



Analysis of Greyhound Racing Injuries

1 July 2019 – 30 September 2019

Foreword

Each quarter the NSW Greyhound Welfare & Integrity Commission (the Commission) publishes a report providing data in relation to injuries that have been sustained by greyhounds while racing in NSW. The publication of such data has occurred in NSW since 2016 and is designed to provide transparent, accurate and timely reporting of racing related injuries.

This report contains both quarterly analysis and trend line analysis of racing injury related information and provides an important evidence base to assess current and future strategies to minimise the incidence and severity of greyhound racing related injuries.

Minor changes to the report's structure and content are sometimes made to enhance the utility of these reports.

This report relates to the first quarter of the 2019-20 financial year or quarter 3 on a calendar year basis.

Key points

During the quarter, the Commission supervised 286 greyhound race meetings consisting of 2,835 races and 20,289 greyhound starts. A total of 3,781 individual greyhounds started in races over this period, with an average of 5.4 starts per greyhound.

The number of greyhounds found to have sustained an injury was 754, amounting to 3.72% of all greyhound starts or a total injury rate per 1,000 starts of 37.2. The vast majority of injuries, some 632 or 83.9%, were classified as minor or medium, requiring incapacitation periods of less than 21 days.

The number of greyhounds that suffered a catastrophic injury resulting in euthanasia or death was 12, representing a rate per 1,000 starts of 0.6. This is the lowest catastrophic injury rate since reporting began in 2016.

Data sources and Injury classification

This report is prepared by the Commission's Chief Veterinary Officer and details greyhound injuries and fatalities that occurred at race meetings in New South Wales for the respective reporting period.

The information is compiled from data recorded by the Commission's On-Track Veterinarians (OTVs) using the Greyhound Examination Database (GED) managed by the Faculty of Engineering and Information Technology at the University of Technology Sydney (UTS).

The data captured by OTVs and input into the GED includes a description of the greyhound; the track; the race distance; the box and race number; the anatomical location and nature of the injury; the incapacitation time applied; the apparent location on the track where the incident that resulted in the injury occurred; and all treatment information. This information also contributes to ongoing research being conducted by UTS into greyhound racing track design, safety and injury prevention.

Data on the number of race meetings and race starts is drawn from the Commission's business systems (including OzChase and OneGov).

All greyhounds that present at a race meeting are subject to a pre-race veterinary examination by the OTV.

In a post-race context, the OTV undertakes examination of some greyhounds for a variety of reasons including:

- at the request of a steward due to suboptimal or inexplicable performance
- a racing incident (for example, a race collision or race fall or a marring incident)
- where a greyhound fails to finish a race
- at a trainer’s request; and/or
- initiated by the OTV.

All greyhounds injured at the racetrack receive immediate veterinary treatment from an OTV. Trainers may be directed by the OTV to seek follow-up treatment for a greyhound from a veterinarian in private practice.

Injury classification methodology

Injuries are classified according to the number of days ‘incapacitation’ or stand-down from racing required to recover from the injury diagnosed at the time of the examination by the OTV. The injury classification used by the Commission’s OTVs is detailed in Table 1.

Table 1: Injury classification and examples of injuries

Injury category	Incapacitation period (days)	Example of injury
Minor I	0	No stand-down needed: torn nail or minor abrasion or spike.
Minor II	1-10	Minor cuts, abrasions, pad injuries, Grade 1 muscle injuries requiring treatment.
Medium	14-21	Moderate cuts and pad/toe injuries, joint sprains, ligament or tendon injuries, Grade 2 muscle injuries.
Major I	28-42	Fractured toes, severe split pads, dislocated joints, simple fractures, Grade 3 muscle injuries.
Major II	43-90	Long bone fractures; severe spinal, pelvic or skull injuries; major fracture dislocations, Achilles tendon ruptures.
Catastrophic		Euthanased or sudden death.

Prior to the Commission assuming regulatory oversight of greyhound racing on 1 July 2018, OTVs employed by Greyhound Racing NSW classified all injuries requiring an incapacitation period of 21-90 days as Major. Separating this category into Major I (28 to 42 days) and Major II (43 to 90 days) improves understanding of the nature and extent of major injuries. For example, some injuries, such as fractured toes and split paw webbing, may not be serious in nature but require an incapacitation period of 28 days or more to enable the injury or wound to fully heal.

All serious injuries that require surgery, significant rehabilitation and may be potentially career-ending are classified as Major II, with an incapacitation period of more than 42 days. This categorisation also enables OTVs to proactively follow up the progress of those greyhounds with the most serious injuries.

Counting methodology

Where an individual greyhound sustains injuries in more than one injury category, only the highest category is used in reporting.

Injury rates are reported both as injuries per 100 greyhounds raced (where each greyhound will be counted only once irrespective of how many times it raced), and injuries per 1,000 starts (where a greyhound is counted every time it races within the quarter).

Causative factor analysis

There are many causes of injuries in racing greyhounds and the relative importance and interactions of causative factors vary. Causative factors can be divided into:

1. Greyhound factors: genetics, nutrition, physical growth and development, fitness, race preparation and previous injury history
2. Track factors: design and surface characteristics
3. Race factors: race distance, racing incidents and number of greyhounds in a race.

The causal factors for major and catastrophic race injuries are examined by the Commission's Race Injury Review Panel. A separate report is produced in relation to the findings of the Race Injury Review Panel.

Race injury prevention strategies

The Commission is committed to reducing the incidence and severity of greyhound injuries and eliminating the unnecessary euthanasia of injured greyhounds. Various policies, programs and other measures are in place or will be progressively introduced to deliver this outcome, including the analyses of all catastrophic and Major II injuries in racing greyhounds by the Race Injury Review Panel; obtaining advice from the Greyhound Industry Animal Welfare Committee into greyhound injuries and their causes; agreement through the greyhound industry Measurement and Reporting Working Group to compile a comprehensive data set, in conjunction with GRNSW, for multi-factorial analysis of injury causes and correlations; working with Greyhound Racing NSW on track safety reform projects in conjunction with safety experts including from the University of Technology Sydney (UTS) in order to improve understanding of the track-related aspects of racing injuries.

The Commission will continue to advocate for priority attention to be given to those tracks that are above the average in relation to rates of Major II or Catastrophic injuries where race factors are thought to be the most significant factor.

Injuries this quarter

Injuries reported during the quarter are shown in Table 2.

Table 2: Injury numbers and rates 1 July – 30 September 2019 (Q3 2019)

Injury category	Incapacitation period (days)	Number of greyhounds injured	Percentage of greyhounds injured per injury category	Cumulative total per injury category	Injuries per 100 greyhounds raced	Injuries per 1,000 starts
Minor I	0	128	17.0%	17.0%	3.4%	6.3
Minor II	1-10	343	45.5%	62.5%	9.1%	16.9
Medium	14-21	161	21.4%	83.9%	4.3%	7.9
Major I	28-42	76	10.0%	93.9%	2.0%	3.7
Major II	43-90	34	4.5%	98.4%	0.9%	1.7
Catastrophic	Euthanased/died	12	1.6%	100%	0.3%	0.6
Total		754	100%	100%	19.9%	37.2

Injury trends over five quarters

The total injury rate in this quarter (per 1,000 starts) represents an increase in the total injury rate in comparison to the previous two quarters (Table 3), due to increases in the incidence of Minor I and Minor II injuries. Major I and II and Catastrophic injuries have shown a further decrease in comparison to the previous two quarters.

The rate of Catastrophic injuries in quarter 3 of 2019 (0.6 per 1,000 starts) is the lowest rate observed since reporting began in the first quarter of 2016, having decreased again since Quarter 2 2019. It is thought that increased awareness by trainers and owners of treatment options and increasing awareness of the race injury treatment scheme¹, implemented by GRNSW in March 2019, as well as increased and dedicated focus on track surface preparation, has contributed to this further decrease.

¹ The race injury treatment scheme, administered by GRNSW, provides financial support for the off-track diagnosis and treatment of serious injuries which occur during racing. The scheme is intended to eliminate the euthanasia of injured greyhounds in circumstances where owners may not have the financial capacity to treat serious injuries

Table 3: Greyhound injury numbers and rates over 15 months

Injury category	Quarter 3 2018 ²			Quarter 4 2018 ²			Quarter 1 2019 ²			Quarter 2 2019 ²			Quarter 3 2019 ²		
	Number	Per 100 raced	Per 1000 starts	Number	Per 100 raced	Per 1000 starts	Number	Per 100 raced	Per 1000 starts	Number	Per 100 raced	Per 1000 starts	Number	Per 100 raced	Per 1000 starts
Minor I	62	1.5%	2.7	43	1.1%	2.1	61	1.6%	3.5	76	2.1%	3.8	128	3.4%	6.3
Minor II	211	5.0%	9.2	229	5.7%	11.0	247	6.7%	14.1	303	8.4%	15.0	343	9.1%	16.9
Medium	200	4.8%	8.7	201	5.0%	9.7	207	5.6%	11.8	154	4.3%	7.6	161	4.3%	7.9
Major I	118	2.8%	5.2	109	2.7%	5.3	84	2.3%	4.8	71	2.0	3.5	76	2.0%	3.7
Major II	15	0.4%	0.7	44	1.1%	2.1	27	0.7%	1.5	41	1.1	2.0	34	0.9%	1.7
Catastrophic	26	0.6%	1.1	21	0.5%	1.0	33	0.9%	1.9	17	0.5%	0.8	12	0.3%	0.6
Total	632	15.0%	27.6	647	16.2%	31.2	659	17.8%	37.6	662	18.3%	32.9	754	19.9%	37.2

²GWIC data: Quarter 3 - 1 July - 30 Sept 2018; Quarter 4 - 1 October - 31 December 2018; Quarter 1 - 1 January- 31 March 2019; Quarter 2 2019 – 1 April – 30 June 2019; Quarter 3 2019- 1 July 2019- 30 September 2019.

Longer term trends

Trends in injury rates since the start of 2016 are shown in Figures 1 and 2.

The third quarter of 2019 demonstrates a slight increase in the overall injury rate in comparison to the previous quarter and an increase in the overall injury rate in comparison to the same quarter in 2018. It is important to note that, since Q3 2018, the Commission reports injuries sustained during all races (TAB and non-TAB) in NSW². The increase in total injuries this quarter occurred predominantly in the Minor I and Minor II categories. The rates of Major and Catastrophic injuries has decreased steadily since quarter 4 2018 (Figure 2).

Minor I + Minor II injuries have increased from 11.2 per 1,000 starts in Q3 of 2017 to 11.9 per 1,000 starts in Q3 of 2018 to 23.2 per 1,000 starts in this quarter.

Medium injuries have been decreasing from 10.2 per 1,000 starts in Q3 of 2017 to 8.7 per 1,000 starts in Q3 of 2018 to 7.9 per 1,000 starts in this quarter.

Major I + II injuries have remained similar to previous years, reported as 4.4 per 1,000 starts in Q3 of 2017 and increasing slightly to 5.8 per 1,000 starts in 2018 and 5.4 per 1,000 starts during this quarter.

Catastrophic injuries have decreased from 1.2 per 1,000 starts in Q3 of 2016 to 0.9 per 1,000 starts in Q3 of 2017; increased to 1.1 per 1,000 starts in Q3 of 2018 and now decreased for the second straight quarter to 0.6 per 1,000 starts this quarter, representing the lowest rate since reporting began in 2016.

² Prior to 1 July 2018, Non-TAB injuries were not consistently reported.

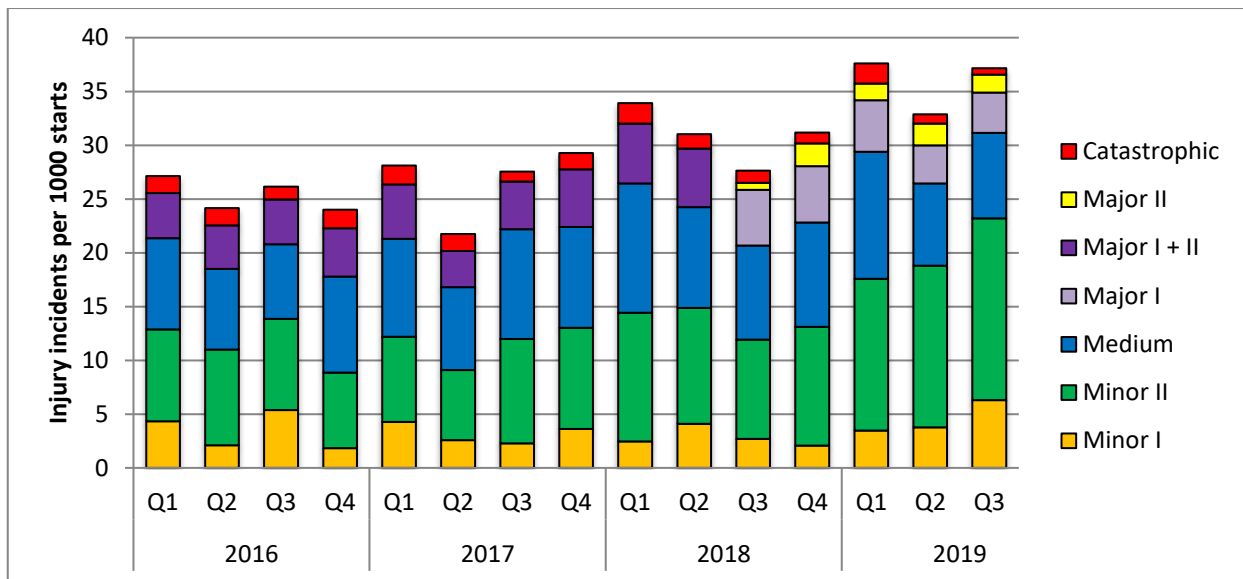


Figure 1: Injury trends by year quarters since 2016

*Data before Q3 2018 is from GRNSW reports available at <http://www.grnsw.com.au/welfare/veterinary/injury-report>

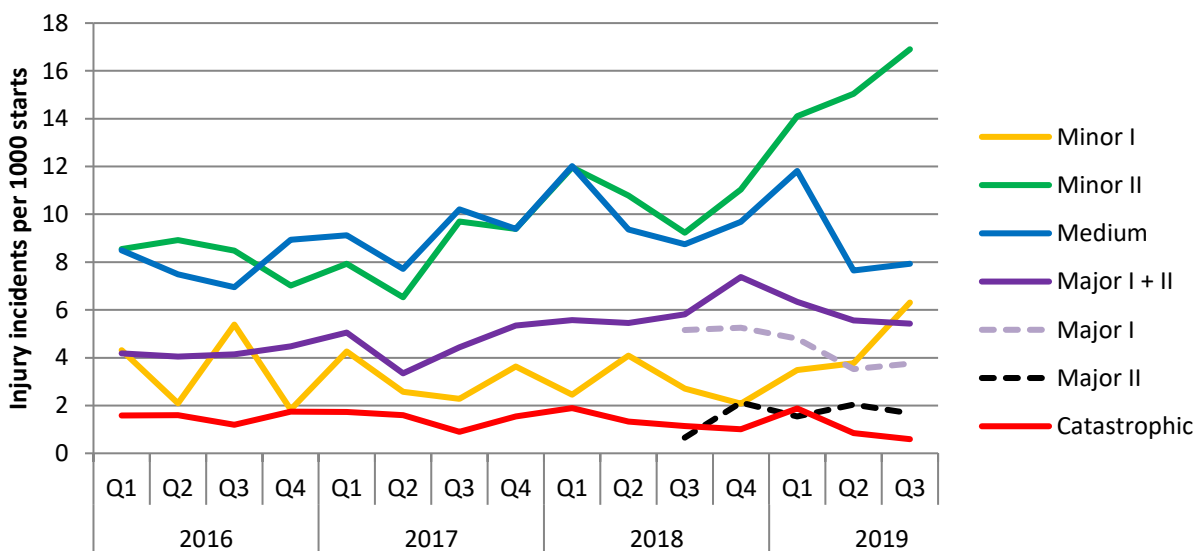


Figure 2: Trends in injury category by year quarters since 2016

*Data before Q3 2018 is from GRNSW reports available at <http://www.grnsw.com.au/welfare/veterinary/injury-report>

Injuries by severity

The largest proportion of injuries in this quarter were Minor I and II (62.5%), followed by Medium (21.4%) and Major I (10.1%). Likely recoverable injuries (Minor I, Minor II, Medium, Major I) made up 93.9% of all greyhound injuries during this quarter. Major II injuries were 4.5% of all injuries, and Catastrophic injuries were 1.6% of all injuries reported. Injuries which required an incapacitation of 21 days or less (Minor I + Minor II + Medium) made up 84% of this quarter's injuries, an increase in the proportion of recoverable injuries in comparison to previous years and the average of Q1 and Q2 in 2019 (Table 4).

Serious injuries (Major I + Major II + Catastrophic) have decreased from 23% of all injuries in 2018 to an average of 21% during the first two quarters of 2019 and 16% of all injuries in Q3 2019 (Table 4).

Injuries which were likely to be career-ending, require further surgery and/or rehabilitation, or be life-threatening, result in sudden death or require immediate euthanasia (Major II + Catastrophic) were 6.1% of all injuries in this quarter, compared to 6.5% in the third quarter of 2018 .

Table 4: Comparison of greyhound injuries over three calendar years by severity

	Calendar year				
	2016	2017	2018	Q1+ Q2 2019	Q3 2019
Minor I + II + Medium injuries	77%	78%	77%	79%	84%
Major I + II + Catastrophic injuries	23%	22%	23%	21%	16%

The major II and catastrophic injuries occurring during this period were reviewed by the Race Injury Review Panel as it continued its work analysing contributing factors to Major II and Catastrophic race injuries.

The Panel continues to study all the contributing factors of Major II and Catastrophic injuries and, over time, the data collected will assist in informing prevention strategies and regulatory steps to minimise the incidence of racing injuries.

Fatalities

A fatality is defined as a greyhound which is euthanased at a race meeting as a result of an injury sustained during the meeting, or any sudden death occurring during the race meeting. These fatalities are classified as Catastrophic injuries.

Of the 12 greyhound fatalities during this quarter 10 were euthanased as a result of catastrophic injuries sustained during racing. There were two instances of sudden death occurring at a racecourse after the completion of a race, with post mortem examinations confirming the causes of death to be a ruptured internal artery and ruptured cardiac aneurysm respectively.

Eleven fatalities occurred at TAB tracks (0.54 per 1,000 starts), and one at a non-TAB track (0.05 per 1,000 starts), representing a total rate of 0.6 per 1,000 race starts, which is the lowest rate reported since 2016.

Five greyhounds that were categorised by OTVs as having sustained a Major II injury were subsequently reported to the Commission as having been euthanased by a private veterinarian following further diagnostics and treatment. A further two greyhounds, categorised as sustaining a Major II injury, died following complications associated with treatment.

The race injury treatment scheme, which was introduced at the end of March 2019 and is administered by GRNSW, provides financial support for the off-track diagnosis and treatment of serious injuries which occur during racing, thereby eliminating unnecessary euthanasia of injured greyhounds due to the financial commitments associated with surgery and on-going treatment of serious injuries.

Two greyhounds were reported as having been euthanased as a result of injuries sustained during unofficial club trials and one greyhound is reported to have suffered a sudden death during these trials. No post mortems were conducted on these greyhounds. These fatalities are not included in the reported statistics for Catastrophic injuries in Table 2.