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# APPENDIX 1:

## Indigenous Injury Surveillance database and National Data Standards for Injury Surveillance

### INDIGENOUS INJURY SURVEILLANCE DATABASE SHOALHAVEN DISTRICT MEMORIAL HOSPITAL'S EMERGENCY DEPARTMENT – 1999

**STUDY ID****ABORIGINALITY****ARRIVAL DATE/TIME****SEX/AGE****SUBURB****TRIAGE CATEGORY****INJURY DATE/TIME****ED DIAGNOSIS****DEPARTURE STATUS**

*E.g. Admitted to ward; Departed: Treatment completed; Departed: At own risk... etc.*

**REFERRED TO ON DEPARTURE**

*E.g. Community Health; Local Medical Officer; Return for X-ray; Not referred...etc.*

**DESTINATION**

*E.g. ICU; Wollongong Hospital; Home or usual place of residence....etc.*

**TEXT DESCRIPTION**

*Free text*

**CAUSE**

*E.g. Motor Vehicle Driver/Passenger; MC Driver/Passenger; Bicycle rider; Fall- low/high; Poison; Animal bite...etc.*

**INTENT**

*E.g. Accidental; Intentional self-harm, Assault...etc.*

**PLACE**

*E.g. Home, School, Work...etc.*

**ACTIVITY**

*E.g. Sport, Leisure, Work, Educational...etc.*

**TRAUMA**

*E.g. Open wound, fracture, sprain...etc.*

**BODY REGION**

*E.g. Head, neck, abdomen...etc.*

**ALCOHOL INVOLVED - SELF/OTHER**

*Yes, No, Unknown.*

**OTHER DRUGS INVOLVED - SELF/OTHER**

*Yes, No, Unknown.*

**ICD CODE**

*International Disease and Injury coding system.*

**COMMENTS**

*Free text field.*

## APPENDIX 2: Injury Classifications

### Broad E code categories and broad ICD9 code categories

		E code / ICD9 code
<b>Injury – external cause</b>	Transport accidents	E800-E849
	Accidental poisonings	E850-E869
	Misadventure during or due to medical care	E870-E879
	Accidental falls	E880-E888
	Accidents caused by fire or flames	E890-E899
	Other accidents, late effects	E900-E929
	Adverse effects of therapeutic drugs, biologicals	E930-E949
	Self-inflicted injury, suicide	E950-E959
	Injury purposely inflicted by other, homicide	E960-E969
	Other external causes	E970-E999
<b>Injury – type</b>	Fractures, dislocations, sprains and strains	800-848
	Open wounds, intracranial, internal, blood vessel injury	850-904
	Late effects, burns, superficial, other injuries	905-959
	Poisoning, toxic effects	960-989
	Other, unspecified effects of external causes	990-995
	Complications of surgical, medical care (not elsewhere classified)	996-999

### Narrow ICD9 code categories

		ICD9 code
<b>Injury – type</b>	Fractures	800-829
	Dislocations	830-839
	Sprains/ strains	840-849
	Intracranial (excluding fracture)	850-859
	Internal chest, abdomen, pelvis	860-869
	Open head, neck, trunk	870-879
	Open upper limb	880-889
	Open lower limb	890-899
	Blood vessels	900-904
	Late effects	905-909
	Superficial	910-919
	Contusion	920-924
	Crushing	925-930
	Foreign body through orifice	930-939
	Burns	940-949
	Nerves, spinal cord	950-957
	Trauma complications, unspecified	958-959
	Poisoning by drugs, medicines, biological	960-979
	Toxic effects, non-medical	980-989
	Other unspecified effects	990-995
Complications of surgery, medical care	996-999	

## APPENDIX 3: Additional Tables

**Table A3.1: Comparison of injury-related Emergency Department presentations among indigenous and general populations, Shoalhaven Local Government Area, 1996-1998**

Injury Type [A]	Observed	Expected	SPR[B]	Lower CI[C]	Upper CI
<b>Males</b>					
Fractures	77	81.2	94.8	74.8	118.5
Dislocations	16	11.1	144.0	82.3	233.9
Sprains/ strains	89	81.1	109.7	88.1	135.0
Intracranial (excluding fracture)	24	24.3	98.8	63.3	147.0
<b>Open head, neck, trunk</b>	<b>93</b>	<b>71.6</b>	<b>129.8</b>	<b>104.8</b>	<b>159.1</b>
<b>Open upper limb</b>	<b>76</b>	<b>59.8</b>	<b>127.2</b>	<b>100.2</b>	<b>159.2</b>
Open lower limb	32	29.9	107.2	73.3	151.3
Superficial	45	45.8	98.2	71.6	131.4
Contusion	31	30.1	103.0	70.0	146.1
Crushing	6	10.2	59.0	21.7	128.5
Foreign body through orifice	8	31.4	25.5	11.0	50.2
Burns	13	15.2	85.4	45.4	146.0
Nerves, spinal cord	3	1.9	155.9	32.2	455.7
Trauma complications, unspecified	15	12.9	116.4	65.2	192.0
Poisoning by drugs, medicines, biological	6	8.8	68.6	25.2	149.2
Toxic effects, non-medical	5	7.7	65.0	21.1	151.8
<b>Other unspecified effects</b>	<b>30</b>	<b>15.3</b>	<b>196.3</b>	<b>132.4</b>	<b>280.2</b>
Complications of surgery, medical care	12	9.2	130.9	67.7	228.7
<b>Females</b>					
Fractures	25	41.1	60.8	39.3	89.7
Dislocations	5	5.9	84.4	27.4	196.9
Sprains/ strains	52	65.2	79.7	59.6	104.6
Intracranial (excluding fracture)	20	14.0	143.0	87.3	220.8
Open head, neck, trunk	31	26.9	115.3	78.3	163.7
<b>Open upper limb</b>	<b>30</b>	<b>20.2</b>	<b>148.5</b>	<b>100.2</b>	<b>212.0</b>
Open lower limb	12	12.9	93.0	48.1	162.5
Superficial	27	28.4	95.0	62.6	138.2
Contusion	20	18.3	109.3	66.8	168.8
Crushing	2	3.4	58.8	7.1	212.5
Foreign body through orifice	6	10.3	58.0	21.3	126.4
Burns	13	9.5	136.6	72.7	233.6
Trauma complications, unspecified	12	9.1	132.3	68.4	231.1
<b>Poisoning by drugs, medicines, biological</b>	<b>18</b>	<b>10.0</b>	<b>179.2</b>	<b>106.2</b>	<b>283.3</b>
Toxic effects, non-medical	4	4.2	94.7	25.8	242.4
<b>Other unspecified effects</b>	<b>25</b>	<b>12.6</b>	<b>199.2</b>	<b>128.9</b>	<b>294.0</b>
Complications of surgery, medical care	3	6.4	46.5	9.6	136.0

<sup>(A)</sup> Cause of injury is based on standard aggregations of the ICD9 classification. Injury types where no injuries occurred in the indigenous population have been excluded from the table.

<sup>(B)</sup> Age adjustment of rates was made by indirect standardisation, using the 1997 general Shoalhaven population as the standard. The Standardised Presentation Ratio (SPR) is the ratio of the number of observed to 'expected' injury ED presentations among indigenous people, multiplied by 100. The 'expected' numbers have been estimated by applying age-specific injury rates in the general Shoalhaven population to the numbers of indigenous Shoalhaven residents in the specific age groups. Therefore, an SPR of 100 means that the indigenous rate is equal to the general population rate, taking into account different age structures of the populations. Where the SSR is greater than 100 the indigenous injury rate is apparently higher.

<sup>(C)</sup> Confidence intervals (CI) around the SPR help indicate whether any apparent differences are likely to have occurred due to chance fluctuations. If the lower CI is above 100 (so that the indigenous rate is considered 'significantly' higher than the non-indigenous rate), then it is considered very unlikely that the higher indigenous rate is due to chance alone. On the other hand, 'non-significant' differences (i.e. when the lower and upper CIs span 100) should not be automatically dismissed as 'non important'. Because the numbers of indigenous ED presentations in small areas such as the Shoalhaven are small, the confidence intervals are wide. Even though the indigenous rates may be much higher, statistical significance is not often reached. This problem is compounded by the underestimation of indigenous injury rates, due to the poor recording of indigenous status in ED data.

**Table A3.2: Major cause of injury among indigenous people presenting to SDMH Emergency Department, by sex, 1999**

Cause	Female	Male	Persons	Percent
Fall - low less than 1m	40	41	81	20%
Struck by person	18	50	68	17%
Cut/pierce	16	32	48	12%
Fall – high	11	31	42	10%
Other specified	9	24	33	8%
Struck by object	12	16	28	7%
Other unspecified	8	17	25	6%
Poison - not drug/ medication	3	15	18	4%
Other animal (not dog)	6	8	14	3%
Motor vehicle (MV) passenger	6	3	9	2%
Bicycle rider/ passenger	2	6	8	2%
Dog	3	3	6	1%
Hot fluids/ scalds	0	5	5	1%
Breathing threat (not drown)	1	3	4	1%
Hot objects/ contact burn	0	3	3	1%
Machinery	0	3	3	1%
Poison - drug/ medication	2	1	3	1%
Electricity	2	0	2	0%
Fire/ flame/ smoke	0	2	2	0%
Hot conditions (natural)	1	0	1	0%
Motor vehicle driver	0	1	1	0%
Pedestrian	0	1	1	0%
<b>Total</b>	<b>140</b>	<b>265</b>	<b>405</b>	<b>100%</b>

**Table A3.3: Major cause of injury among indigenous people presenting to SDMH Emergency Department, by age, 1999**

CAUSE	Age Group (years)							Total	%
	0 to 4	5 to 14	15 to 24	25 to 34	35 to 44	45 to 54	55 plus		
Fall – low less than 1m	19	22	18	15	4	2	1	81	20%
Struck by person	2	5	30	20	7	3	1	68	17%
Cut/pierce	4	13	13	11	3	3	1	48	12%
Fall – high	13	13	3	4	1	7	1	42	10%
Other specified	5	9	8	4	5	1	1	33	8%
Struck by object	5	9	4	1	7	2	0	28	7%
Other unspecified	7	5	5	5	1	2	0	25	6%
Poison –not drug/ medication	1	3	5	5	3	1	0	18	4%
Other animal (not dog)	1	8	2	2	0	1	0	14	3%
Other (specific causes where less than 10 total cases)	7	11	12	10	5	2	1	48	12%
<b>Total</b>	<b>64</b>	<b>98</b>	<b>100</b>	<b>77</b>	<b>36</b>	<b>24</b>	<b>6</b>	<b>405</b>	<b>100%</b>

**Table A3.4: Intent related to injuries among indigenous people presenting to SDMH Emergency Department, by sex, 1999**

INTENT	Female	Male	Total	Percent	
Accidental	105	192	297	73%	73%
Intentional self-harm	7	25	32	8%	8%
Assault					
Legal intervention	0	3	3	1%	
Other specified intent	1	0	1	0%	
Other assault	12	31	43	11%	
Parent maltreatment	2	0	2	0%	
Partner maltreatment	2	0	2	0%	13%
Intent unknown					
Undetermined intent	3	7	10	2%	
Unspecified intent	8	7	15	3%	6%
<b>Total</b>	140	265	405	100%	100%

**Table A3.5: Activity at time of injury among indigenous people presenting to SDMH Emergency Department, by age, 1999**

ACTIVITY	Age Group (years)							Total	%
	0 to 4	5 to 14	15 to 24	25 to 34	35 to 44	45 to 54	55 plus		
Leisure	25	64	52	32	17	14	3	207	51%
Sport	0	12	24	14	3	0	0	53	13%
Nursed/cared for	33	6	0	0	0	1	0	40	10%
Paid work	0	0	4	7	6	2	2	21	5%
Other work	0	3	4	3	4	1	1	16	4%
Educational	1	9	1	0	0	0	0	11	3%
Unspecified	5	4	14	20	6	6	0	55	14%
Other specified	0	0	1	1	0	0	0	2	0%
<b>Total</b>	64	98	100	77	36	24	6	405	100%

**Table A3.6: Place of occurrence of injury among indigenous people presenting to SDMH Emergency Department, by age, 1999**

PLACE	Age Group (years)							Total	%
	0 to 4	5 to 14	15 to 24	25 to 34	35 to 44	45 to 54	55 plus		
Home	51	55	26	23	14	11	2	182	45%
Unspecified	4	4	16	16	8	3	1	52	13%
Sports/ athletics	0	6	24	14	3	0	0	47	12%
Recreation	4	9	14	7	4	3	0	41	10%
Road	1	6	9	7	1	1	0	25	6%
School/ child care / public admin area	1	17	1	0	0	0	0	19	5%
Other specified	3	1	5	3	0	3	1	16	4%
Trade/ service place	0	0	3	5	3	1	1	13	3%
Industry/ construction site	0	0	1	2	3	1	1	8	2%
Hospital/ health service	0	0	1	0	0	1	0	2	0%
<b>Total</b>	64	98	100	77	36	24	6	405	100%