

Fireworks related injury Northern Territory 2018

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Outline

- Territory Day – nature of celebrations
- Fireworks Safety Campaign
- Results of 2018 fireworks related injury (FWRI) survey
- Analysis of trends of FWRI from 1998 to 2018
- Harm Minimisation

Territory Day

- ❑ Celebration of self-governance
- ❑ Celebrated on the 1st July
- ❑ Cabinet decision in 1980 to allow the purchase and use of private fireworks¹

b. The gazettal of the conditions for sale and use of fireworks and the arrangement of pyrotechnic displays on 1 July in each year in recognition of the anniversary of Northern Territory Self-Government;

c. An officer in the Department of Health compiling records of injury occasioned by public firing of fireworks and submit a report to the Minister following each 'cracker night'.

Territory Day in the NT in 2018

- ❑ Only jurisdiction that allows personal use of fireworks
- ❑ 40th year celebration
- ❑ Legal for persons aged 18 years and older to purchase fireworks between the **hours of 9 am and 9 pm on 1 July** and to set them off between the hours of **6 pm and 11 pm**²
- ❑ Legislation for the purchase, transport, storage and use of fireworks is governed under the ***Dangerous Goods Act*** administered by the NT Work Safe, with oversight by the Chief Minister



Fireworks Safety Campaign

www.nt.gov.au



1980

- NT government moved the annual cracker night from Guy Fawkes Day on 5 November to 1st July, Territory Day

2003

- Fireworks sales only allowed 2 days prior

2008

- Sales only on Territory Day
- Increasing the legal age from 16 to 18 to purchase fireworks
- Prohibiting sales to people under the influence of alcohol

1998

- CDC Annual Survey

2006

- Exclusion zone at Mindil beach

2013

- “Big boom” crackers banned

Stakeholders



Eye injury

Specks in the eye "It small and loose"

- Do not rub the eye
- Wash the eye with gentle streams of saline or clean water or let tears wash the speck out
- If unsuccessful, for an object on the white of the eye, try to remove it using the corner of a clean, moist cloth, cotton bud or tissue paper strip
- Do not try to remove an object from the coloured part of the eye. Wash the eye with saline or clean water. If unsuccessful seek medical help.

Date and puncture of the eye or eyelid or objects penetrating to the eye

- Do not wash out the eye with water or any other liquid
- Do not try and remove object that is stuck in the eye
- Do not give anything to eat or drink
- Seek urgent medical help.



Important contact information

In emergency situations dial

000

to contact Fire, Police or Ambulance

If you are calling from a mobile phone, you need to tell the operator the town and state you are calling from, then wait to be connected.

Let's keep it

safe on Territory Day!

NT Health
June 30

If you fool around with fireworks, you're crackers. Last year a record number of Territorians were injured on Territory Day. For tips on how to have a safe and fun Territory Day, visit <https://territoryday.nt.gov.au/cele.../safe-celebrations-guide> #territoryday40 #crackernight #fireworks #safety

Let's keep it safe on Territory Day!

Let's keep it safe on Territory Day!

Fireworks can be fun but they are dangerous. Take care when using them by following these safety tips.

- It is illegal to purchase fireworks outside of Territory Day. Only buy what you can use on Territory Day.
- Only use fireworks that are approved by the NT Government. Do not use fireworks that are not approved by the NT Government.
- Read the instructions carefully. Do not use fireworks that are not approved by the NT Government.
- Do not drink alcohol and do not use drugs when using fireworks.
- Never throw fireworks at anyone or anything. Do not throw fireworks into the air.
- Supervise children at all times. Do not allow children to use fireworks.
- Do not use fireworks in enclosed spaces, such as tents or marquees.
- Fire services advise that the most responsible way to enjoy fireworks is to hire a professional fireworks display.

In emergency situations dial 000 to contact Fire, Police or Ambulance.

www.nt.gov.au/health www.fire.nt.gov.au



Territory Day 2018

370 tonnes of fireworks shipped to the NT for Territory Day

NT cracker night: 27 injured, 770 triple-0 calls, 679 grassfires, \$386k and 370 tonnes of fireworks

Updated 3 Jul 2018, 9:09am

Wild and dangerous: Aussie party where people are forced to dodge explosives and sometimes maimed

IT'S an annual Aussie party like no other. Anything goes — but what happens here on July 1 every year has to be seen to be believed.

1. ABC News Available at <https://www.abc.net.au/news/2018-06-29/hundreds-tonnes-fireworks-darwin-territory-day-40th-anniversary/9923230>
2. ABC News Available at <https://www.abc.net.au/news/2018-07-02/nt-firework-cracker-night-injuries-hospital-fires/9930232>
3. Available at <https://www.news.com.au/lifestyle/real-life/wtf/wild-and-dangerous-aussie-party-where-people-are-forced-to-dodge-explosives-and-sometimes-maimed/news-story/e5cd9e0b235a7da8c9c91e33326ab463>

www.nt.gov.au



Method

Methods

- ❑ Descriptive Survey
- ❑ Data were collected on FWRI between 30 June and 6 July 2018
- ❑ Clinical information and severity of the injury along with time, place and circumstances surrounding the injury
- ❑ NT public hospital emergency departments, the Australian Defence Force Health Centre and the Palmerston General Practice Superclinic.

Results

Baseline characteristics

- 38 FWRI
- 22 (58%) males vs 16 (42 %) females.
- Median age of presentation was 27 years (SD 17.6, range: 18 months–74 years).
- A total of 11 children
- Darwin and Palmerston region had the highest number of presentations with FWRI.
- NT Resident (90%)
- Bystander (71%)
- 4 people reported having consumed alcohol; 2 were bystanders and 2 were individuals igniting the fireworks*.

*Of the 17 respondents who completed the extended survey forms,

Severity of Injuries

- ❑ Severity of injuries
 - ❑ Mild 26.3%
 - ❑ Moderate 39.5 %
 - ❑ Severe 34.2%.
- ❑ 13 people were admitted to hospital
- ❑ 45.5% of children requiring admission to hospital vs 30.8% of adults.

Anatomical site and type of injuries

Characteristic	n	%
Anatomical site of injuries		
Chest	1	2.6
Ear	2	5.3
Eye	2	5.3
Face	8	21.1
Foot	2	5.3
Hand & forearm	10	26.3
Neck	2	5.3
Respiratory	2	5.3
Groin	1	2.6
Thigh	2	5.3
Type of injuries		
Burns	26	68.4
<3% total body surface area	22	
5% total body surface area	2	
8% total body surface area	1	
17.5% total body surface area	1	
Bruising and haematoma	4	10.5
Laceration	3	7.7
Hearing loss	4	10.5
Visual changes	1	2.6
Shortness of breath	2	5.3

❑ 68% sustained burns

❑ Hands and forearm most common site at 26%

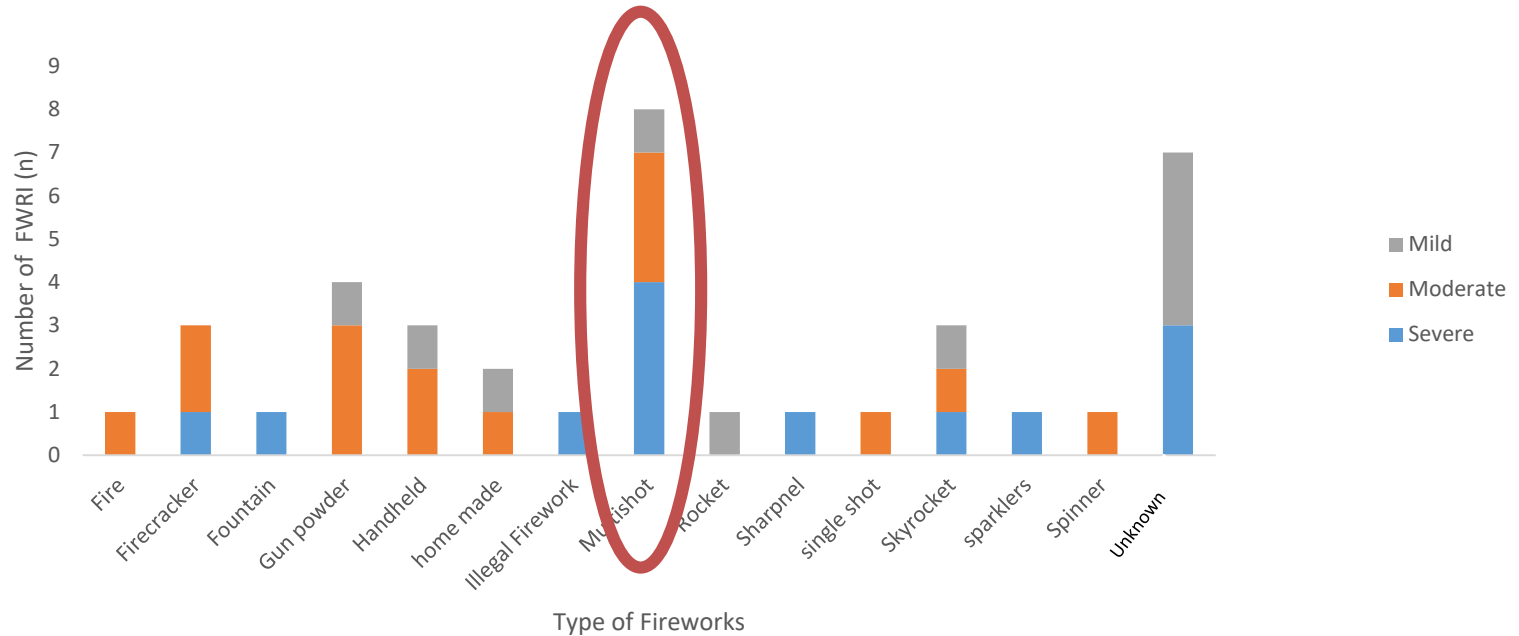
Table 2. Anatomical site and type of FWRI in 2018

Mechanism of FWRI

- ❑ Only 44.7% (17/38) people completed the survey
- ❑ The most frequent mechanism of injury was being hit by a multi-shot firework that fell over or was inappropriately launched
- ❑ 2 people were injured when checking a firework that did not fire.

“Powder from cracker was put in an ash tray. I did not realise and put my cigarette out in the same ashtray and the powder exploded”.

Type of Fireworks causing FWRI in 2018



» Janagaraj,PD. Firework-related injuries survey report 2018. *NT Dis Control Bull* 2018;25(3):1-8.

Complications

- Distal fingertip amputation
- Tympanic membrane perforation with hearing loss
- Extensive burns requiring surgical debridement.

First Aid Administration

Characteristic	Private residence		Public facilities		p value
	Count	%	Count	%	
Total *	17	47.2	19	52.8	
Severity of Injuries *					
Mild	6	35.3	3	15.8	0.18 ⁺
Moderate	5	29.4	9	47.4	0.28 ⁺
Severe	6	35.3	7	36.8	0.92 ⁺
Time to First Aid[#]					
Delayed (>30 minutes)	1	12.5	6	85.7	0.009
Immediate(<30 minutes)	7	87.5	1	14.3	

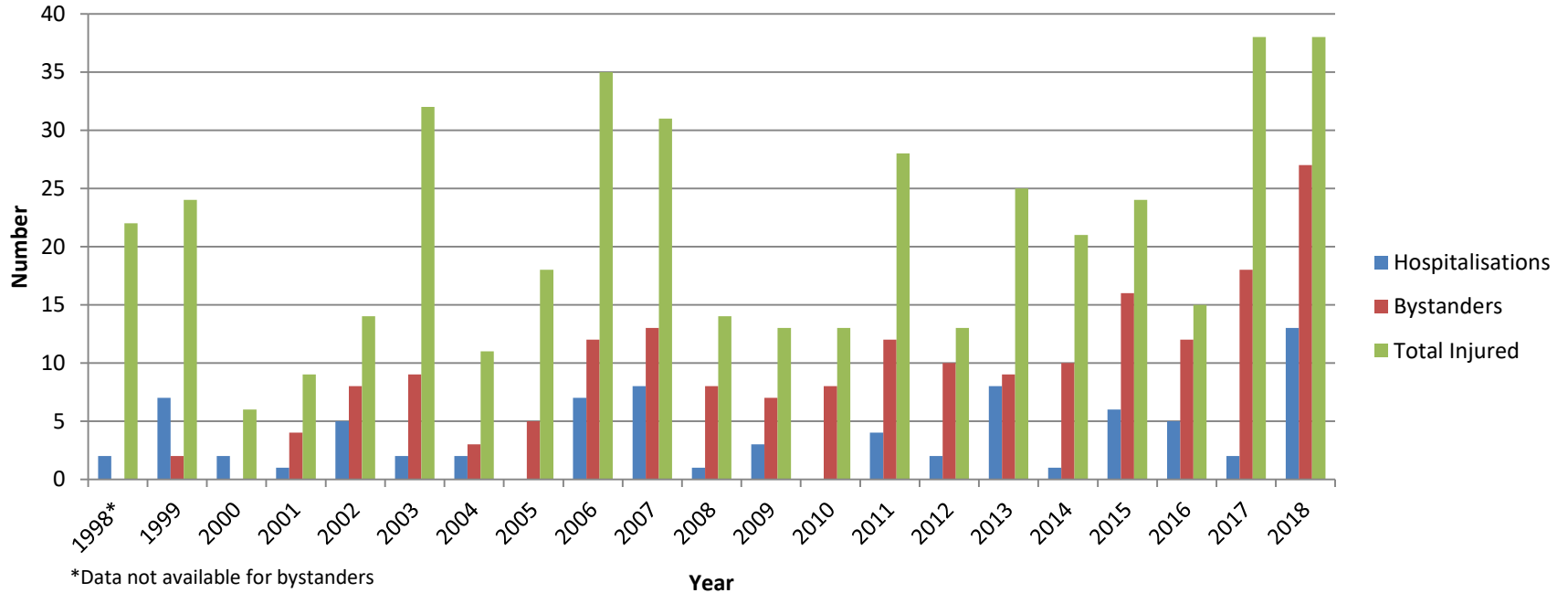
*2 FWRI occurred in unknown location

Only 15 people completed the survey

+ Comparing column proportions

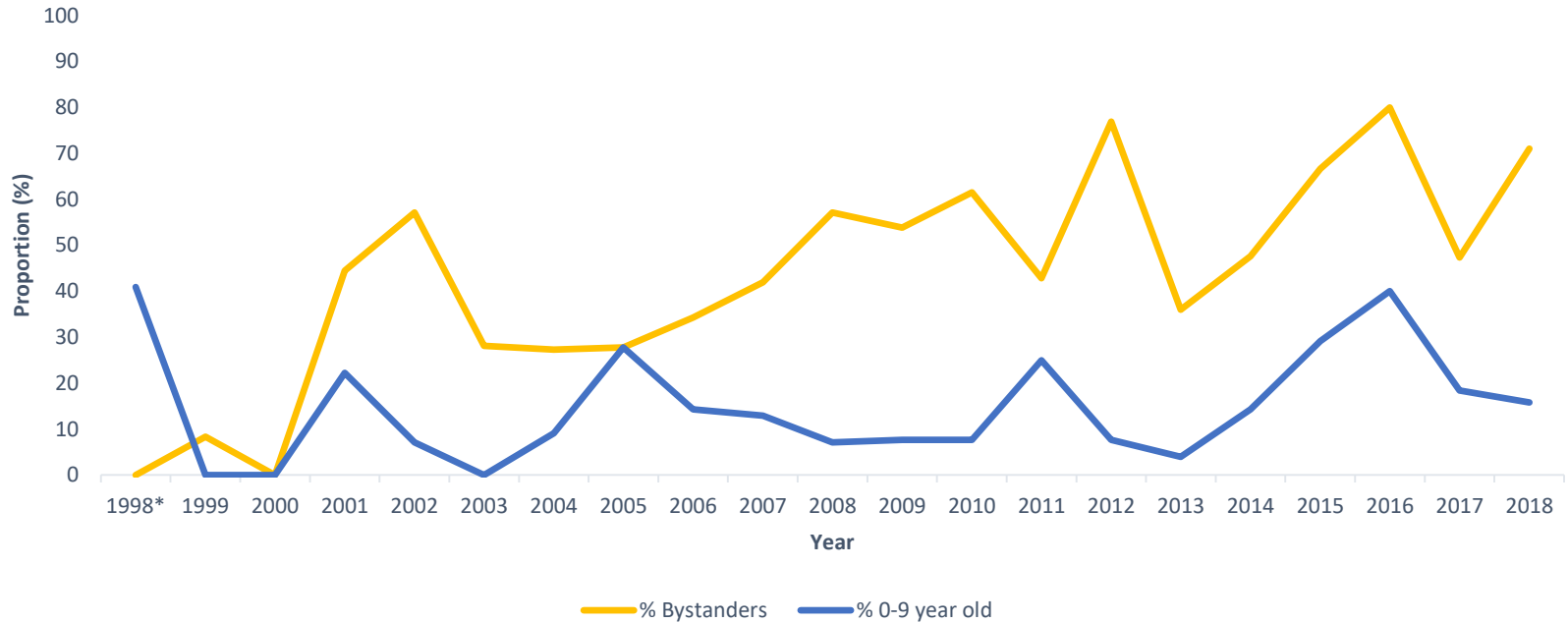
Analysis of Trends of FWRI

Frequency of firework-related injuries in the NT - hospitalisations, bystanders, and total injured annually 1998-2018



» Janagaraj,PD. Firework-related injuries survey report 2018. *NT Dis Control Bull* 2018;25(3):1-8.

Annual proportion of FWRI among children and bystanders in NT from 1998 to 2018



Limitations

- Under-representation
- Potential selection bias

Harm Minimisation

- ❑ Fireworks-related injuries have continued to occur on Territory Day over past several years
- ❑ Continued education and health promotion efforts will be required to reduce injuries.
- ❑ Increasing awareness of the 3 C s of Burns First Aid management

FIRST AID

WHAT TO DO IF INJURED BY FIRERWORKS



COOL IT

under running water for 20 minutes



COVER IT

with cling wrap



CALL 000

emergency response



The NT News

October 19 at 3:10 PM · 🌐



RESTRICTIONS on the number of fireworks sold for Territory Day may be introduced if the NT Government adopts new recommendations >>



NTNEWS.COM.AU

Fireworks restrictions proposal for Territory Day

RESTRICTIONS on the number of fireworks sold for Territory Day may be...

👍👎👤 231

92 Comments 27 Shares

www.nt.gov.au

shipped to the NT

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Summary

- ❑ 38 FWRI in people aged between 18 months and 74 years old.
- ❑ 71.1% of the injured were bystanders.
- ❑ Severity of FWRI were mild 26%, moderate 40 % and severe 34%.
- ❑ A total of 11 children presented to the various health facilities with 46% of children requiring admission to hospital in comparison to 31% of adults.
- ❑ Multi-shot fireworks were responsible for 21 % of FWRI.
- ❑ Time to first aid administration for FWRI was delayed for 86% of injuries occurring at public facilities compared to 13% at private residences (p=0.009).
- ❑ Harm minimisation of FWRI is important.
- ❑ Targeted approaches including increasing burns first aid knowledge in the community and providing safety messages for bystanders could reduce the number and severity of harms associated with fireworks.

Acknowledgements

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 - Melissa Garde from NT Worksafe who delivered posters and brochures to the fireworks wholesalers for distribution across the Territory before cracker night.
 - Department of Education
 - Northern Territory WorkSafe
 - Northern Territory Fire Services
 - Dr.Charles Douglas for his guidance
 - Previous CDC Investigators from 1998 to 2017 who have collected data and compiled the survey results
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References

1. Northern Territory Government. Cabinet records. 1980 Cabinet Decision Highlights: Fireworks Day. 1980. Accessed 25 September 2018. Available at https://dtc.nt.gov.au/_data/assets/pdf_file/0005/266297/Decision_1050.pdf
2. NTWorkSafe. Fireworks. Accessed 25 August 2018. Available from <http://www.worksafe.nt.gov.au/LicensingAndRegistration/fireworks/Pages/default.aspx>
3. ABC News Available at <https://www.abc.net.au/news/2018-06-29/hundreds-tonnes-fireworks-darwin-territory-day-40th-anniversary/9923230>
4. ABC News .Available at <https://www.abc.net.au/news/2018-07-02/nt-firework-cracker-night-injuries-hospital-fires/9930232>
5. Available at <https://www.news.com.au/lifestyle/real-life/wtf/wild-and-dangerous-aussie-party-where-people-are-forced-to-dodge-explosives-and-sometimes-maimed/news-story/e5cd9e0b235a7da8c9c91e33326ab463>

Thank you