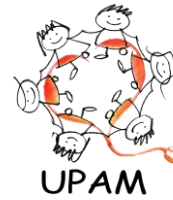




LI KA SHING FACULTY OF MEDICINE
THE UNIVERSITY OF HONG KONG
香港大學李嘉誠醫學院



A geographical study of child injury in Hong Kong: Spatial variation among 18 districts

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June 16, 2017

RESEARCH TEAM



Dr Patrick Ip, Clinical Associate Professor
Dr Chow Chun-bong, Honorary Clinical Professor
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Mr Frederick Ho Ka-wing, PhD Candidate
Mr Tung Tsz-suen, Research Assistant
Mr Lee Chun-yin, Research Assistant

AGENDA

- Study
 - Study Objectives & Purpose
 - Study Design
 - Study Deliverables
 - Conclusion & Recommendation
- Advocacy

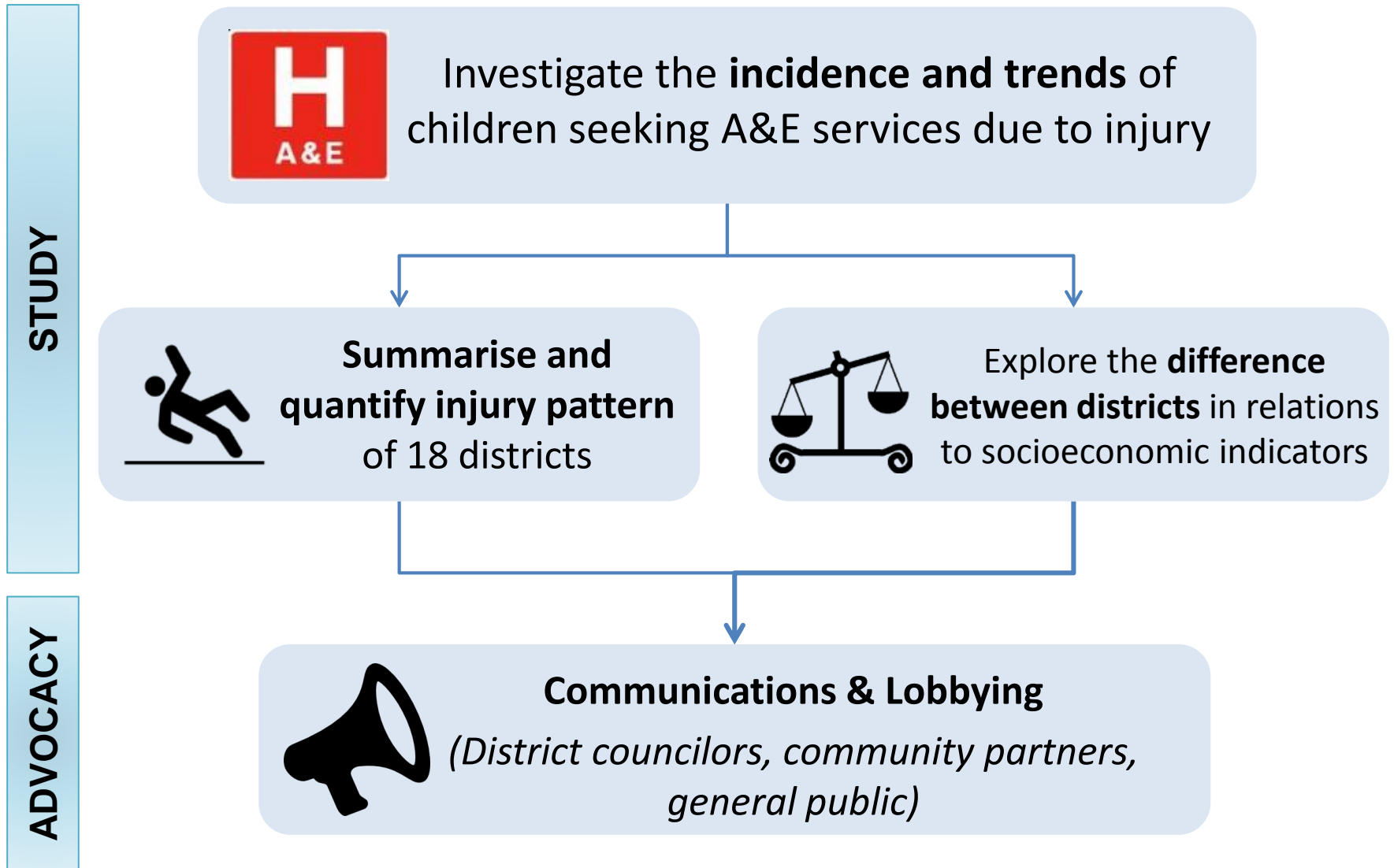
STUDY OBJECTIVE

This **retrospective study** aims to provide a comprehensive comparison of **injury accident and emergency attendance rates** among 18 districts through 2001 to 2012 by **spatial analysis** and explored the relationship between **injury and socio-economic statuses**.

STUDY PURPOSE

The findings provides useful HK-wide and district-specific data for **injury surveillance, prevention and resource planning for effective interventions**.

HEALTH PROMOTION: STUDY & ADVOCACY



STUDY DESIGN

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- **Research Period:** 2001 – 2012 (12 years)
- **No. of research cases:** 742,552
- **Research subjects:** 0-19 children received Accident and Emergency (A&E) services under Hospital Authority (HA) due to injury

DATA COLLECTION METHOD

- There are 3 main datasets:
 1. **Population data** (collect from Census Department)
 2. **Social indicators** (collect from Census Department)
 - i. Household size
 - ii. Median household income
 - iii. Tenure of accommodation
 - iv. Labor force participation
 3. **A&E attendance** (collect from Hospital Authority Patient Database – CDARS system)

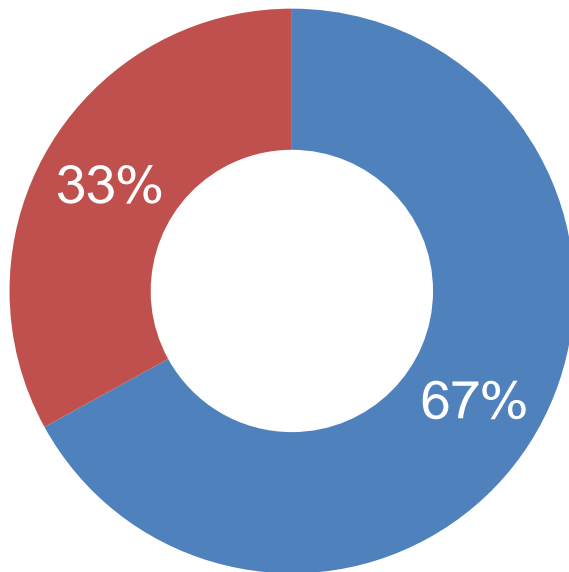
STUDY DELIVERABLES

1. HK Children Injury Pattern
2. Children Injury Pattern by District

HK CHILD INJURY SITUATION 2001-2012

INJURY CASES AT A&E – SEX & AGE DISTRIBUTION

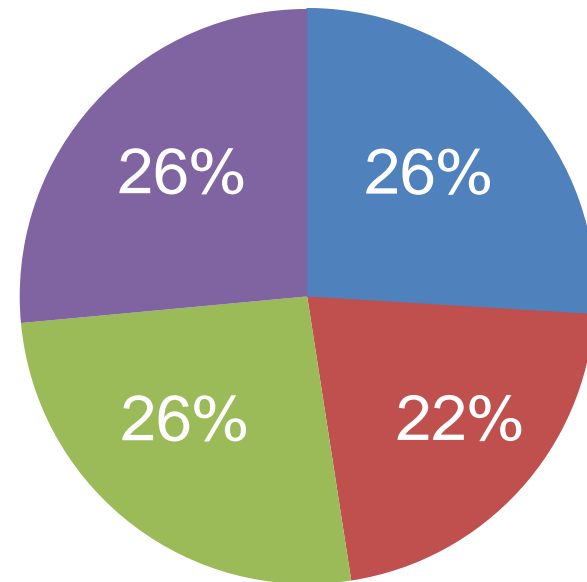
Sex



■ Male ■ Female

Male injury rate **doubled** that of female's.

Age

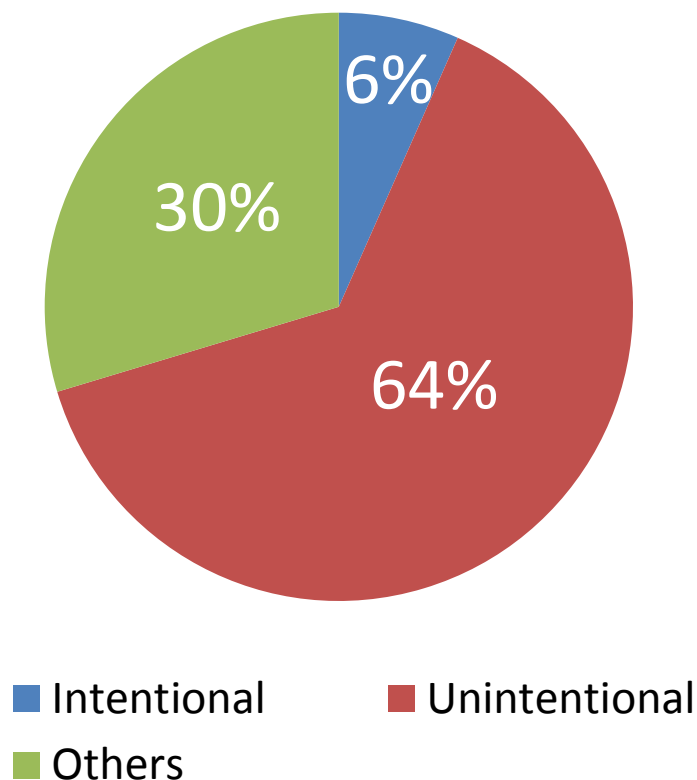


■ 0-4 years old ■ 5-9 years old
■ 10-14 years old ■ 15-19 years old

HK CHILD INJURY SITUATION 2001-2012

RANKING OF INTENTIONAL & UNINTENTIONAL INJURY

Intentional & Unintentional Injury

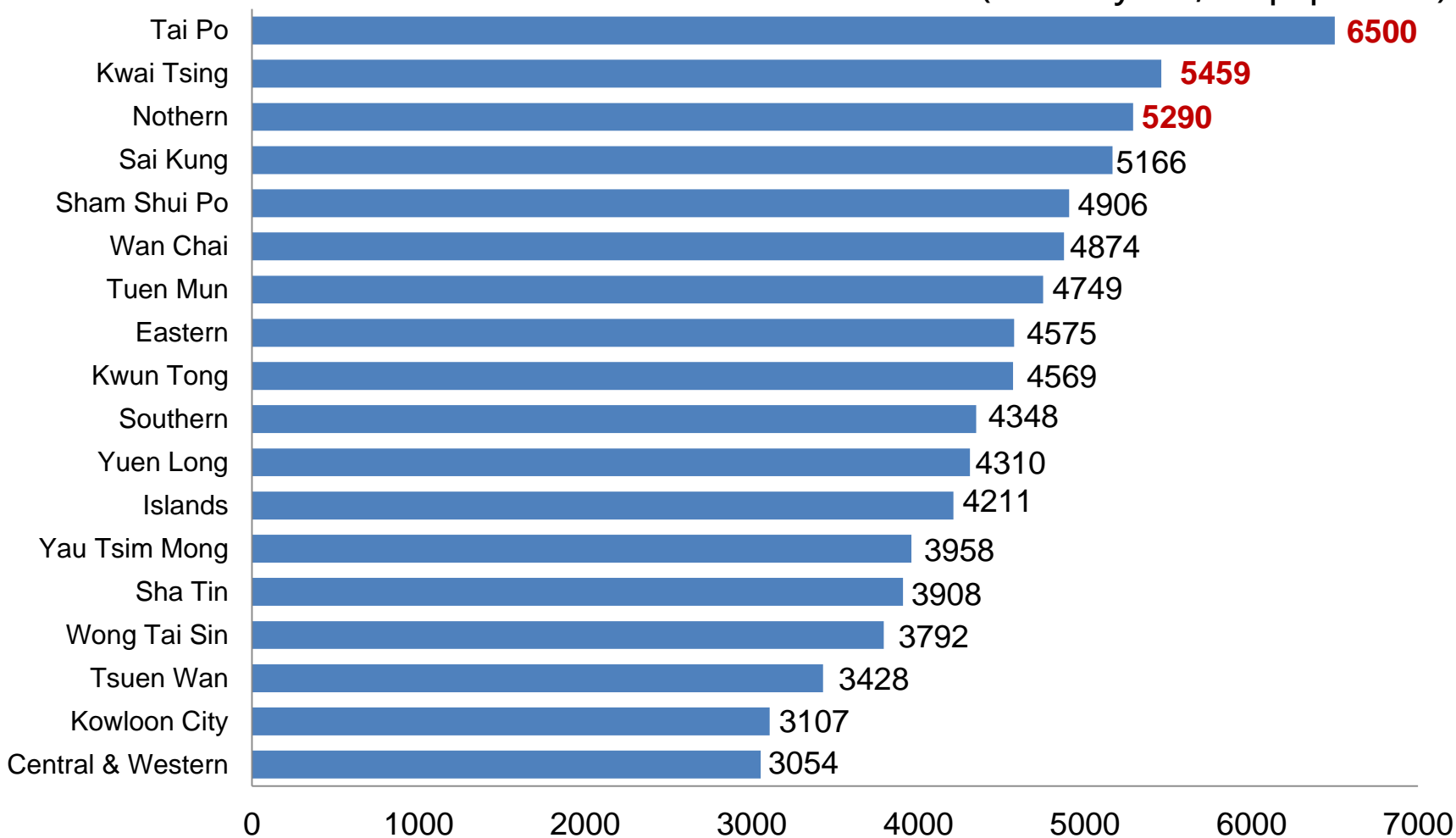


	Injury Type	Category
1.	Domestic	Unintentional
2.	Sports	Unintentional
3.	Common assault	Intentional
4.	Traffic accident	Unintentional
5.	Industrial	Unintentional
6.	Self-harm	Intentional
7.	Abuse	Intentional
8.	Indecent Assault	Intentional

HK CHILD INJURY SITUATION 2001-2012

Highest injury incidence: Tai Po District, Kwai Tsing District & Northern District

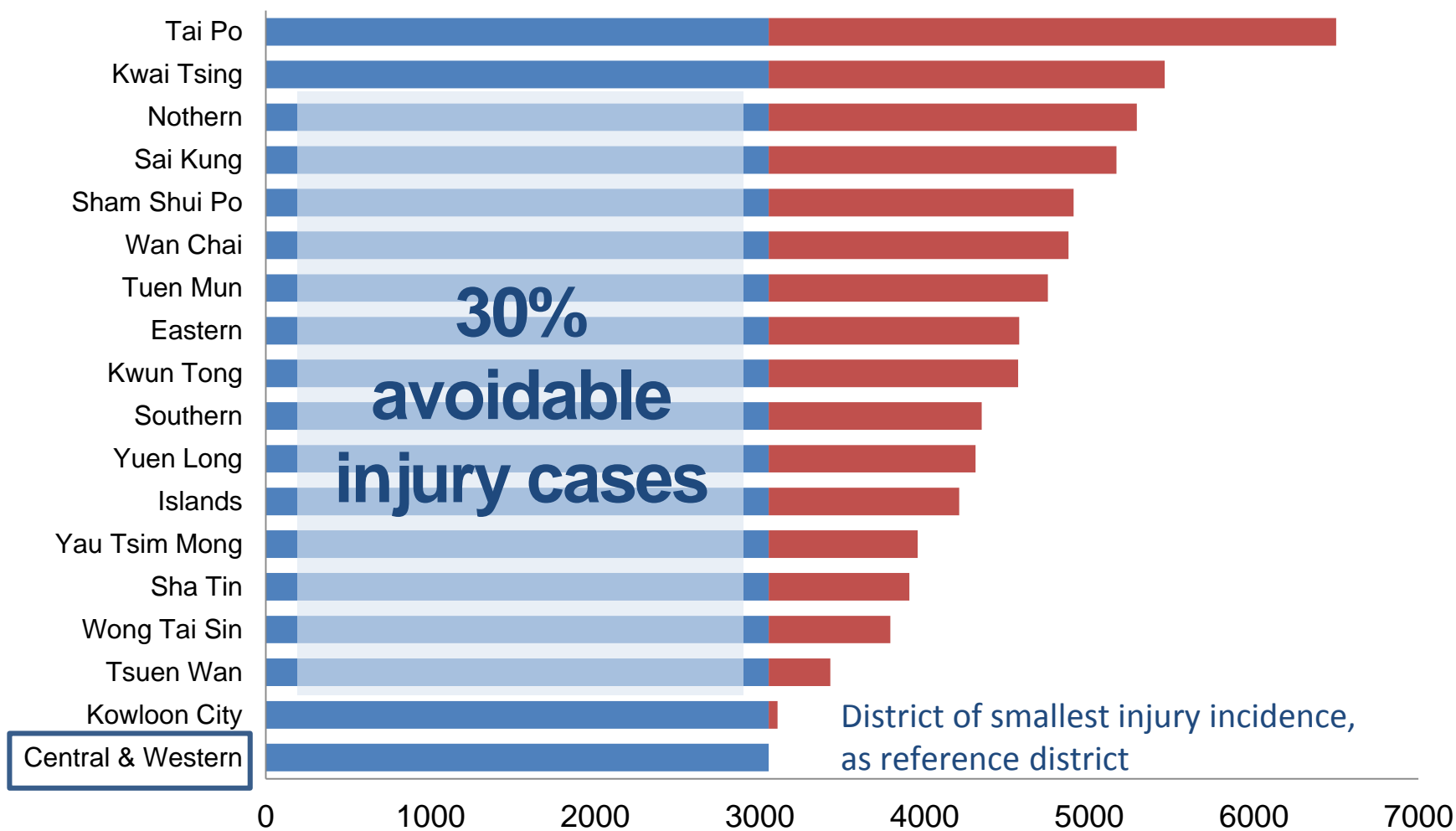
(Per every 100,000 population)



HK CHILD INJURY SITUATION 2001-2012

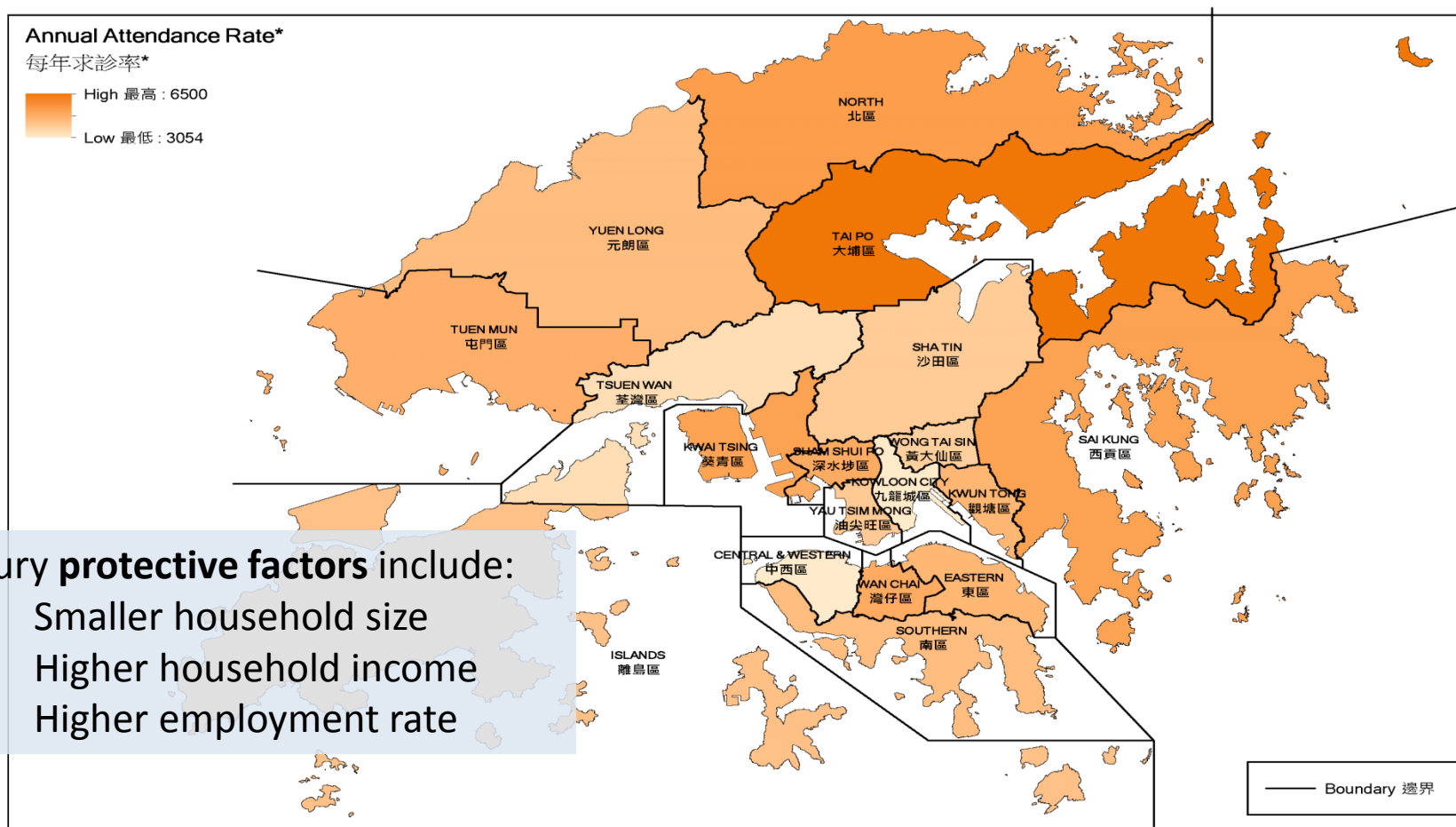
30% of injuries are avoidable, equivalent to HK\$13.6M annually

Avoidable injury : The remainder if all districts reach minimal injury rate



BY DISTRICT CHILD INJURY SITUATION 2001-2012

High socioeconomic districts have lower risks of injury



Injury protective factors include:

1. Smaller household size
2. Higher household income
3. Higher employment rate

Annual Injury AED Attendance Rates among Children 0-19 Years Old, by District, Hong Kong, 2001-2012

2001-2012年香港按區議會分區0-19歲兒童每年損到症室求診率

*Annual Injury AED Attendance Rate per 100,000 Population 每年每十萬人損傷急症室求診率

Data Source: CDARS, Hospital Authority
資料來源：醫院管理局臨床資料系統

BY DISTRICT CHILD INJURY SITUATION 2001-2012

ANNUAL CHILD INJURY RATE RANKING (FOR EVERY 100,000 POPULATION)

District \ Injury Type	All Injury	Common assault	Indecent assault	Abuse	Self-harm	Traffic accidents	Industrial accidents	Domestic accidents	Sport injury
Tai Po	1	1	10	14	3	1	1	3	1
Northern	2	2	13	11	9	2	4	8	5
Sai Kung	3	9	5	10	6	9	8	5	2
Kwai Tsing	4	4	9	3	15	8	2	2	3
Sham Shui Po	5	6	6	5	10	15	5	1	7
Wan Chai	6	15	11	8	17	5	16	6	4
Tuen Mun	7	5	4	2	13	4	3	16	11
Eastern	8	10	12	9	5	13	13	7	6
Kwun Tong	9	7	2	15	12	14	9	10	9
Southern	10	13	14	4	7	6	10	4	8
Yeun Long	11	3	3	1	14	3	6	17	13
Islands	12	12	8	6	11	17	11	9	10
Yau Tsim Mong	13	11	16	13	2	12	12	11	16
Sha Tin	14	14	17	18	1	7	14	18	14
Wong Tai Sin	15	8	1	7	4	10	7	14	12
Tsuen Wan	16	17	18	16	18	18	15	12	15
Kowloon City	17	16	7	12	8	11	17	15	18
Central & Western	18	18	15	17	16	16	18	13	17

BY DISTRICT CHILD INJURY SITUATION 2001-2012

TAI PO DISTRICT:

INTENTIONAL INJURY RANKING & TREND

Intentional Injury				
2001-2012	1	10	14	3
2001-2004	1	7	16	3
2005-2008	1	9	7	2
2009-2012	2	18	17	10
	Common assault	Indecent assault	Abuse	Self-harm

- **Injury of significant improvement:**
Indecent assault, self-harm
- **Injury needing further improvement:**
Common assault

BY DISTRICT CHILD INJURY SITUATION 2001-2012

TAI PO DISTRICT:

UNINTENTIONAL INJURY RANKING & TREND

	Unintentional injury			
2001-2012	1	1	3	1
2001-2004	2	1	3	1
2005-2008	4	1	4	1
2009-2012	1	2	5	1
	Traffic accident	Industrial accident	Domestic accident	Sport injury

- Unintentional injury situation is more serious than intentional ones in Tai Po
- **Improved injury:** Domestic & Industrial accident
- **Worsened injury:** Traffic accident

STUDY CONCLUSION

STUDY CONCLUSION

- **Around 30%** of injury cases are **preventable**
- Marked **geographical difference in injury patterns** exists between districts
- **Higher SES districts** are associated with lower injury risks

STUDY RECOMMENDATIONS

RECOMMENDATION ON CHILD INJURY SITUATION



Establish **injury surveillance** to effectively monitor injury situation for effective resource allocation.



District Councils should review child injury situation in respective districts to support interventions on reducing child injury



Set up **multidisciplinary committee**, including medical professionals, social workers, educators, police, engineers, etc, for holistic advice for injury cases and situations

RECOMMENDATION ON CHILD INJURY SITUATION



Improve injury-related database by connecting with other official databases, including traffic statistics of the Hong Kong Police Force & Transportation Department, child abuse data from Social Welfare Department and occupational injury database of Labour Department.



Open the Hospital Authority's database for easier and more effective access by researchers so as to provide ground research for policies.

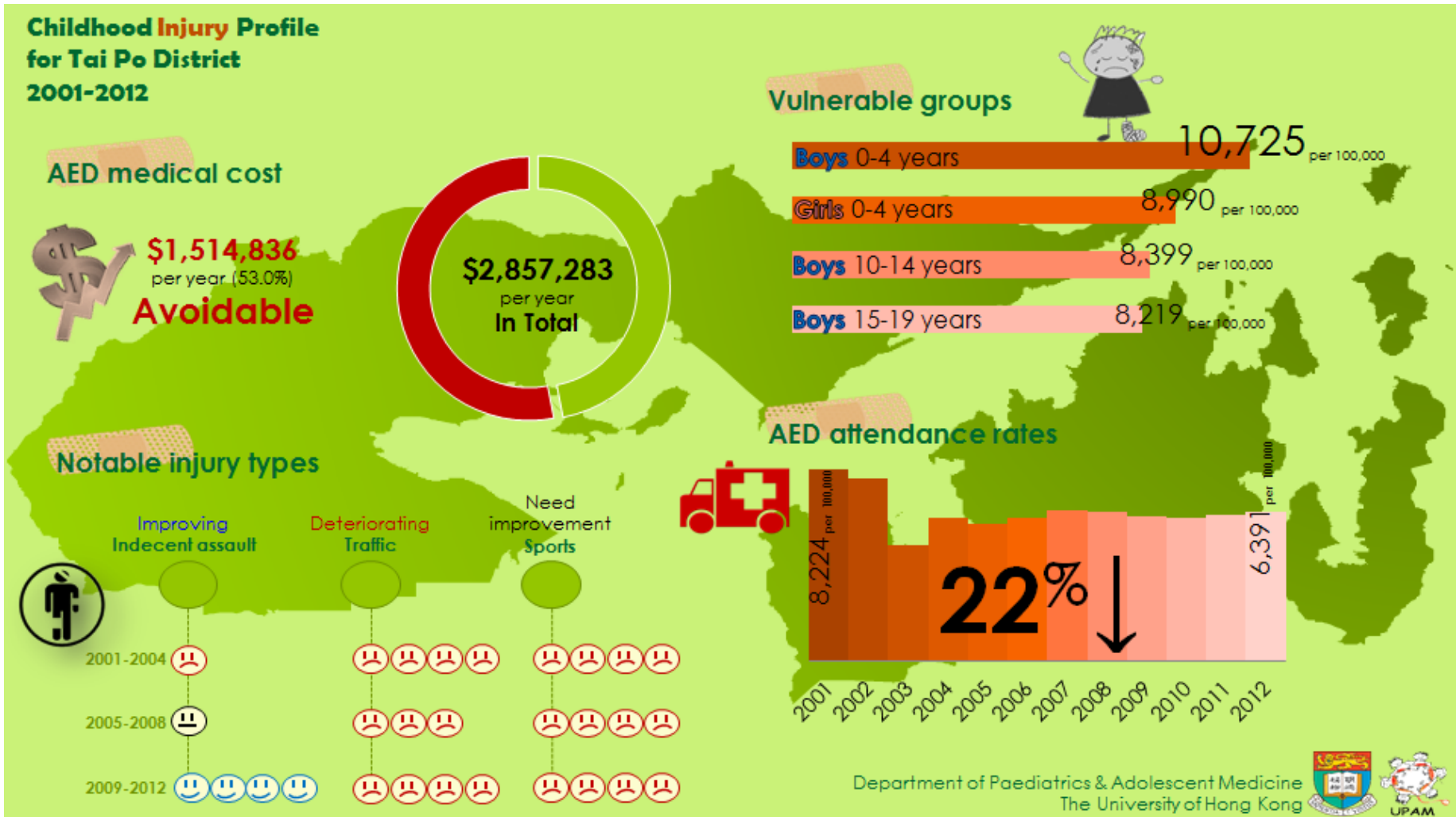


Establish child central database in a long run to consolidate child-related information for resource planning and usage on child-related issues.

ADVOCACY

1. Graphic information sheet
2. District Council lobbying
3. Press Conference
4. Media Interviews

Graphical district-based injury information sheet disseminated to NGOs, policymakers & general public



Meeting with district councilors to lobby for district-base intervention



Sham Shui Po
District Council



Southern
District Council



Press Conference releasing study results Resulting in over 60 media reports local & overseas

The Standard (27/4/2017)



Chief technician Wilfred Wong, left, Patrick Ip and Chew Chun-bong see various trends. SINGTAO

UNI TEAM IN PUSH TO CUT KID INJURIES

Carain Yeung

One in three accidents involving children can be avoided with measures carried out at the district level, saving HK\$13 million in accident and emergency expenses a year, a University of Hong Kong study found. Leading causes of childhood injury include domestic accidents, sports injuries and common assaults. HKU's pediatrics and adolescent medicine department found after looking into 742,552 A&E cases of those aged up

to 19. Unintentional injuries made up 64 percent of all cases from 2001 to 2012, and three intentional or others. The injury rate of males was twice that of females. Tai Po has the highest annual rate of children A&E cases with 6,500 recorded per 100,000 people, while Central and Western District had the lowest, at 3,054. The researchers highlighted an increasing trend observed in falls and abuse cases. The incidence rate for falls is the highest in Sai Kung with some 700 cases, compared with fewer than 200 in Central and Western. Abuse is the most serious in Yuen Long, four times that of Sha Tin. Children aged five to nine years old are more prone to abuse, making up about 30 percent of the 3,700 abuse cases annually.

Clinical associate professor Patrick Ip Pak-keung said socioeconomic status plays a role in the injury rate for childhood. For example, Ip said the average household income in Central and Western is four times that of Yuen Long. But he stressed the teams not stigmatizing the districts but said those with a higher injury rate can learn from ones with significant improvements or lower rates.

"If we could reduce the injury rates to a minimum in all districts, 30 percent of the accidents could be prevented, which is equivalent to 19,488 cases and could save about HK\$13.64 million of A&E expenses annually," said Ip, who called it a conservative estimate, as it excludes costs of hospitalization and psychological impact. With injury rates and differing causes in each district, department honorary clinical professor Chow Chun-bong called for intervention at the community level to target the problems. HKU is approaching district councils with the findings in the hope that policymakers will take action. The Hospital Authority should connect its database with relevant departments and there should be an injury surveillance system to monitor the situation, Chow said. In response to the report, Tai Po district councillor Kwan Wing-yip said he believes the promotion of road safety lowers the accident rate with a number of cycling paths in his district.

He said he has heard complaints from single or working parents over a lack of child-care services, adding that more such centers would help as a few new housing estates have sprung up in the district.

Sky Post (27/4/2017)

大埔兒童最易傷

在港區，每10萬名兒童每年有19.488宗兒童受傷個案，其中以意外受傷佔64%。大埔區兒童受傷率最高，每10萬名兒童每年有6,500宗受傷個案。而中西區受傷率最低，每10萬名兒童每年只有3,054宗受傷個案。

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Sing Pao (27/4/2017)

港大分析數據 大埔區兒童損傷率居首

【本報港聞部報導】香港大學醫學院兒科及青少年科專家分析了2001年至2012年期間，合共742,552宗19歲以下兒童急症個案。研究發現，大埔區兒童受傷情況最為嚴重，在墮打、交通意外、運動意外及工業意外損傷率都居榜首。元朗區需要兒童受傷數字不低，但患兒情況則最嚴重。研究團隊建議，政府應設立「損傷監察系統」，檢視各區情況，針對分配資源。

元朗區傷兒情況最嚴重

研究分析了742,552宗19歲兒童到公立醫院急症科的數據，發現兒童傷兒以男性居多，佔67%，女性則佔33%。在18區兒童受傷個案中，有三至五成的個案都可以預防。他指出：「若各地區的受傷率能減至最低水平，每年有高達三成的意外可預防，相當於19,488宗個案，每年能減少急症室開支約1.364億港元。」

他建議，長遠可設立兒童中央資料庫，集中處理兒童有關的資料，以促進有關兒童和兒童有關的資源規劃及運用。

三至五成的損傷可預防

港大兒童及青少年科學系臨床副教授梁祖恆發現，在7萬多宗兒童受傷個案中，有三至五成的個案都可以預防。他指出：「若各地區的受傷率能減至最低水平，每年有高達三成的意外可預防，相當於19,488宗個案，每年能減少急症室開支約1.364億港元。」

香港兒童受傷種類

意外受傷	64%
工業意外	6%
其他	30%

受傷類別排名	類別
1	家居意外
2	運動受傷
3	警鐘敲打
4	交通意外
5	工業意外
6	自我傷害
7	虐待
8	非違

資料來源：港大醫學院

香港18區兒童受傷情況 (01至12年)

地區	受傷比率 (每10萬計)	地區	受傷比率 (每10萬計)
南區	4,348	大埔區	6,500
元朗區	4,310	葵青區	5,459
離島區	4,211	北區	5,290
沙田區	3,958	西貢區	4,906
沙田區	3,908	灣仔區	4,874
黃大仙區	3,792	屯門區	4,749
葵青區	3,428	東區	4,575
九龍城	3,107	觀塘區	4,569
中西區	3,054		

資料來源：港大醫學院

Sing Tao Daily (27/4/2017)

大埔童受傷最多 葵青北區緊隨

受虐個案 年達3600宗

大埔區兒童受傷率最高，西貢及元朗區分別在兒童跌傷及因虐待而受傷方面居首。港大醫學院相信，兒童受傷或與該區經濟設計、社區設施、家庭社會經濟能力及教育資源有關，已交咨政務會與社會局。學院建議每年有三成意外，約二萬宗個案可預防，借政府設立監察系統及資料庫，助分析及改善個別受虐個案的設施等。

萬九宗可預防

其中兒童最易受傷則為家庭暴力。醫管局每年平均錄得約三萬三千宗家庭暴力個案，其中以兒童受傷個案佔百分之三。其次為大埔區及葵青區，其次是中西區。兒童因受虐待而求助的個案，醫管局每年平均錄得三萬三千宗。其中以九歲兒童最高，佔一萬一千宗。其次為十至十四歲兒童，元朗區的相關宗數人次最高，每十萬人中有四十二點六人，屯門及葵青區第二、三位，最少為中西區及沙田。



香港大學醫學院兒科及青少年科專家...

教研研發F4版

Media Interviews

In-depth interviews on Chinese and English radio channels

Hong Kong Today, RTHK(27/4/2017)



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Hong Kong Today

Description:
RTHK's morning news programme. Weekdays 6:30 - 8:00

Presenter:

[This Episode](#) [All Episodes](#)

2017-04-27
Thursday

Now playing: Kids in low-income districts more prone to injury



自由風自由 Phone (27/4/2017)



自由風自由 PHONE

類型: 聲音 語言: 中文 分類: 時事 狀態: 播放中

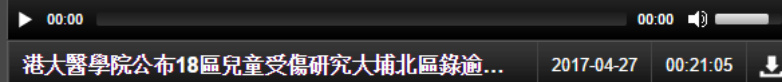
節目簡介:
自由風自由 Phone

主持: 陳燕萍、區家麟、馮德雄
評論員: 雷鼎鳴、陳婉嫻、李卓人、張國華 (2017年4月5日起)
監製: 鄭婉薇
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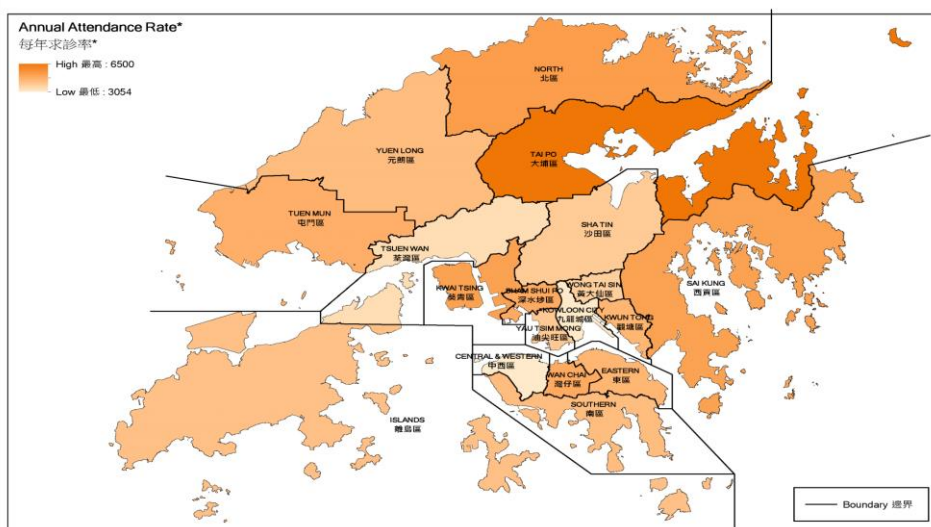
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訪問: 黃慶生 (港大醫學院兒童及青少年科學系名譽導師)

As a recap of my presentation



- Injury situation
- Protect our children
- Reduce the injury rate

Hong Kong Childhood Injury Prevention and Research Association

<http://www.childinjury.org.hk/>

 **香港兒童安全促進會**
Hong Kong Childhood Injury Prevention and Research Association

資源中心

十八區分區兒童受傷情況

- 校本意外預防課程
- 互動教學遊戲及動畫
- 小一至小六常識科輔助教材
- 怎樣預防家居意外?
 - 撞擊
 - 燒傷/燙傷
 - 刺傷
- 急救常識知多少?
- 香港兒童意外受傷報告
- 相關網頁
- 兒童損傷概覽
- 兒童受傷與社區政策的關係

中西區

類別	2004-2005	2006-2007
意外個案總數	5948,723	4,257
受傷兒童總數	5,157	3,157
受傷兒童百分比	86.7%	74.3%
受傷兒童減少百分比	-	29%

深水埗區

類別	2004-2005	2006-2007
意外個案總數	22,289,457	8,599
受傷兒童總數	5,919	3,157
受傷兒童百分比	26.5%	36.3%
受傷兒童減少百分比	-	47%

東區

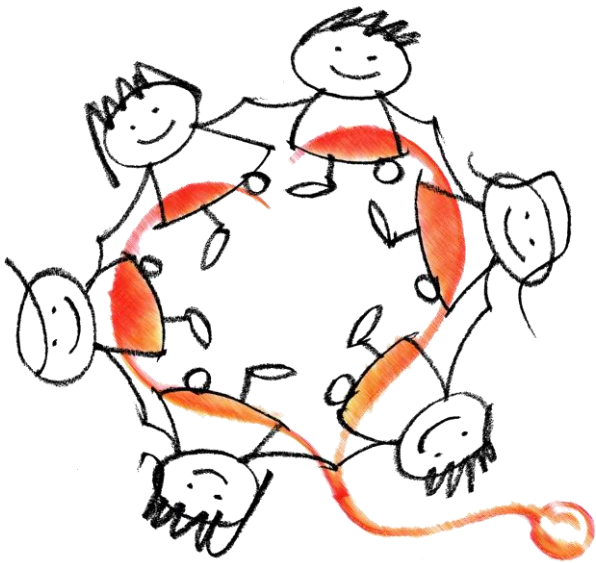
類別	2004-2005	2006-2007
意外個案總數	53,420,083	7,242
受傷兒童總數	5,875	3,157
受傷兒童百分比	11.0%	43.3%
受傷兒童減少百分比	-	27%

南區

類別	2004-2005	2006-2007
意外個案總數	51,497,517	4,570
受傷兒童總數	5,116	3,157
受傷兒童百分比	9.9%	61.3%
受傷兒童減少百分比	-	18%

Windows Taskbar: 14:48, 13/6/2017

Thanks!



UPAM

