Epidemiology of Paediatric Trauma in Hong Kong: a multicentre cohort study

Chow C B[1], M Leung[2], Gilberto K K Leung[3,4], W Y Shen[5,6], C W Kam[7], H M Cheung[8], K L Auyeung[5], Patrick IP[1]
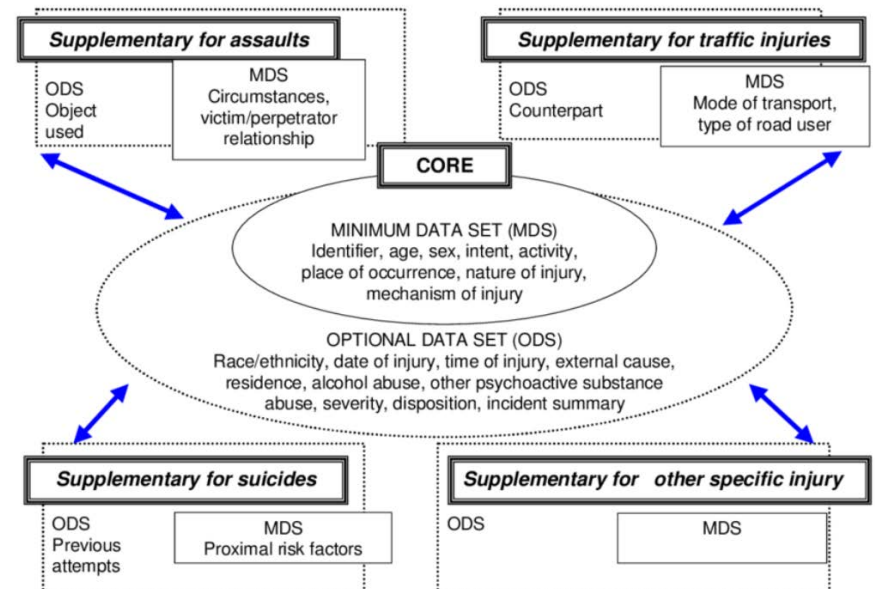
1. Department of Paediatrics and Adolescent Medicine, LKS Faculty of Medicine, The University of Hong Kong, 2. Princess Margaret Hospital, 3. Department of Surgery, The University of Hong Kong, 4. Queen Marry Hospital, 5. Queen Elizabeth Hospital, 6. Hospital Authority, HK, 7.Tuen Mun Hospital, 8. Department of Paediatrics, Chinese University of Hong Kong,

Injury Surveillance Model (WHO)

Objective

1. To identify the epidemiological features of paediatric trauma in Hong Kong

2. To explore the characteristics in the low-income group

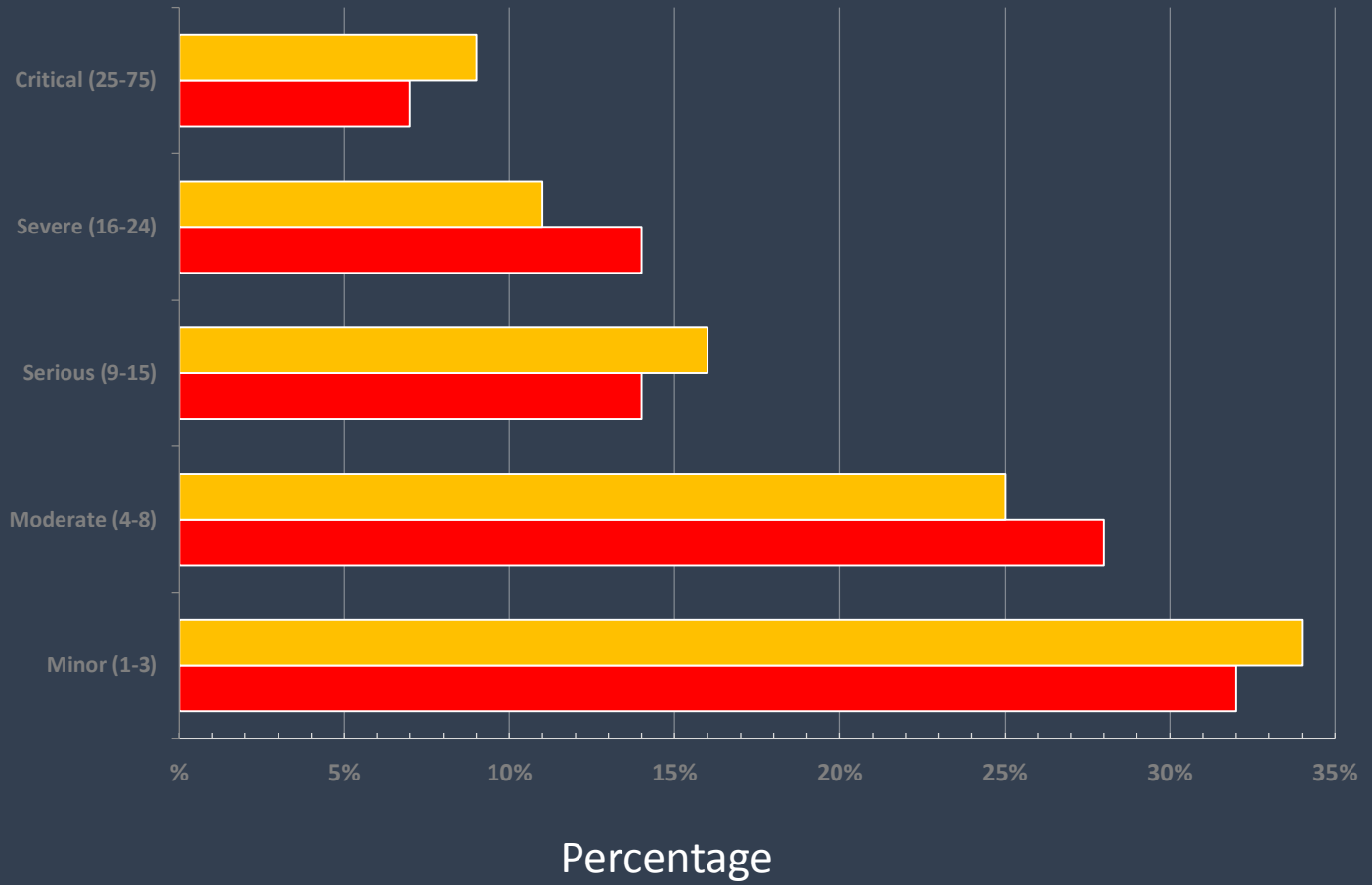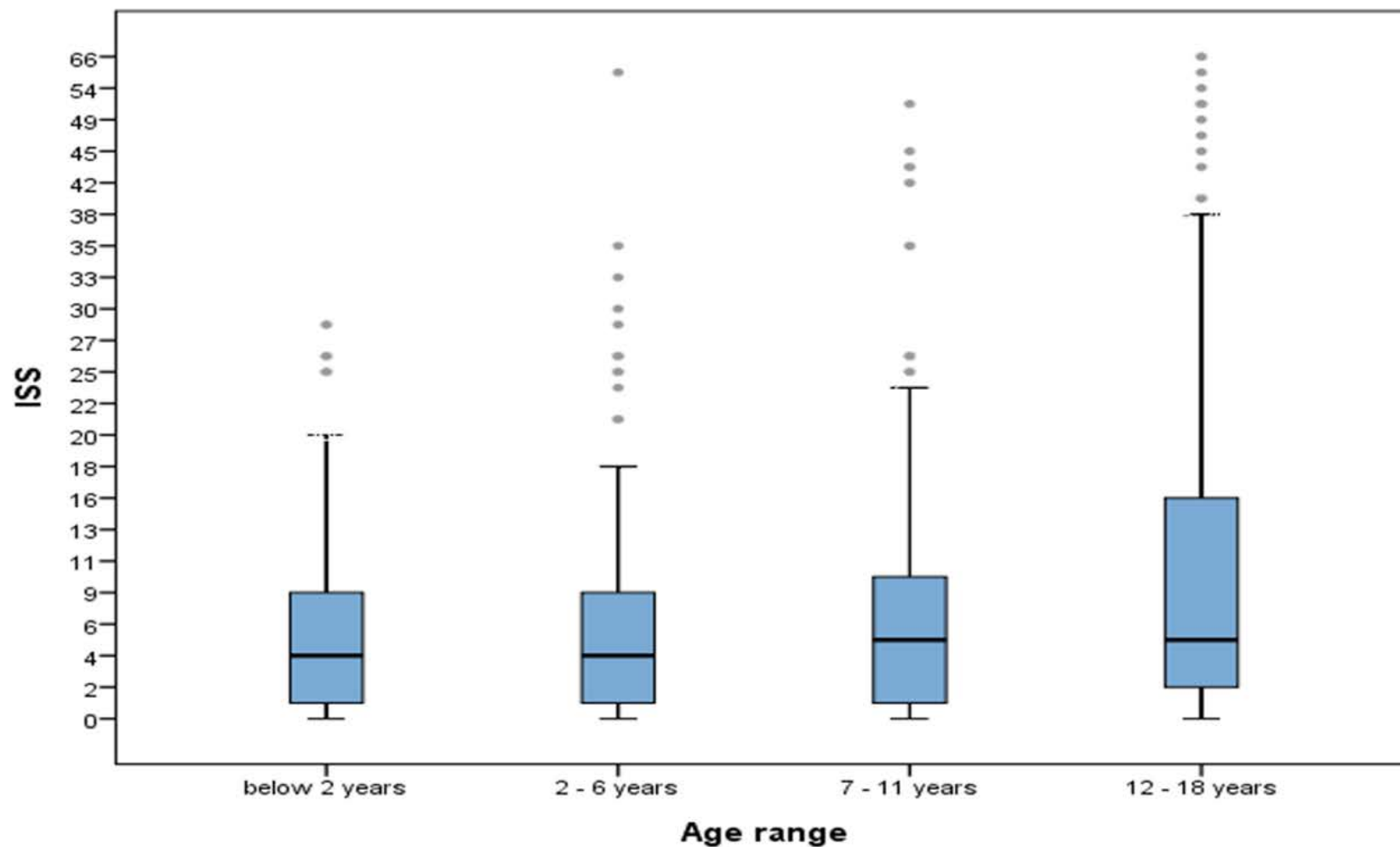3. To find the prevention focus and further research initiatives

Box plot of the injury severity scale by age group

Injury severity score (ISS) by epidemiological features among PA and non PA group

	N			ISS			Mean consumption of hospital bed day		
Gender	Non PA	PA	chi-square test (p value), df	Non PA	PA	t value (p value)	Non PA	PA	t value (p value)
Female	495	74	0.259 (0.611), df=1	7.76	9.73	1.301 (0.197)	10.34	17.53	0.073 (0.178)
Male	966	156		8.00	7.71	0.379 (0.705)	9.32	7.05	1.143 (0.253)
Intent									
Unintentional	1316	198	5.868 (0.319), df=5	7.74	8.22	0.722 (0.470)	9.48	10.10	0.655 (0.791)
Self-harm	39	10		15.56	14.60	0.146 (0.884)	28.49	15.56	0.582 (0.564)
Assault	72	17		6.97	8.24	0.631 (0.530)	5.12	11.19	1.726 (0.103)
Other	3	1		8.33	1.00	-	4.33	38.00	7.003 (0.020)
Unknown	31	4		8.03	1.75	3.197 (0.003)	5.13	4.50	0.104 (0.917)
Activities									
Work related	19	2	13.629 (0.058), df=7	8.74	2.50	0.653 (0.522)	20.08	7.00	0.382 (0.709)
Educational activities	13	3		9.46	10.67	0.199 (0.845)	3.88	2.33	0.507 (0.624)
Sports	117	14		5.99	7.71	0.920 (0.360)	4.09	3.62	0.380 (0.705)
Leisure activities	286	26		5.65	4.77	0.632 (0.528)	11.32	10.65	0.061 (0.952)
Travelling	334	68		10.41	9.26	0.842 (0.400)	8.19	13.63	0.945 (0.348)
Other	263	42		9.00	8.05	0.577 (0.564)	9.47	7.23	0.751 (0.453)
Unknown	429	75		7.28	9.13	1.625 (0.105)	11.06	10.70	0.087 (0.931)
Place of Injury									
Home, including garden and out buildings	482	57	13.922 (0.237), df=11	6.62	6.81	0.164 (0.870)	9.20	13.08	1.182 (0.238)
School, including kindergarten and schoolyard	38	8		9.68	9.50	0.047 (0.963)	4.68	2.71	0.821 (0.417)
Street/highway	392	83		10.56	10.10	0.365 (0.715)	9.43	13.28	0.793 (0.430)
Residential institution	25	3		9.16	7.00	0.274 (0.786)	5.07	5.67	0.156 (0.878)
Sports and athletics area	109	13		6.13	6.15	0.013 (0.990)	4.94	4.73	0.087 (0.931)
Other transport area	15	2		11.80	3.00	2.443 (0.041)	12.13	1.50	0.729 (0.477)
Industrial/construction	20	1		10.15	1.00	0.680 (0.505)	11.71	0.00	-
Farm, excluding home	2	-		9.00	-	-	3.50	-	-
Commercial	45	7		5.73	5.57	0.044 (0.965)	10.82	5.29	0.648 (0.521)
Countryside, water, sea	11	2		7.45	13.00	0.457 (0.724)	4.80	2.00	0.751 (0.472)
Other	69	12		7.90	5.50	0.987 (0.326)	7.35	6.45	0.260 (0.795)
Unknown	253	42		6.68	9.07	1.279 (0.207)	14.30	7.17	0.753 (0.452)
Trauma Centers Admission									
PMH	251	55	24.915, (<0.001), df=4	7.36	7.44	0.079 (0.937)	5.29	7.96	1.863 (0.063)
PWH	313	41		9.81	9.61	0.120 (0.904)	13.99	9.56	0.575 (0.566)
QEH	340	57		10.29	8.98	0.897 (0.370)	8.81	7.53	0.551 (0.582)
QMH	300	21		4.36	3.19	0.752 (0.452)	8.38	12.00	0.671 (0.503)
TMH	257	56		7.18	9.64	1.764 (0.079)	11.22	16.22	0.826 (0.409)

Conclusion

01 Epidemiological characteristics

02 Clustering characteristics of paediatric trauma

03 Additional research about risk and protective factors, and efforts to implement successful injury prevention strategies

04 Further study initiatives including injury surveillance, geographical analysis and environmental survey

Thank you