



Injury surveillance project in rural WA - *an Off Road Vehicle focus*

Annual reporting of injuries sustained in Lancelin

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Outline

- WACHS Wheatbelt
- Lancelin overview - including ORV area
- History of Lancelin ORV injury surveillance
- Method of data collection
- Injury trends
- Practical use of data



Lancelin

- Coastal agricultural, fishing town 130km North of Perth
- Coastal town within Shire of Gingin
- Population approx 665 - more than double during holiday periods
- Shire of Gingin - 107, 000 domestic visitors in 2007 (average stay 2 nights)
- Shire of Gingin 6400 international tourists 2007 (average stay 2 nights)



Lancelin Off Road Vehicle Areas

Control of Vehicles (Off-Road Areas) Act 1978

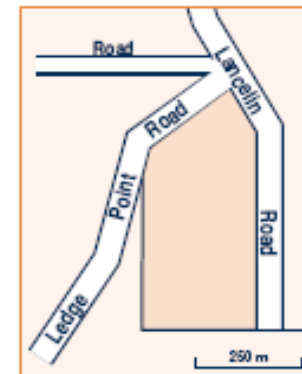
Gazetted Areas in Shire of Gingin -

- **Lancelin Off Road Area:** permits all classes and kinds of off road vehicles
- **Ledge Point Off Road Area:** motorcycles only

1. LANCELIN



2. LEDGE POINT



History of Lancelin Off Road Area injury surveillance

- 1993 - Lancelin Silver Chain Nursing Post & Department of Health WA began monitoring Off-Road Injuries
- 1996 - Ranger appointed to Shire of Gingin
- 1997 - Lancelin Off Road Management Group developed plan to reduce injuries (Road Safety Award)
- 2000 - Review of surveillance form
- 2001 - Reporting taken over by Wheatbelt Public Health Unit

Method - tool used

Off Road Injury Survey

Lancelin Medical Centre
This survey is completely confidential. It is being carried out in the interest of community safety.

Age _____ (Years)
 Sex Male Female

Where do you normally reside?
 Perth Interstate
 Lancelin/Gingin Overseas
 Other WA

1. Do you speak fluent English? Yes No

2. When did the injury occur? Date: _____ Time: _____ am/pm

3. Where did the injury occur? *For example: on sand dunes near town, on track at Lodge Point etc.*

4. What was the injured person doing at the time he/she was injured?
 Driving in a car/ute etc Riding a bike Sandboarding Riding in a buggy
 Travelling in a bus Bystander Other (please specify) _____

5. What happened at the time of injury?
 Lost balance/control Hit bump/hole Overturned Dropped off a dune
 Hit other vehicle Hit Obstacle Hit by Vehicle/Object Fell off/from vehicle
 Unknown Other (please specify) _____

6. What caused the injury?
 Hit ground Hit inside of vehicle Vehicle hit/landed on person
 Jarred body part Hit object on ground Hit/Hit by object
 Unknown Other (please specify) _____

7. What type of safety equipment was the injured person using? (tick as many boxes as appropriate)
 Seatbelt Helmet Gloves None
 Goggles Unknown Bike Pants Boots
 Kidney belt Vehicle rollover protection device
 Other (please specify) _____

8. What type of vehicle was involved? (include vehicle injured person was in/on)
 2-wheel bike 4-wheel bike Buggy 4x4 car/ute
 Bus Sandboard None
 Other (please specify) _____

9. Who owned the vehicle?
 Self Family Friend Hire Company
 Other (please specify) _____

10. Was this vehicle new? Yes No
 If yes, did you purchase it: Privately From a Dealer Other: _____

11. How often do you use this vehicle or a similar vehicle off road?
 First time Rarely Monthly Annually
 Other (please specify) _____

Any additional comments: _____

TO BE COMPLETED BY THE HEALTH PROFESSIONAL

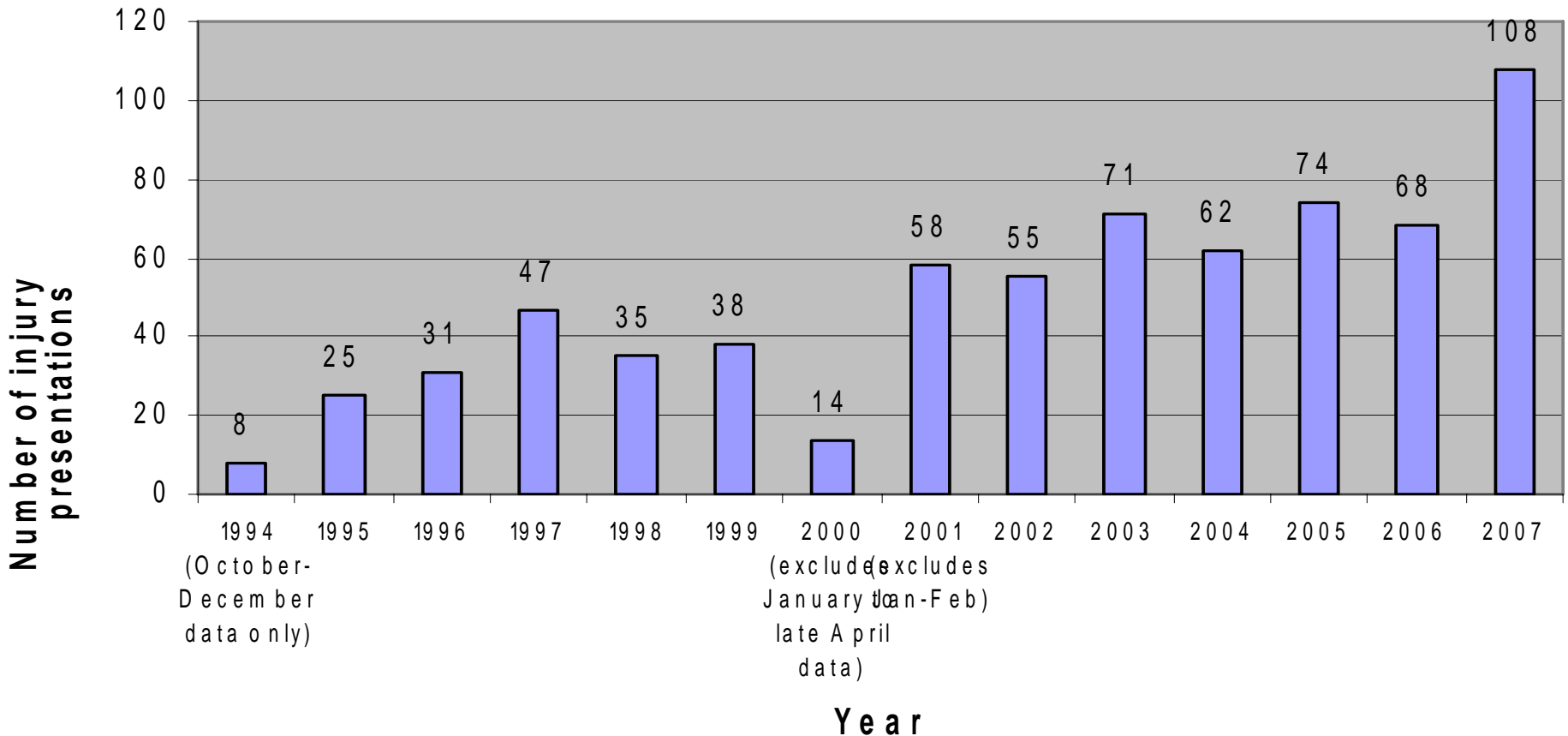
Complete only for first attendance of a particular episode (NEC means "not elsewhere classified")

1. NATURE OF THE INJURY	2. BODY PART
<input type="checkbox"/> <input type="checkbox"/> Severest	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Severest
<input type="checkbox"/> <input type="checkbox"/> Second	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Second
<input type="checkbox"/> <input type="checkbox"/> Third	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Third
<i>Select up to three codes</i>	
Systemic and special injury 91 poisonings (thru skin/lung/mouth etc) 93 asphyxiation or respiratory difficulty 94 electric shock 95 over-exertion, heat/cold stress	Systemic and special injury 000 defined as in Section 1 at left Head 101 eyeball 102 eye area 103 nose 104 mouth internal eg Teeth/tongue 105 ear 106 face/cheek/forehead/scalp/lip 107 skull base 108 skull vault 109 neck, NEC 198 other injury to head
Soft tissue 01 cut/laceration 02 puncture 03 bite 04 superficial abrasion 05 penetrating wound 06 other wound, incl. amputation 07 bruising/haematoma 08 bleeding/haemorrhage 09 inflammation/oedema/tenderness 10 burn, full thickness 11 burn, partial thickness 12 foreign body in 13 damage to major blood vessel 14 crushing injury 15 loss of consciousness 16 pain, no visible injury	Trunk 401 ribs(s) 402 sacroiliac joint 404 pelvis 405 chest, NEC 406 abdomen, NEC 407 upper back, NEC 408 lower back, NEC 409 genitalia 410 heart 498 other injury to trunk
Bone, tendon or joint 20 fracture 21 dislocation 22 sprain/strain	Upper extremity 201 clavicle 202 scapula 203 shoulder, NEC 205 upper arm, NEC 207 elbow 208 forearm 209 wrist 211 metacarpal bone 212 digit/phalanx/finger 213 hand, NEC 298 other injury to upper extremity
3. IS THE USE OF ALCOHOL OR OTHER DRUGS SUSPECTED? 0 no 1 yes 2 unknown	Respiratory tract 501 pharynx 502 larynx 503 trachea 504 bronchus 505 lung 598 other injury to respiratory tract
WPHU use only	Digestive tract 601 mouth internal, eg gum, palate 609 suspected injury to other internal organs 698 other injury to digestive tract
4. WHAT YOU DID WITH YOUR PATIENT Select one code <input type="checkbox"/> <input type="checkbox"/> 01 advice only 02 treated, no referral 04 treated, referred to family doctor 05 treated, other referral	Lower extremity 301 hip 303 upper leg, NEC 304 knee 306 lower leg, NEC 307 ankle 309 metatarsal bone 310 digit/phalanx/toe 311 foot/NEC 398 other injury to lower extremity
5. COMMENTS _____ _____ _____	Nervous system 701 brain, not concussion 702 brain stem 703 spinal cord 706 peripheral nerve 798 other injury to nervous system

Injury trends - number of injuries

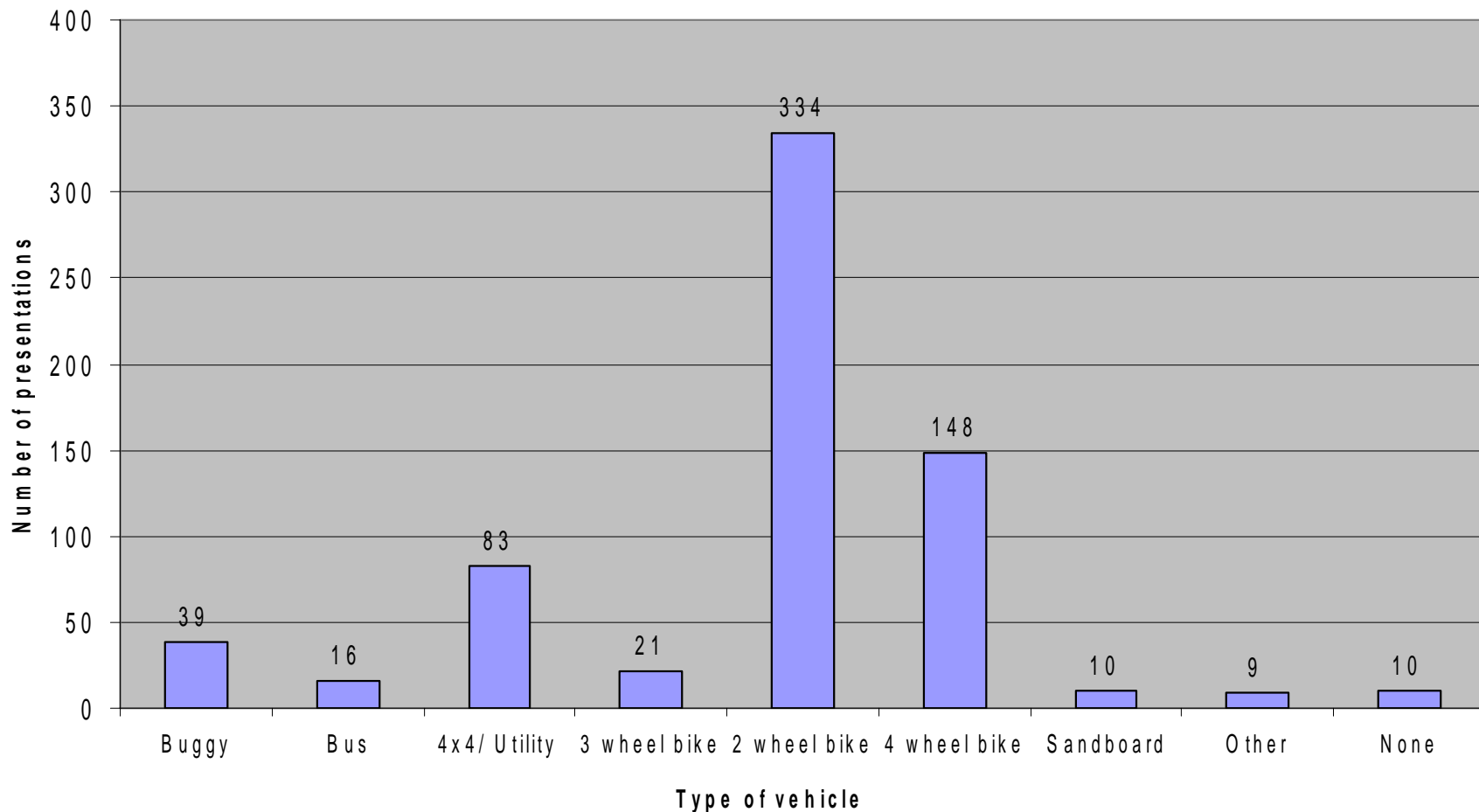


Number of off-road injuries reported to Lancelin Silver Chain Nursing Centre from 1994-2007



Injury trends - type of vehicle

Type of vehicles involved in injury presentations 1994-2007



Injury trends - nature of injury

- **Type of injury** - fractures; cuts/laceration/ bruising
- **Site of injury** - upper extremity; head; lower extremity and trunk
- **What happened?** - lost balance/control; dropped off dune; hit bump/hole
- **What caused injury?** - hitting ground; vehicle hitting/landing on person; hitting inside of vehicle

Injury trends - outcome of attendance at Silver Chain



- 1994-2000: 9 transferred to other hospital
- 2001-2007: 274 transferred to other hospital
- 2004: addition of question to survey tool
 - 2004-2007:
 - 103 transferred by private vehicle
 - 111 transferred by Ambulance
- 1994-07: 5 DOA or died in emergency

Injury trends - circumstances surrounding injury



- Occur during the day
- During school holidays/long weekends
- Warmer months of year

Injury trends - person injured

- Place of residence - most often Perth
- Safety equipment used - trend increasing number pieces safety equipment used
- Use of alcohol or other drugs - question included in 2001; suspected use in approx 10-20% per year

Factors impacting ORV injuries

- Increased popularity of recreational ORV usage
- Availability of cheaper imported vehicles
- Lancelin close proximity to Perth - allows day trips
- Economic climate - fly-in fly-out workforce
- Closure of metropolitan gazetted ORV areas
- Increasing demand on health service and volunteer ambulance services

Limitations and gaps



- Reported injuries under-represented
- Unable to measure 'usage' at this stage
- Limited data on this issue elsewhere

Summary



- For effective injury surveillance:
 - Agency monitoring all injuries
 - Agency with resources to analyse data/ provide report
 - Data used to provide injury prevention initiatives
- More effective
 - Ways to capture data of those not attending Lancelin Silver Chain and RPH
 - Ability to measure Lancelin ORV area usage



Questions??

Contact



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