

Appendix A. Additional figures from exploratory data analysis

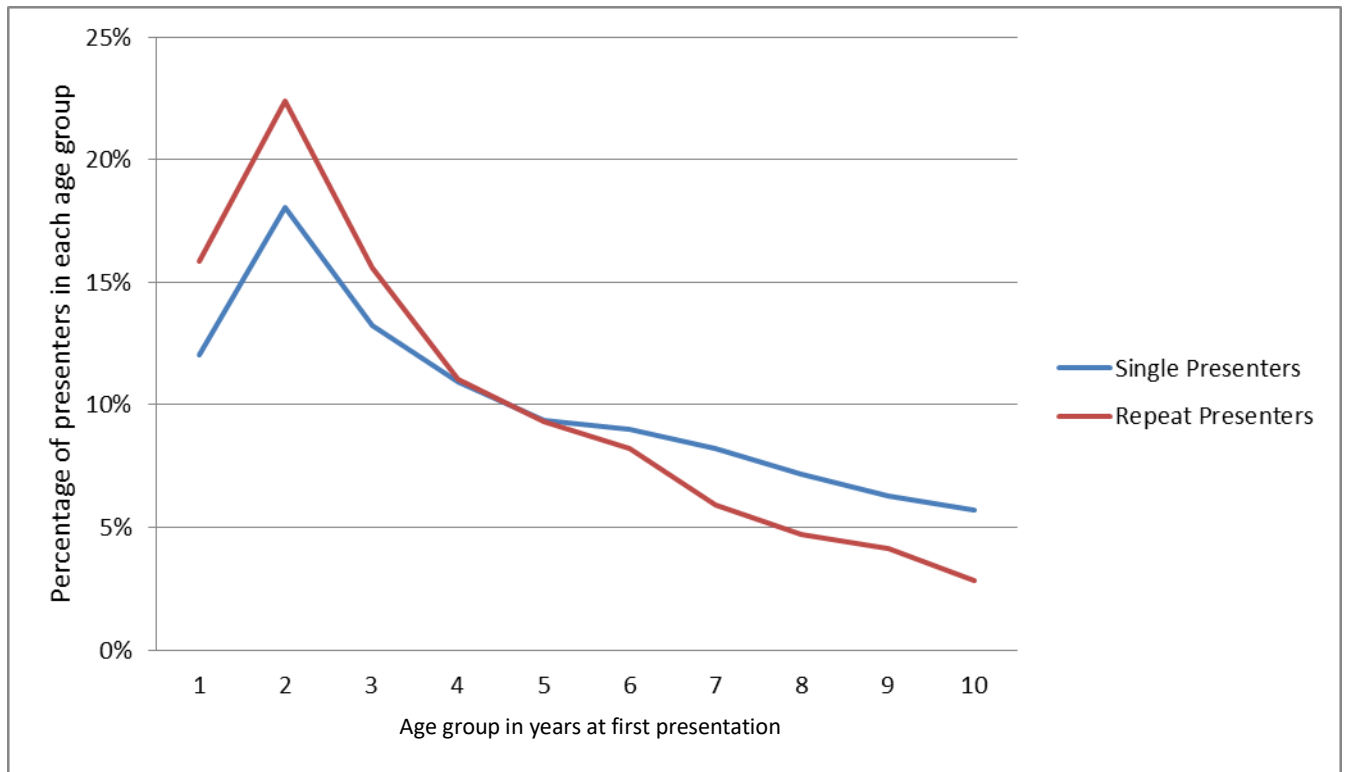


Figure 1: Age group in years at first presentation by single and repeat presenters

(X-axis represents upper limit in years of each age group, for e.g. age group=1: children presenting at 0 to <1 year of age)

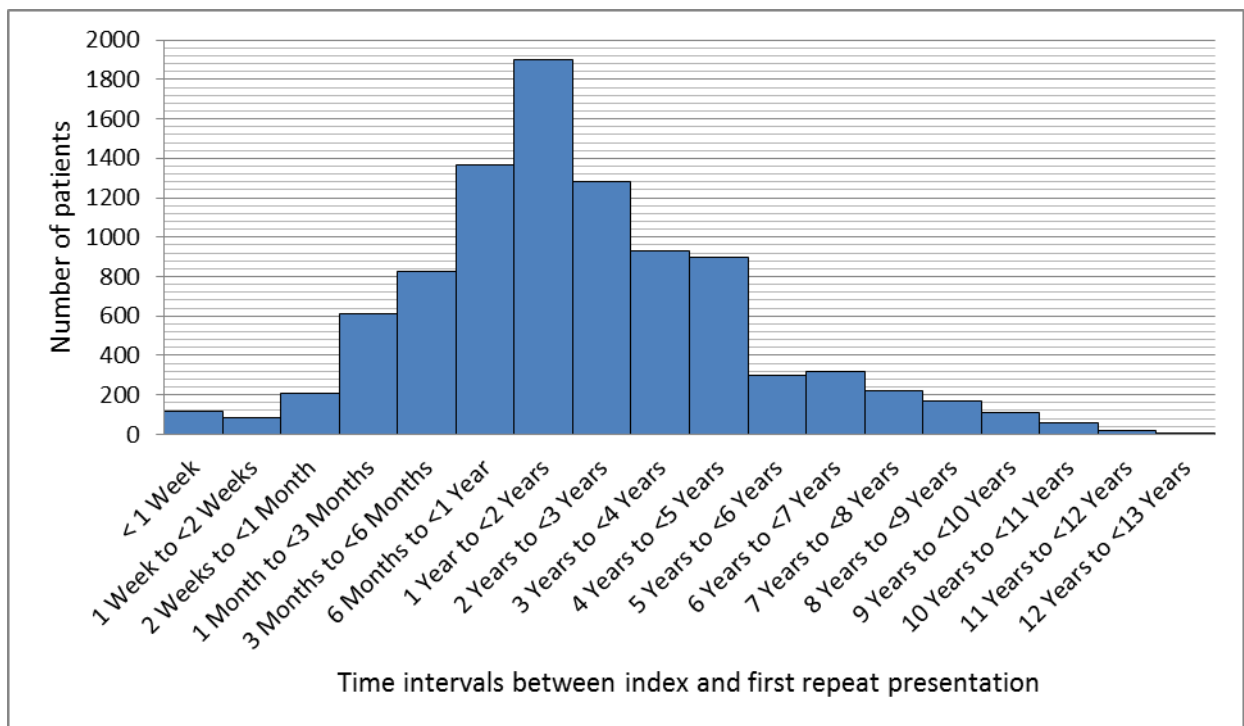


Figure 2: Number of patients with different time intervals between index and first repeat presentation

(Note that time intervals up to 1 year are shorter than subsequent time intervals which are all 1 year long)

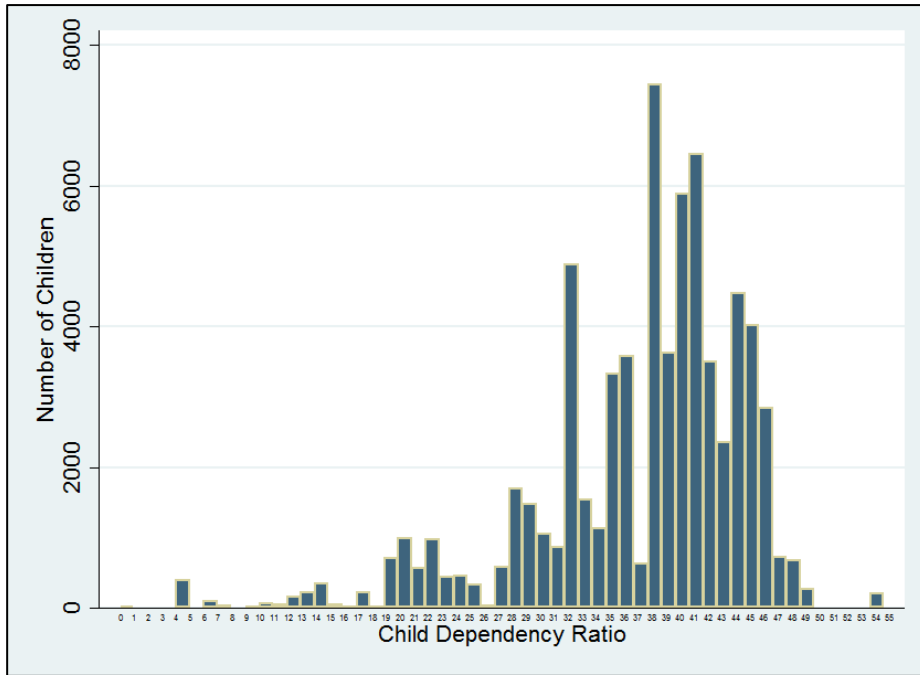


Figure 3: Number of children with different child dependency ratios in study sample (N=72 490)

(Child dependency ratio calculated from SA Census 2011: $[(\text{Total number of children (0-14 years old) suburb}) / (\text{Total number of adults (15-65 years old) suburb})] \times 100$)

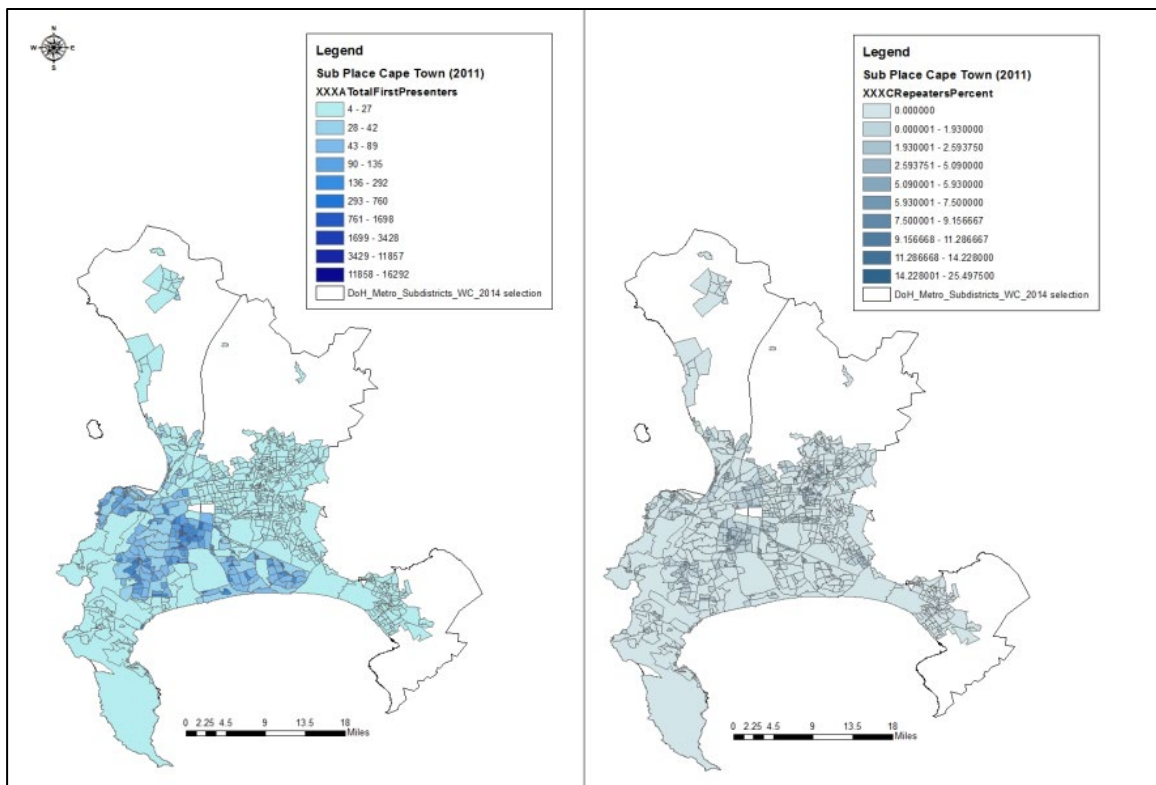


Figure 4: Heat map of first (left) and repeat (right) presentations by suburb of origin

Appendix B. Additional tables from exploratory data analysis

Table 1: Age in years at first presentation to Red Cross War Memorial Children's Hospital Trauma Unit for an injury in childhood

Age categories	Headcount	%
0 to <1 year	9 074	12.5%
1 to <2 years	13 499	18.6%
2 to <3 years	9 826	13.6%
3 to <4 years	7 934	10.9%
4 to <5 years	6 767	9.3%
5 to <6 years	6 451	8.9%
6 to <7 years	5 756	7.9%
7 to <8 years	4 960	6.8%
8 to <9 years	4 364	6.0%
9 to <10 years	3 859	5.3%
Grand total	72 490	

Table 2: Year of first presentation to Red Cross War Memorial Children's Hospital Trauma Unit for an injury in childhood

Year	Headcount	%
1997	4 675	6.4%
1998	4 000	5.5%
1999	4 369	6.0%
2000	3 936	5.4%
2001	3 488	4.8%
2002	3 882	5.4%
2003	4 077	5.6%
2004	3 956	5.5%
2005	4 143	5.7%
2006	3 830	5.3%
2007	4 533	6.3%
2008	4 397	6.1%
2009	5 065	7.0%
2010	5 304	7.3%
2011	5 381	7.4%
2012	5 047	7.0%
2013	2 407	3.3%
Grand total	72 490	

Table 3: Top 10 causes of injury for first presentation to Red Cross War Memorial Children's Hospital Trauma Unit (N=72 490)

Cause	Headcount	%
Fall from non-height level	13 888	19.2%
Fluid burn	7 926	10.9 %
Struck by or against	6 878	9.5%
Fall from height level	6 248	8.6%
Foreign body ingestion	4 917	6.8%
Fall off bed	4 425	6.1%
Other cause (not recorded)	4 339	6.0%
Fall from playground	4 191	5.8%
Unknown cause	2 704	3.7%
Caught between objects	2 674	3.7%

Table 4: Top 10 causes of injury for second presentations to Red Cross War Memorial Children's Hospital Trauma Unit (Total n = 9 417)

Cause	Headcount	%
Fall from non-height level	2 271	24.1%
Struck by or against	1 238	13.1%
Fall from height level	892	9.5%
Fall from playground	711	7.6%
Other cause (not recorded)	683	7.3%
Foreign body ingestion	567	6.0%
Fall off bed	379	4.0%
Sharp instrument	361	3.8%
Caught between objects	327	3.5%
Fluid burn	311	3.3%

Table 5: Mortality and incidence risk in single and repeat presenters

	n	Mortality	Incidence risk
Repeat Presenters	9 417	24	0.25 per 100
Single Presenters	63 073	53	0.08 per 100

$$\text{Incidence Risk Ratio} = [24 / (9417)] / [53 / (63073)] = 3.03$$

Patients in the repeat presentation group had 3.03 times the risk of dying in the province within the study period, due to any cause, relative to patients with only single presentation. *Patients who died at or within 3 years of first presentation were excluded from

the study, which would bias these results – which were therefore removed from the main paper.

Table 6: Absolute incidence rates of repeat presentations to the Red Cross War Memorial Hospital Trauma Unit from January 1997 to June 2016

Age in years at first presentation	Incidence rate [repeat presentations/100 person-years]	95 % Confidence Interval
0 to <1 year	2.6	[2.5; 2.7]
1 to <2 years	2.5	[2.4; 2.6]
2 to <3 years	2.4	[2.2; 2.5]
3 to <4 years	2.1	[2.0; 2.2]
4 to <5 years	2.2	[2.1; 2.4]
5 to <6 years	2.2	[2.0; 2.3]
6 to <7 years	2.0	[1.8; 2.1]
7 to <8 years	2.0	[1.9; 2.2]
8 to <9 years	2.5	[2.2; 2.7]
9 to <10 years	2.4	[2.1; 2.6]

