



Analysis of Greyhound Racing Injuries

1 October 2019 – 31 December 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 second quarter of the 2019-20 financial year or quarter four on a calendar year basis.

Key points

During the quarter, the Commission supervised 286 greyhound race meetings consisting of 2,862 races and 20,381 greyhound starts. A total of 3,981 individual greyhounds started in races over this period, with an average of 5.12 starts per greyhound.

The number of greyhounds found to have sustained an injury was 833, amounting to 4.09% of all greyhound starts or a total injury rate per 1,000 starts of 40.9. The vast majority of injuries, some 689 or 82.7%, 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 15, representing a rate per 1,000 starts of 0.7, which compares favourably with Q4 2018 which had a catastrophic injury rate of 1.0 per 1000 starts. This is the second lowest reported catastrophic injury rate on record.

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 this quarter are shown in Table 2.

Table 2: Injury numbers and rates 1 October – 31 December 2019 (Q4 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	136	16.3%	16.3%	3.4%	6.7
Minor II	1-10	320	38.4%	54.7%	8.0%	15.7
Medium	14-21	233	28.0%	82.7%	5.9%	11.4
Major I	28-42	84	10.1%	92.8%	2.1%	4.1
Major II	43-90	45	5.4%	98.2%	1.1%	2.2
Catastrophic	Euthanased/died	15	1.8%	100%	0.4%	0.7
Total		833	100%	100%	20.9%	40.9

Injury trends over five quarters

The total injury rate in this quarter (40.9 per 1,000 starts) represents the highest injury rate reported since 2016, primarily due to increases in the incidence of Minor I, Minor II and Medium injuries (0-21 days).

The observed reduction in the rate of Catastrophic injuries over the past two quarters is believed to be due to 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.

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 4 2018			Quarter 1 2019			Quarter 2 2019			Quarter 3 2019			Quarter 4 2019		
	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	43	1.1%	2.1	61	1.6%	3.5	76	2.1%	3.8	128	3.4%	6.3	136	3.4%	6.7
Minor II	229	5.7%	11.0	247	6.7%	14.1	303	8.4%	15.0	343	9.1%	16.9	320	8.0%	15.7
Medium	201	5.0%	9.7	207	5.6%	11.8	154	4.3%	7.6	161	4.3%	7.9	233	5.9%	11.4
Major I	109	2.7%	5.3	84	2.3%	4.8	71	2.0%	3.5	76	2.0%	3.7	84	2.1%	4.1
Major II	44	1.1%	2.1	27	0.7%	1.5	41	1.1%	2.0	34	0.3%	1.7	45	1.1%	2.2
Catastrophic	21	0.5%	1.0	33	0.9%	1.9	17	0.5%	0.8	12	0.5%	0.6	15	0.4%	0.7
Total	647	16.2%	31.2	659	17.8%	37.6	662	17.8%	32.9	754	19.9%	37.2	833	20.9%	40.9

Longer term trends

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

The fourth quarter of 2019 demonstrates a slight increase in the overall injury rate. The majority of the increase in injuries occurred in the Minor and Medium categories, which incur 21 days or less time off racing. This is attributed to the greater number of examinations performed and vigilance of trainers, vets and Stewards on race-days. OTV's examined 1591 greyhounds this quarter compared to 1447 in Q3 2019.

Minor I + Minor II injuries this quarter (22.4 per 1000 starts) have increased significantly from 13.1 per 1,000 starts in Q4 of 2018; increased from 17.6 per 1,000 starts in Q1 of 2019; and 18.8 per 1000 starts in Q2 of 2019 and decreased slightly from 23.2 per 1000 starts in Q3 of 2019. The increase in Minor injuries on comparison to previous years suggests that minor cuts, nail injuries and bruises that are common during racing are more likely to be reported upon with increasing examinations performed.

Medium injuries have increased from 9.4 per 1,000 starts in Q4 of 2017 to 9.7 per 1,000 starts in Q4 of 2018 to 11.4 per 1,000 starts in Q4 of 2019. This trend of increased muscle injuries will be monitored but may be as a result of the increase in the average number of starts per greyhound.

Major I + II injuries have remained similar to previous years, reported as 7.4 per 1,000 starts in Q4 of 2018 and decreasing slightly to 6.3 per 1,000 starts during Q4 of 2019.

Catastrophic injuries have decreased from 1.7 per 1,000 starts in Q4 of 2016 to 1.5 per 1,000 starts in Q4 of 2017; to 1.0 per 1,000 starts in Q4 of 2018 and now decreased to 0.7 per 1,000 starts in Q4 2019, representing the second lowest rate since reporting began in 2016.

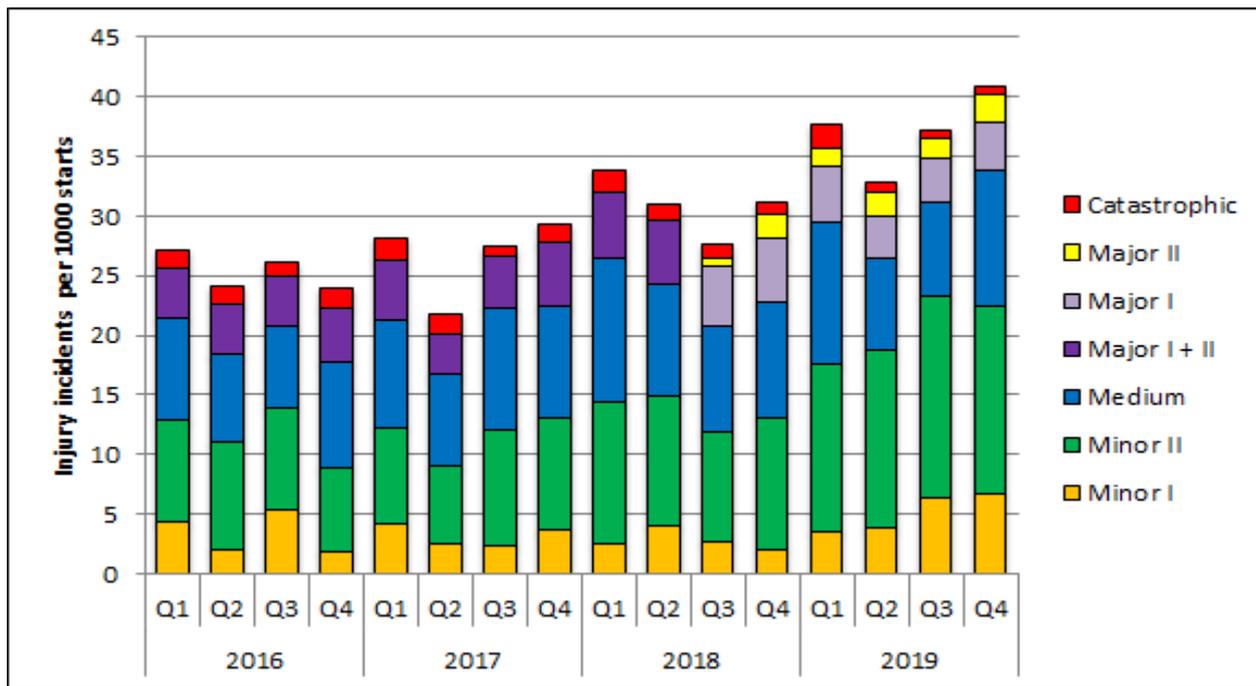


Figure 1: Injury trends by year quarters since 2016

*Data before Q3 2018 is from GRNSW reports available at <http://www.grnsw.com.au/welfare/veterinary/injury-report>. Data reported since the Commission commenced on 1 July 2018 contains injuries at both non-TAB and TAB races.

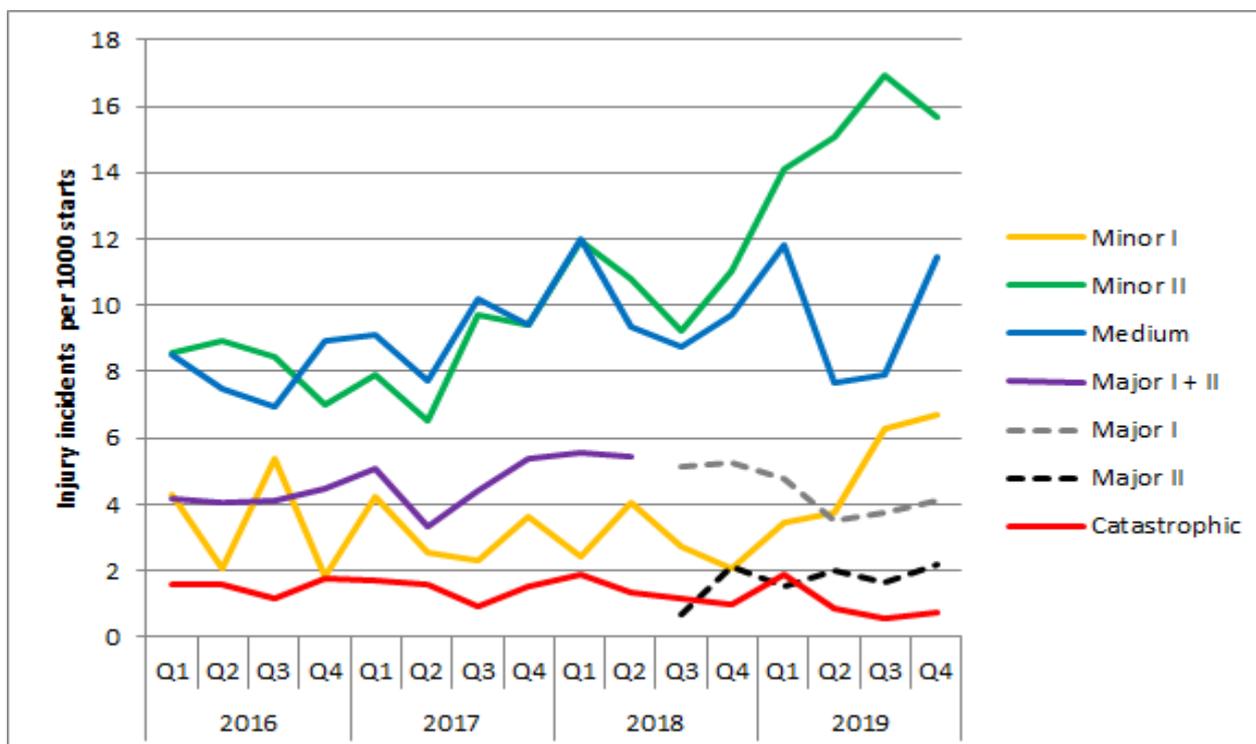


Figure 2: Trends in injury category by year quarters since 2016

Injuries by severity

The largest proportion of injuries in this quarter were Minor I and II (54.7%), followed by Medium (28.0%) and Major I (10.1%). Likely recoverable injuries (Minor I, Minor II, Medium, Major I) made up 92.8% of all greyhound injuries during this quarter. Major II injuries were 5.4% of all injuries, and Catastrophic injuries comprised 1.8% of all injuries reported. Injuries which required an incapacitation of 21 days or less (Minor I + Minor II + Medium) made up 82.7% of this quarter's injuries, an increase in the proportion of recoverable injuries in comparison to previous years. The average proportion of recoverable injuries and serious injuries during each calendar year are summarised below (Table 4).

Serious injuries (Major I + Major II + Catastrophic) have decreased from an average of 23% of all injuries in 2018 to an average of 18.5% during 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 decreased to 7.2% of all injuries in this quarter, compared to 10.0% in Q4 of 2018.

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

	Calendar year			
	2016	2017	2018	2019
Minor I + II + Medium injuries	77%	78%	77%	81.5%
Major I + II + Catastrophic injuries	23%	22%	23%	18.5%

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 15 greyhound fatalities during this quarter, all were euthanased as a result of catastrophic injuries sustained during racing. There were no instances of sudden death occurring at a racecourse after the completion of a race.

Nine fatalities occurred at TAB tracks and six at a non-TAB tracks, representing a total catastrophic injury rate of 0.7 per 1,000 race starts, a decrease in comparison with the equivalent quarter in 2018 (1.0 per 1000 starts).

Seven 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.

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.

Three 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 a trial. One young greyhound was euthanased following a collision, causing a severe injury, during a Steward's performance trial at a TAB track. No post mortems were conducted on these greyhounds. These fatalities are not included in the reported statistics for Catastrophic injuries in Table 2.