

## Injury Presentations to QISU Collecting Emergency Departments for those 15-24 years of age: Queensland from 2016 to 2019

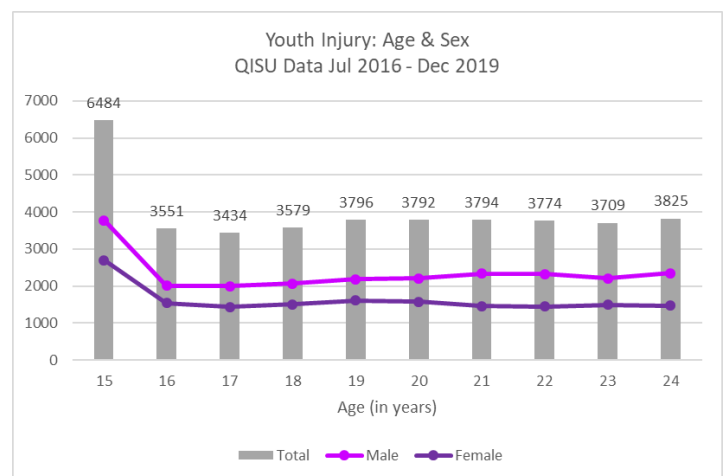
### Key Findings

Between 01 July 2016 and 31 December 2019 (3.5 years):

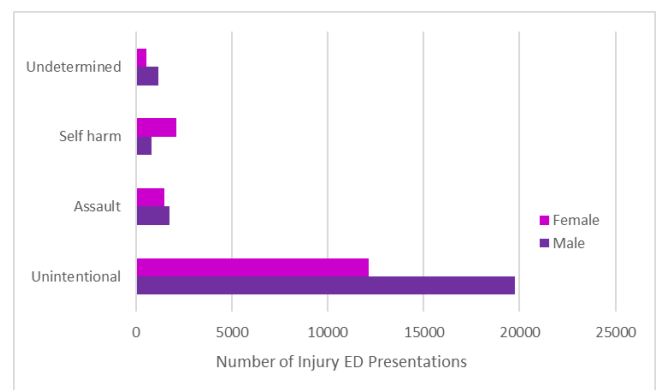
- 39,738 injury-related ED presentation episodes in QISU collecting hospitals for those 15-24 years of age, representing around **12% of the total ED injury presentations statewide** in the same age group.
- Injury presentations were highest amongst those 15 years of age when compared to other ages within the 15 – 24 years of age group.
- Similar to findings in hospitalisation data, males accounted for most injury presentations (60%).
- Most injury presentations were unintentional (80%).
- Self-harm accounted for 7%, with twice as many females presenting to ED for this reason as males.
- The percentage of assault-related presentations increased with age in both sexes.
- Saturday and Sunday were peak days for injury presentations; however, this varied amongst the self-harm-related presentations which peaked on Sunday and Monday.
- Approximately 28% of all injury presentations were related to the 'struck by or collision with object' mechanism.
- More than a quarter of all injury presentations were dislocations and 'sprains or strains' (27%), most commonly of the lower limbs.
- Fracture is the most common nature of injury associated with admission following ED treatment accounting for 19% of all injury-related admissions in QISU data.
- Within the transport-related injury categories, presentations for pedal cycle-related injuries were more frequent in the 15-19 age group compared to the 20-24 age group, while injuries relating to motor vehicle and motorcycle incidents were similar for both groups.

### Key Figures

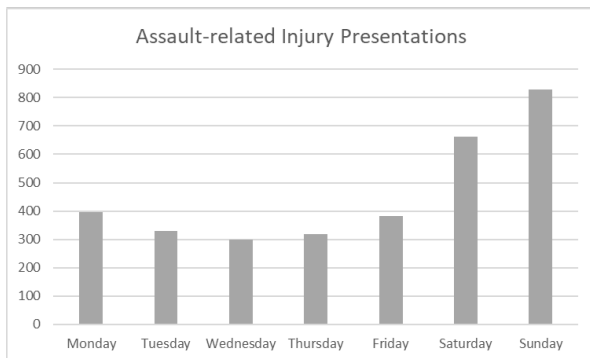
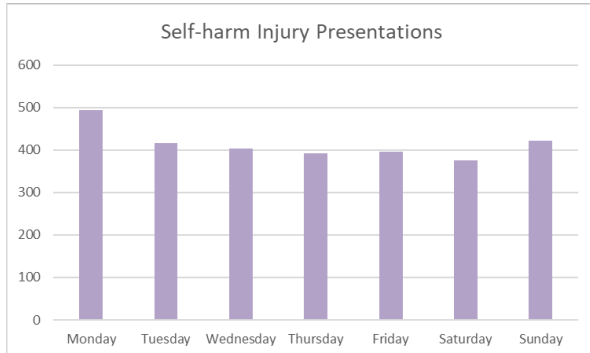
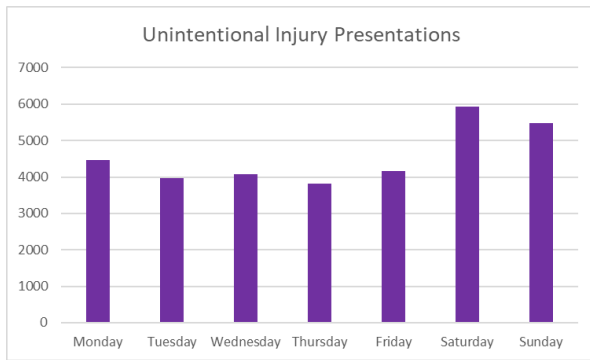
#### Age & Sex



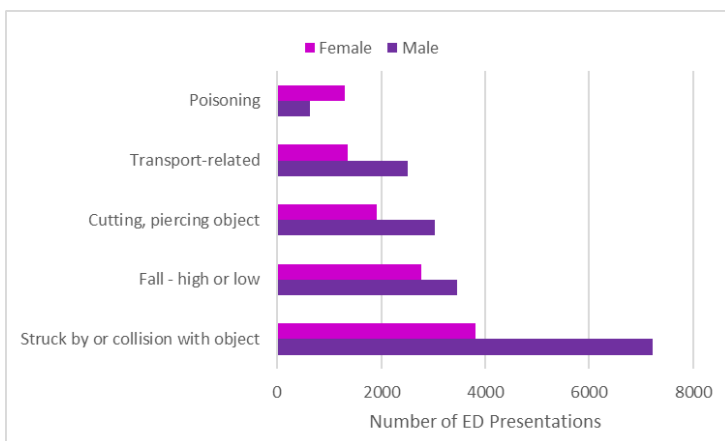
#### Intent of Injury Episode



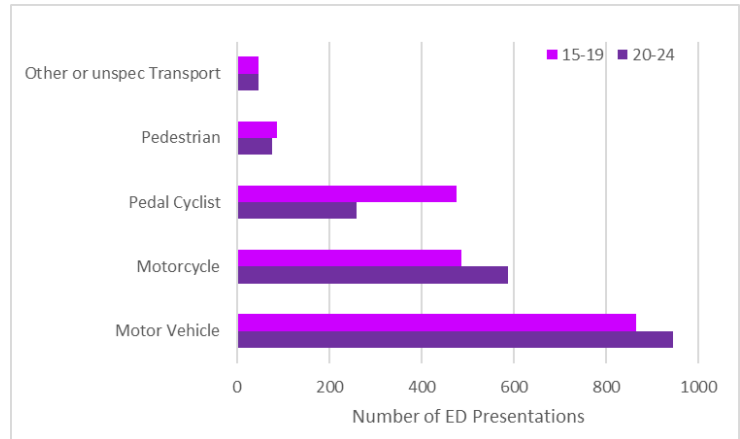
## Day of Episode and Intent



## Top 5 Injury Mechanisms by Sex



## Transport-related Injury Episodes by Age Group \*



\*Transport may include sport-related injuries

## Top 5 Injury Types with Body Region

### Dislocation, sprain or strain 26.7%

- Hip, leg, foot 44.2%
- Shoulder, arm, hand 35.4%
- Neck 7.6%

### Open wound 18.6%

- Shoulder, arm, hand 49.9%
- Head, face 23.4%
- Hip, leg, foot 19.5%

### Superficial 13.8%

- Head, face 50.0%
- Hip, leg, foot 8.3%
- Shoulder, arm, hand 7.7%

### Fracture 13.7%

- Shoulder, arm, hand 56.4%
- Hip, leg, foot 25.1%
- Head, face 12.4%

### Poisoning 5.0%

## Triage Category & Mode of separation

Triage	Male	Female	Total
Resuscitation (immediate)	219(1%)	109(0.01%)	328(0.01%)
Emergency (10 mins)	2707(12%)	2468(15%)	5176(13%)
Urgent (30 mins)	6015(26%)	4574(28%)	10590(27%)
Semi urgent (60 mins)	12165(52%)	7452(46%)	19618(49%)
Non urgent (120 mins)	2369(10%)	1656(10%)	4025(10%)

Mode of separation	Male	Female	Total
Dead on arrival/died in ED	2(0.01%)	1 (0.01%)	3 (0.01%)
Admitted/transfer	3242(14%)	2488 (15%)	5731 (14%)
Discharged from ED	19476(83%)	13197 (28%)	32675 (82%)
Did not wait	752(3%)	572 (4%)	1324 (3%)

## DATA SCOPE AND DEFINITIONS

This overview was produced by the Queensland Injury Surveillance Unit, in consultation with the Jamieson Trauma Institute.

### Data Source

The Queensland Injury Surveillance Unit (QISU) collects injury data from emergency departments (ED) at participating hospitals across Queensland. The data is collected in the following Hospital and Health Service areas: Darling Downs HHS, Cairns and Hinterland HHS, Central QLD HHS, Children's Health QLD HHS, Mackay HHS, Metro North HHS, North West HHS and Wide Bay HHS.

QISU data is coded for Injury Surveillance using the National Data Standards for Injury Surveillance (NDS-IS v.2c). Approximately 43% of the data presented were either manually coded by triage nurses at each participating hospital (17%) or by QISU coders (26%). The remaining data were coded using a machine learning classifier. The prediction summary of the classifier is presented in Appendix 1.

### Data Scope

- Injury Presentations to QISU EDs with arrival date between 01 July 2016 & 31 December 2019
- Age 15-24 years
- Activities when injured are coded manually by QISU coders. As most activity data is still incomplete for the period of study, this component was not included in this report.

## Appendix 1

Approximately 43% of the data presented were either manually coded by triage nurses at each participating hospital (17%) or by QISU coders (26%). The remaining data were coded using a machine learning classifier. The prediction summary of the classifier is presented below.

### Machine Classifier Prediction Summary

Category	Category	N	PropCorrect	PPV
1	Motor Vehicle - Driver	595	0.90	0.88
2	Motor Vehicle - Passenger	222	0.79	0.87
3	Motorcycle - Driver	456	0.90	0.83
4	Motorcycle - Passenger	15	0.33	0.83
5	Pedal Cyclist or Pedal Cycle Passenger	261	0.97	0.88
6	Pedestrian	58	0.72	0.68
7	Other or unspec Transport related circumstance	69	0.13	0.27
8	Horse related (falls from, struck or bitten by)	200	0.95	0.91
9	Fall - low (on same level, or < 1 metre drop or no information on height)	1801	0.77	0.68
10	Fall - high (drop of 1 metre or more)	598	0.29	0.69
11	Drowning, submersion - in swimming pool	1	0.00	0.00
12	Drowning, submersion - other than in swimming pool	5	0.00	0.00
13	Other threat to breathing (including strangulation and asphyxiation)	72	0.56	0.69
14	Fire, flames, smoke	70	0.73	0.72
15	Exposure to hot drink, food, water, other fluid, steam, gas, or vapour (incl. Scalds)	163	0.78	0.71
16	Exposure to hot object or solid substance (incl. Contact burns)	106	0.43	0.70
17	Poisoning - drug or medicinal substance	489	0.77	0.90
18	Poisoning - other or unspecified substances	89	0.25	0.61
19	Firearm	5	0.60	1.00
20	Cutting, piercing object	2133	0.71	0.82
21	Dog related (incl. Bitten, stuck by)	181	0.94	0.85
22	Animal - related (excludes horse or dog)	346	0.87	0.81
24	Machinery	340	0.73	0.76
25	Electricity	62	0.90	0.95
26	Hot conditions (natural origin)	22	0.73	0.94
27	Cold conditions (natural origin)	2	0.00	0.00
28	Other specified external cause or Unspecified external cause (incl late effects)	1507	0.71	0.48
29	Unspecified external cause (incl late effects)	1761	0.53	0.65
30	Struck by or collision with person	2692	0.86	0.83
31	Struck by or collision with object	1954	0.69	0.68