	↔

Ambulance services are listed in descending order according to satisfied or very satisfied customers in 2012.

- Indicate ambulance services that differ from others, based on the proportion of satisfied or very satisfied customers (statistically significant at $p < 0.05$).

(I), (II), (III), etc - Indicate the rank each ambulance service achieved according to its performance in 2012 (statistically significant at $p < 0.05$).

↔ ↑ ↓ - Indicate change in the results for satisfied or very satisfied customers from 2011 to 2012 (statistically significant at $p < 0.05$).

For the respondents' satisfaction with the treatment received by the ambulance paramedics, the overall rating across Australia was 98% and in New Zealand 99%. The Australian Capital Territory scored significantly lower than the remainder patient segments. This was consistent to previous years.

In 2012, Northern Territory decreased its score from 100% in 2011 to 97% in 2012, going back to the same level it was in 2010. This decrease did not impact the total Australia result at aggregate level.

Ambulance paramedics

Respondents were asked how satisfied they were with explanations given by the ambulance paramedics about what was happening to them and why.

Table 9: Ambulance paramedics satisfaction ratings (Q7)

Ambulance services	Very dissatisfied or dissatisfied %	Neither satisfied nor dissatisfied %	Satisfied or very satisfied		Change 2011-2012
			2012 %	2011 %	
NSW (I)	0	2	98	97	↔
VIC – rural (I)	0	2	98	96	↔
SA (I)	1	2	97	97	↔
TAS (I)	1	2	97	96	↔
WA (I)	1	3	96	96	↔
QLD (I)	2	2	96	97	↔
ACT (II)	2	3	95 #	95	↔
VIC – metropolitan (II)	2	3	95 #	95	↔
NT (II)	2	4	94 #	96	↔
Victoria overall	1	3	96	96	↔
Total Australia	1	2	97	96	↑
SJNZ (I)	0	4	96	97	↔
WFA (I)	0	2	98	n/a	n/a
Total New Zealand	1	3	96	97	↔

Ambulance services are listed in descending order according to satisfied or very satisfied customers in 2012.

- Indicate ambulance services that differ from others, based on the proportion of satisfied or very satisfied customers (statistically significant at $p < 0.05$).

(I), (II), (III) etc - Indicate the rank each ambulance service achieved according to its performance in 2012 (statistically significant at $p < 0.05$).

↔ ↑ ↓ - Indicate change in the results for satisfied or very satisfied customers from 2011 to 2012 (statistically significant at $p < 0.05$).

The average proportion of *satisfied or very satisfied* respondents with the explanation given to them by the ambulance paramedics was 97% in Australia and was 96% in New Zealand. The overall result in Australia in 2012 was slightly higher than in 2011, going back to the same level of 2010. It decreased from 97% in 2010 to 96% in 2011 and then increased to 97% in 2012.²

All states/territories scores were high and stable, although the Australian Capital Territory, Victoria metropolitan and Northern Territory achieved lower results than the other ambulance services. As explained previously, the Australian Capital Territory and Northern Territory had a higher proportion of younger patients and patients who have been transported only once. Victoria metropolitan had a higher proportion of carers completing the survey comparing to other states. These groups tend to provide more critical evaluations.

² Although there were no statistical significant increases for *Ambulance paramedics*, on the aggregate level there was a statistical significant increase.

Trip/ride satisfaction

Respondents were also asked about their satisfaction with the conditions of the trip when being transported by an ambulance.

Table 10: Trip/ride satisfaction ratings (Q8)

Ambulance services	Very dissatisfied or dissatisfied %	Neither satisfied nor dissatisfied %	Satisfied or very satisfied		Change 2011-2012
			2012 %	2011 %	
TAS (I)	1	2	97	92	↑
WA (I)	1	2	97	96	↔
NT (I)	1	3	96	96	↔
SA (I)	2	2	96	96	↔
NSW (I)	1	4	95	95	↔
VIC – metropolitan (II)	1	5	94 #	95	↔
QLD (II)	2	4	94 #	94	↔
ACT (II)	2	5	93 #	92	↔
VIC – rural (II)	4	4	92 #	92	↔
Victoria overall	2	5	93	94	↔
Total Australia	2	4	94	95	↔
SJNZ (II)	2	5	93 #	95	↔
WFA (I)	1	2	97	n/a	n/a
Total New Zealand	2	4	94	95	↔

Ambulance services are listed in descending order according to satisfied or very satisfied customers in 2012.

- Indicate ambulance services that differ from others, based on the proportion of satisfied or very satisfied customers (statistically significant at $p < 0.05$).

(I), (II), (III), etc - Indicate the rank each ambulance service achieved according to its performance in 2012 (statistically significant at $p < 0.05$).

↔ ↑ ↓ - Indicate change in the results for satisfied or very satisfied customers from 2011 to 2012 (statistically significant at $p < 0.05$).

In 2012, 94% of respondents in Australia and New Zealand were *satisfied or very satisfied* with the conditions of their trip while being transported in an ambulance. The majority of states/territories scored similarly, with the exception of Victoria metropolitan, Queensland, Australian Capital Territory, St John New Zealand and Victoria rural. These states/territories achieved significantly lower perceived levels of performance on this dimension, therefore formed the second-best rated group. A lower score in trip ride satisfaction could be explained by geographical and transportation differences such as distance of travel, rugged terrain, large proportions of population living in the hills or up in valleys where access includes windier roads, and also differences in vehicles used for transport.

Most results were stable from 2011 to 2012. However there was an increase for Tasmania, from 92% in 2011 to 97% in 2012, going to the same level it was in 2010. There were no demographic changes over time to explain this variation. The Tasmanian ambulance service has had the same fleet replacement programme for the last five years. Hence, the drop in 2011 was an anomaly.

Overall satisfaction

Respondents were asked about their overall satisfaction using the ambulance service.

Table 11: Overall satisfaction ratings (Q10)

Ambulance services	Very dissatisfied or dissatisfied %	Neither satisfied nor dissatisfied %	Satisfied or very satisfied		Change 2011-2012
			2012 %	2011 %	
NT (I)	0	2	98	98	↔
NSW (I)	1	1	98	98	↔
TAS (I)	1	1	98	98	↔
WA (I)	1	1	98	98	↔
VIC – rural (I)	1	1	98	98	↔
QLD (I)	1	2	97	98	↔
SA (I)	1	2	97	98	↔
ACT (I)	2	1	97	96	↔
VIC – metropolitan (I)	2	1	97	98	↔
Victoria overall	2	1	97	98	↔
Total Australia	1	1	98	98	↔
SJNZ (I)	1	2	97	98	↔
WFA (I)	0	1	99	n/a	n/a
Total New Zealand	1	2	97	98	↔

Ambulance services are listed in descending order according to satisfied or very satisfied customers in 2012.

- Indicate ambulance services that differ from others, based on the proportion of satisfied or very satisfied customers (statistically significant at $p < 0.05$).

(I), (II), (III), etc - Indicate the rank each ambulance service achieved according to its performance in 2012 (statistically significant at $p < 0.05$).

↔ ↑ ↓ - Indicate change in the results for satisfied or very satisfied customers from 2011 to 2012 (statistically significant at $p < 0.05$).

In 2012 the *Overall satisfaction* for all ambulance services and Australia and New Zealand maintained a high level at 98% and 97% respectively. All scores were consistent over time and there were no statistical significant differences between states/territories.

The confidence interval for *Overall satisfaction* was calculated based on the overall patient population (total road and air) for the different states/territories at 95% confidence level. This demonstrates the allowed error given the sample size and proportion of *satisfied or very satisfied* respondents.

Table 12: Confidence interval for overall satisfaction ratings

Ambulance services	95% Confidence Interval +- Error margin			
	2008-2009	2009-2010	2010-2011	2011-2012
ACT	1.3	1.6	1.9	1.6
NSW	1.4	1.1	1.1	1.2
NT	2.4	2.4	1.9	2.0
QLD	1.2	1.3	1.4	1.6
SA	1.0	0.9	1.0	1.4
TAS	1.1	1.1	1.0	1.1
VIC	0.9	0.9	0.9	1.0
WA	1.8	1.3	1.4	1.4
Total Australia	0.5	0.4	0.4	0.5
Total New Zealand	n/a	1.5	1.2	1.1

Reasonable time for emergency ambulance arrival

Respondents were asked what they expect to be a reasonable time for an ambulance to arrive in an emergency situation. This was an open-ended question, providing respondents with the opportunity to answer the exact timing in minutes.

Table 13 reflects several indicators reported: average (mean value), median (a mid-point where half the answers are below this point and half above), minimum (lowest answer), maximum (highest answer) and range (range between the lowest and the highest answers).

Table 13: Reasonable time for emergency ambulance arrival (Q9)

Ambulance services	Average	Median	Minimum	Maximum	Range
	(in minutes)				
TAS	16	15	1	250	249
QLD	14	10	0	160	160
NT	14	10	1	60	59
NSW	15	15	3	60	57
VIC – rural	15	15	4	60	56
VIC – metropolitan	13	10	2	50	48
ACT	12	10	3	45	42
SA	13	10	3	45	42
WA	14	15	1	40	39
Victoria overall	13	10	2	60	58
Total Australia	14	12	0	250	250
SJNZ	14	12	1	60	59
WFA	n/a	n/a	n/a	n/a	n/a
Total New Zealand	14	12	1	60	59

Ambulance services are listed in descending order based on the range.

The average results were largely consistent with the previous surveys' results.

The most common answers across all Australian states/territories and across New Zealand were:

Table 14: Most common times expected for emergency ambulance arrival

	Total Australia%	Total New Zealand %
5 minutes	8	6
10 minutes	34	35
15 minutes	28	24
20 minutes	11	12
30 minutes	6	7

Compared to 2011, in 2012 there were more respondents for total Australia who believe 15 minutes was a reasonable time for emergency ambulance arrival (change from 24% in 2011 to 28% in 2012). For total New Zealand there were more respondents who believe 10 minutes was a reasonable time for ambulance arrival (change from 29% in 2011 to 35% in 2012).

RESPONDENTS' PROFILE

This section reports on the demographic characteristics of the respondents who partook in the 2012 study. The questionnaire included questions on patients' gender, age, usage level (how many times they have used ambulance service in the twelve months prior to the survey) as well as an indication of who actually answered the questionnaire (the patient who had been transported or a relative/carer). These characteristics are important because they influence respondents' answers and were used to interpret and explain results for the core questions of the study throughout this report.

Who completed the survey

Respondents were asked: 'Is the person completing this survey... the patient that was transported, or a relative, or carer of the patient?'

Table 15: Proportions of patients and carers who completed the survey (Q1)

Ambulance services	Patient %	Carer/relative %
QLD (I)	82	18
NT (II)	78 #	22
TAS (II)	78 #	22
NSW (II)	77 #	23
VIC – rural (II)	77 #	23
SA (II)	75 #	25
WA (II)	74 #	26
ACT (II)	73 #	27
VIC – metropolitan (III)	68 ##	32
Victoria overall	71	29
Total Australia	76	24
SJNZ (II)	79 #	21
WFA (I)	86	14
Total New Zealand	79	21

Ambulance services are listed in descending order according to the proportion of patients.

- Indicate ambulance services that differ from others, based on the proportion of respondents that were patients (statistically significant at $p < 0.05$).

(I), (II), (III), etc - Indicate the rank each ambulance service achieved according to the proportion of respondents that were patients in 2012 (statistically significant at $p < 0.05$).

As a rule, the majority of the respondents were patients. In Australia 76% of the respondents were patients and in New Zealand 79%. Yet, this figure varied slightly between ambulance services. Firstly, as previous years, Queensland achieved higher number of patients compared to the other states/territories. Wellington Free Ambulance also had a higher number of patients. Patients tend to

provide less critical evaluations; hence, this could be a reason why both ambulances services scored higher than other states/territories in some service dimensions. Secondly, Victoria metropolitan reached significantly less patients. This was in line with surveys on previous years.

In total, the proportion of patients and relatives/carers who completed the survey was similar to previous years, which allows direct and unbiased comparisons. However, compared to 2011, there were fewer patients and more carers who completed the survey for the Australian Capital Territory. It changed from 80% of patients in 2011 to 73% patients completing the survey in 2012. Although this there was a change, the Australian Capital Territory did not present any changes in service dimensions over time.

Gender

Respondents were asked about the gender of the patient transported.

Table 16: Proportions of male and female patients who have been transported (Q11)

Ambulance services	Male	Female
	%	%
VIC – rural (I)	51	49
QLD (I)	50	50
NT (I)	49	51
SA (I)	49	51
TAS (I)	48	52
WA (I)	47	53
VIC – metropolitan (I)	47	53
NSW (II)	44 #	56
ACT (II)	40 #	60
Victoria overall	48	52
Total Australia	47	53
SJNZ (II)	42 #	58
WFA	n/a	n/a
Total New Zealand	42	58

Ambulance services are listed in descending order according to the proportion of males.

- Indicate ambulance services that differ from others, based on the proportion of respondents that were males (statistically significant at $p < 0.05$).

(I), (II), (III), etc - Indicate the rank each ambulance service achieved according to the proportion of respondents that were males in 2012 (statistically significant at $p < 0.05$).

Three states/territories achieved significantly lower proportions of male patients transported compared to the remainder ambulance services. These were: New South Wales, Australian Capital Territory and St John New Zealand. In total, the composition of patients transported in Australia was 47% males and 53% females. This was slightly different to the 2011 survey where there were 50% males and 50% females. The Australian Capital Territory could have driven the change for Australia, where there were 40% of males transported in 2012 while in 2011 there were 48%. The proportion of males and females from 2011 to 2012 for all other states/territories and New Zealand was stable.

Age groups

Respondents were asked about the age of the patient transported. The survey used eighteen age groups in alignment with the Australian Bureau of Statistics quotas, starting from 0-4 years old up to 85 years old and over.

Table 17: Age of the patients (Q12)

Age Groups	ACT %	NSW %	NT %	QLD %	SA %	TAS %	WA %	VIC metro %	VIC rural %	Vic overall %	Total Aus %	SJ NZ %	WFA %	Total NZ %
0-4	5	0	4	1	0	2	2	0	0	0	1	4	n/a	4
5-9	1	0	0	0	0	1	0	1	1	1	1	1	n/a	1
10-14	1	0	1	0	0	1	0	1	1	1	0	2	n/a	2
15-19	3	1	2	0	1	3	2	3	2	3	1	2	n/a	2
20-24	2	1	5	1	1	2	2	3	2	2	2	1	n/a	1
25-29	2	1	4	1	1	1	2	1	2	1	1	2	n/a	2
30-34	3	3	5	3	2	1	1	3	1	2	2	2	n/a	2
35-39	4	2	5	3	2	2	3	2	2	2	3	2	n/a	2
40-44	4	3	7	5	2	3	2	4	4	4	4	3	n/a	3
45-49	5	3	11	6	2	5	5	4	5	4	4	2	n/a	2
50-54	8	5	13	5	4	4	7	5	5	5	5	4	n/a	3
55-59	7	6	9	8	5	8	8	6	5	6	6	3	n/a	3
60-64	12	6	13	9	8	8	8	6	6	6	7	6	n/a	6
65-69	9	6	7	12	11	10	11	7	10	8	9	10	n/a	10
70-74	11	11	7	9	11	11	8	10	13	11	11	10	n/a	10
75-79	7	13	3	11	14	11	14	12	13	13	12	16	n/a	17
80-84	7	17	4	11	18	14	12	15	15	15	14	14	n/a	14
85+	9	22	0	15	18	13	13	17	13	16	17	16	n/a	16

To determine statistically significant differences in the ratings for the main survey questions that attributed to differences in the proportion of the sample in each age group, three main age groups were created: 0-24, 25-49 and 50+ years old (Table 18).

Table 18: Patients' main age groups (Q12)

Ambulance services	0-24 years %	25-49 years %	50+ years %
SA (I)	2	8	90
NSW (I)	2	12	86
WA (II)	6	14	80 #
QLD (II)	2	18	80 #
TAS (II)	8	13	79 #
VIC – rural (II)	7	14	79 #
VIC – metropolitan (II)	8	14	78 #
ACT (III)	12	18	70 ##
NT (IV)	13	32	55 ###
Victoria overall	8	14	78
Total Australia	4	14	82
SJNZ (II)	10	11	79 #
WFA	n/a	n/a	n/a
Total New Zealand	10	11	79

Ambulance services are listed in descending order according to the proportion of 50+ years old.

- Indicate ambulance services that differ from others, based on the proportion of respondents that were 50+ years old (statistically significant at $p < 0.05$).

(I), (II), (III), etc - Indicate the rank each ambulance service achieved according to the proportion of respondents that were 50+ years old in 2012 (statistically significant at $p < 0.05$).

Overall, 82% of the sample in Australia and 79% in New Zealand were 50 years old or over. Compared to 2011, the proportion of age groups of the patients was stable across states/territories. However, there were fewer patients aged 50 years old or over and more patients aged up to 24-49 years old for the Australian Capital Territory. In 2011 there were 81% of patients in the age group 50 years old or over, whether in 2012 there were 70%. Again, although there was a change for the Australian Capital Territory, this did not produce an over time change for any service dimension.

Also, as in previous surveys, the Australian Capital Territory and the Northern Territory had a significantly lower proportion of 50 years old or over patients compared to the other ambulance services. Older patients generally give higher scores and younger patients lower scores. This partly explains the lower performance of both territories for some service dimensions.

Usage of ambulance service

Respondents were asked to identify how many times the patient transported used the ambulance service in the last twelve months.

Table 19: Usage of ambulance service in the last twelve months (Q13)

Ambulance services	Once	Between 2 and 5 times	More than 5 times
	%	%	%
ACT (I)	70	28	2
NT (I)	69	27	4
WA (II)	55 #	41	4
TAS (II)	51 #	41	8
VIC – rural (II)	50 #	42	8
SA (III)	47 ##	46	7
VIC – metropolitan (III)	47 ##	47	6
QLD (III)	45 ##	44	11
NSW (III)	44 ##	47	9
Victoria overall	48	45	7
Total Australia	48	44	8
SJNZ (II)	52 #	43	5
WFA	n/a	n/a	n/a
Total New Zealand	52	43	5

Ambulance services are listed in descending order according to the proportion of patients transported once.

- Indicate ambulance services that differ from others, based on the proportion of patients transported once (statistically significant at $p < 0.05$).

(I), (II), (III), etc - Indicate the rank each ambulance service achieved according to proportion of patients transported once in 2012 (statistically significant at $p < 0.05$).

Respondents' levels of ambulance services usage varied across states/territories; however, the results were mostly consistent over time. As in 2011 and previous years, the Australian Capital Territory and the Northern Territory were the ambulance services with higher incidence of patients transported only once in the last twelve months. Patients who have been transported only once tend to provide more critical evaluations. This partly explains the lower performance of the Australian Capital Territory and the Northern Territory for some service dimensions.

CONCLUSION

Overall, satisfaction scores in 2012 were very high and stable compared to the results from the 2002 to 2011 studies. Overall, 98% of patients in Australia, and 97% in New Zealand, were *satisfied or very satisfied* with the ambulance service they received. All patient segments performed about the same on different dimensions with small variations, discussed throughout the report.

Demographic questions provided additional insight into the respondents' profile (% of patients and relatives or carers who completed the survey, age distribution and usage levels) and could have caused differences between states/territories services scores due to sample bias.

Recommendations:

- Consistent with our advice in the previous years, we recommend changing the reporting style from focusing on amalgamated figure of “satisfied” and “very satisfied” patients, to reporting these two groups separately. The reason for this advice is that in many dimensions the amalgamated score has reached almost 100%. While this indicates an excellent performance, from the analysis point of view, this result presents a statistical challenge known as the “ceiling effect”. This effect means that changes in scores are harder to identify when they vary by such a narrow margin at the top of the scale. Reporting separately the proportions of “satisfied” and “very satisfied” customers will allow for better sensitivity of the measurement instrument, providing better identification of the changes over time and between the states.
- The current reporting style includes results for Victoria rural, metropolitan and overall. We would recommend dropping the split and only report the overall amalgamation.

APPENDIX 1: QUESTIONNAIRE

Patient Satisfaction Survey

Please answer the questions below by placing a tick in the appropriate box. If you don't understand any questions, please use the 'don't know' option and move to the next question. If the question is not relevant to your experience, mark the 'NA' box and move on to the next question. Please note that your personal opinions will be kept confidential and that no information, which could identify you, will be released. Information obtained from you will be combined with the other responses and used for analytical purposes only.

Q1 Is the person completing this survey?

- 1 The patient that was transported
- 2 A relative, or carer of the patient

Q2 When the ambulance was called, thinking about the time it took to be connected with an Ambulance Service call taker, were you?

- 1 Very satisfied
- 2 Satisfied
- 3 Neither satisfied nor dissatisfied
- 4 Dissatisfied
- 5 Very dissatisfied
- 6 Don't know/Can't say
- 7 Not applicable

Q3 How satisfied were you with the assistance provided by the Ambulance Service call taker, were you?

- 1 Very satisfied
- 2 Satisfied
- 3 Neither satisfied nor dissatisfied
- 4 Dissatisfied
- 5 Very dissatisfied
- 6 Don't know/Can't say
- 7 Not applicable

Q4 Thinking about the time the ambulance took to arrive, were you?

- 1 Very satisfied
- 2 Satisfied
- 3 Neither satisfied nor dissatisfied
- 4 Dissatisfied
- 5 Very dissatisfied
- 6 Don't know/Can't say
- 7 Not applicable

Q5 Thinking about how caring the ambulance paramedics that attended to you were, were you?

- 1 Very satisfied
- 2 Satisfied
- 3 Neither satisfied nor dissatisfied
- 4 Dissatisfied
- 5 Very dissatisfied
- 6 Don't know/Can't say
- 7 Not applicable

Q6 How satisfied were you with the standard of treatment provided by the ambulance paramedics, were you?

- 1 Very satisfied
- 2 Satisfied
- 3 Neither satisfied nor dissatisfied
- 4 Dissatisfied
- 5 Very dissatisfied
- 6 Don't know/Can't say
- 7 Not applicable

Q7 How satisfied were you with the ambulance paramedics' explanation about what was happening to you and why, were you?

- 1 Very satisfied
- 2 Satisfied
- 3 Neither satisfied nor dissatisfied
- 4 Dissatisfied
- 5 Very dissatisfied
- 6 Don't know/Can't say
- 7 Not applicable

Q8 Thinking about your journey in the ambulance, how satisfied were you with the quality of the ride i.e. smoothness of transport and quietness of the vehicle? Overall, were you?

- 1 Very satisfied
- 2 Satisfied
- 3 Neither satisfied nor dissatisfied
- 4 Dissatisfied
- 5 Very dissatisfied
- 6 Don't know/Can't say
- 7 Not applicable

Q9 All things considered, if you had an emergency in your home, what do you think is a reasonable time for an ambulance to arrive after calling one?

No of mins _____

Q10 How satisfied were you overall with your last experience using the Ambulance Service, were you?

- 1 Very satisfied
- 2 Satisfied
- 3 Neither satisfied nor dissatisfied
- 4 Dissatisfied
- 5 Very dissatisfied
- 6 Don't know/Can't say

Q11 Gender (of the patient)

- 1 Male
- 2 Female

Q12 Please indicate the age group that you (the patient) fall into.

- 01 0-4
- 02 5-9
- 03 10-14
- 04 15-19
- 05 20-24
- 06 25-29
- 07 30-34
- 08 35-39
- 09 40-44
- 10 45-49
- 11 50-54
- 12 55-59
- 13 60-64
- 14 65-69
- 15 70-74
- 16 75-79
- 17 80-84
- 18 85 and over

Q13 How many times have you (the patient) used the Ambulance Service (in the last 12 months)?

- 1 Once
- 2 Between 2 and 5 times
- 3 More than 5 times

Q14 What is your (the patient's) postcode?

Postcode _____

Q15 Include non-standard demographic questions (if required).

Please add any additional comments you have regarding your experience of the Ambulance Service.

The Ambulance Service respects your privacy and would like to thank you for taking the time to complete this questionnaire. Please place the completed questionnaire in the reply paid envelope provided and post.