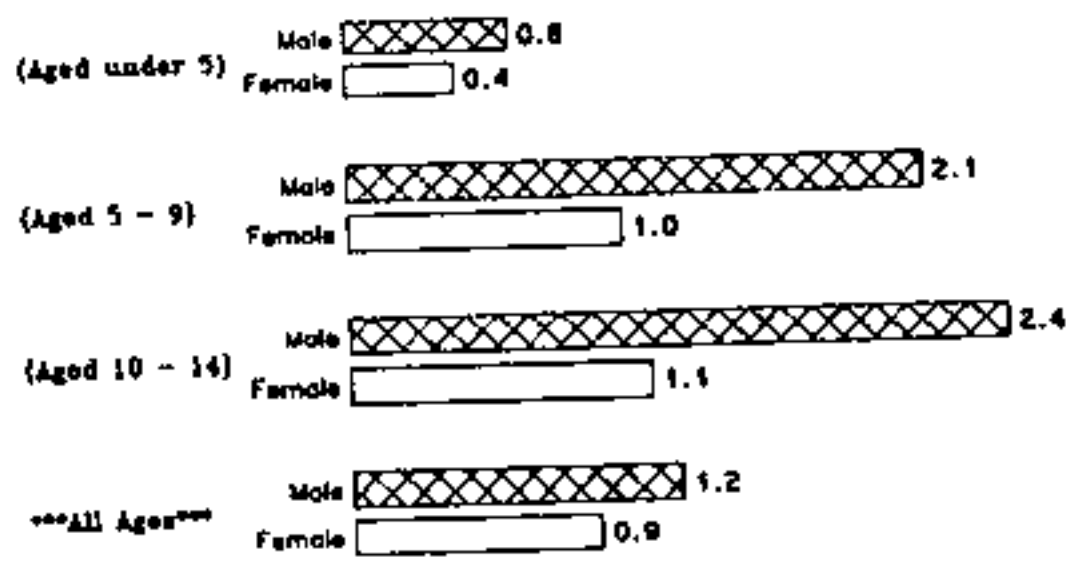
took at the injury rate of child pedestrian or the number of pedestrian got injured in 1,000 population, we have for age 5, 0.6 for male and 0.4 for female; for age between 5-9, 2.1 for nd 1 for female; for age between 10-14, 2.4 for male and 1.1 for e whereas for all ages we have 1.2 for male and 0.9 for female. these figures we can see that male child pedestrian between the 5-14 is more likely to get injured than pedestrian of most other

(Appendix 4)

ROAD TRAFFIC CHILD PEDESTRIAN CASUALTY RATE
PER 1000 POPULATION BY AGE BY SEX
1991

endix 4 :

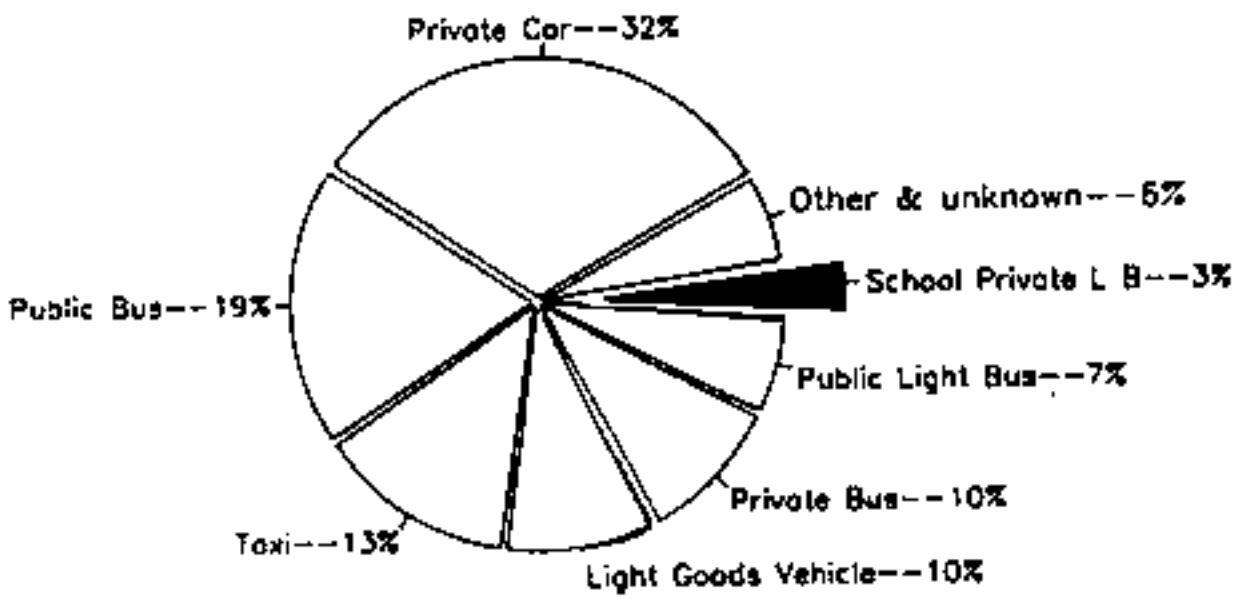


Pedestrian casualty rate for all ages of both sexes = 1.1

or the 941 passenger casualtics of age under 15. 32% involve private ar, 19% public bus, 13% taxi, 10% light goods vehicle, 10% private bus, 7% public light bus and 3% school private light bus. Therefore private car and public bus are the 2 types of vehicles in which there are more child passengers injured. *(Appendix 5)*

Appendix 5 :

ROAD TRAFFIC CHILD PASSENGER CASUALTIES
AGED UNDER 15 BY TYPE OF VEHICLE
1991

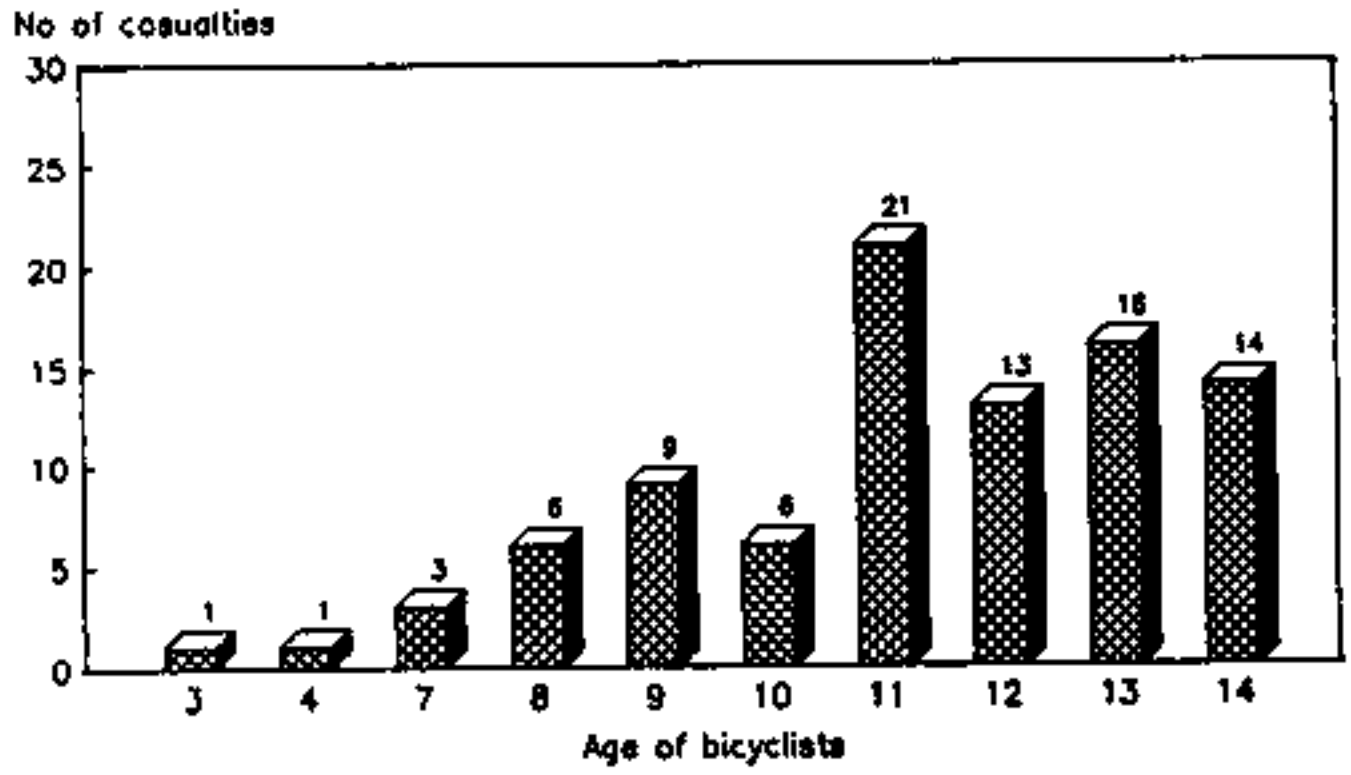


Child passenger casualties = 941

There are not too many child bicyclists who got injured in 1991 or 90 in number and their age distribution is shown in figure 6. It obvious that the 11-14 age group has a higher number of casualti *(Appendix 6)*

Appendix 6 :

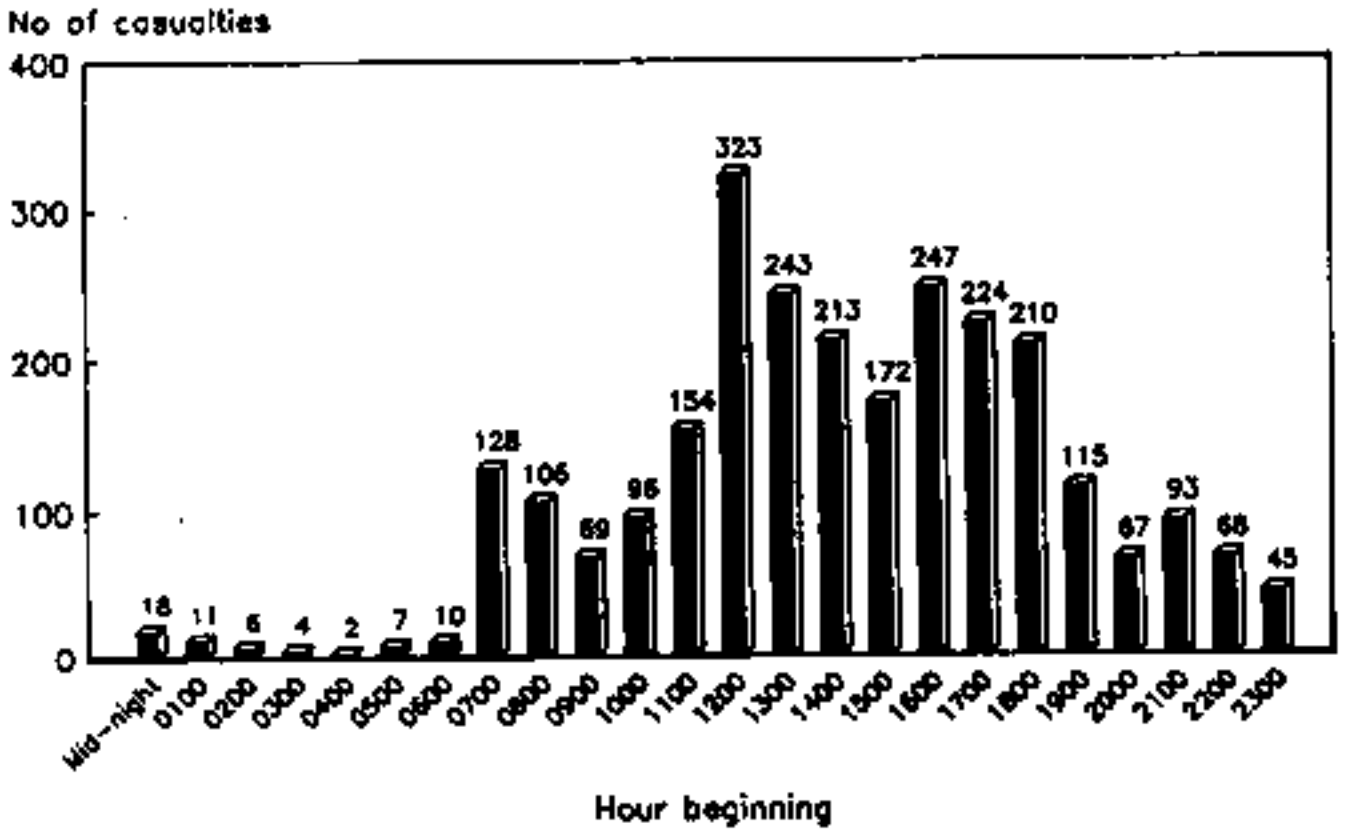
ROAD TRAFFIC CHILD CASUALTIES AGED UNDER 15
BY BICYCLISTS BY AGE
1991



As to the time of the day at which the child casualties got injur the periods noon to 1 p.m. and 4 to 5 p.m. are the time when t highest number of child casualties got injured. These are the sch dispersal hours. *(Appendix 7)*

Appendix 7 :

ROAD TRAFFIC CHILD CASUALTIES AGED UNDER 15
BY HOUR OF THE DAY
1991



FFIC ACCIDENT DATA SYSTEM

charts you have seen provide some very interesting information ut child casualties in traffic accidents. They would be icularly useful for the road safety workers. You may now ask re do these information come from? How are they stored and ieved and what information are available?

is diagram will give answers to these questions. *(Appendix 8)*

A traffic accident involving personal injury has occurred.

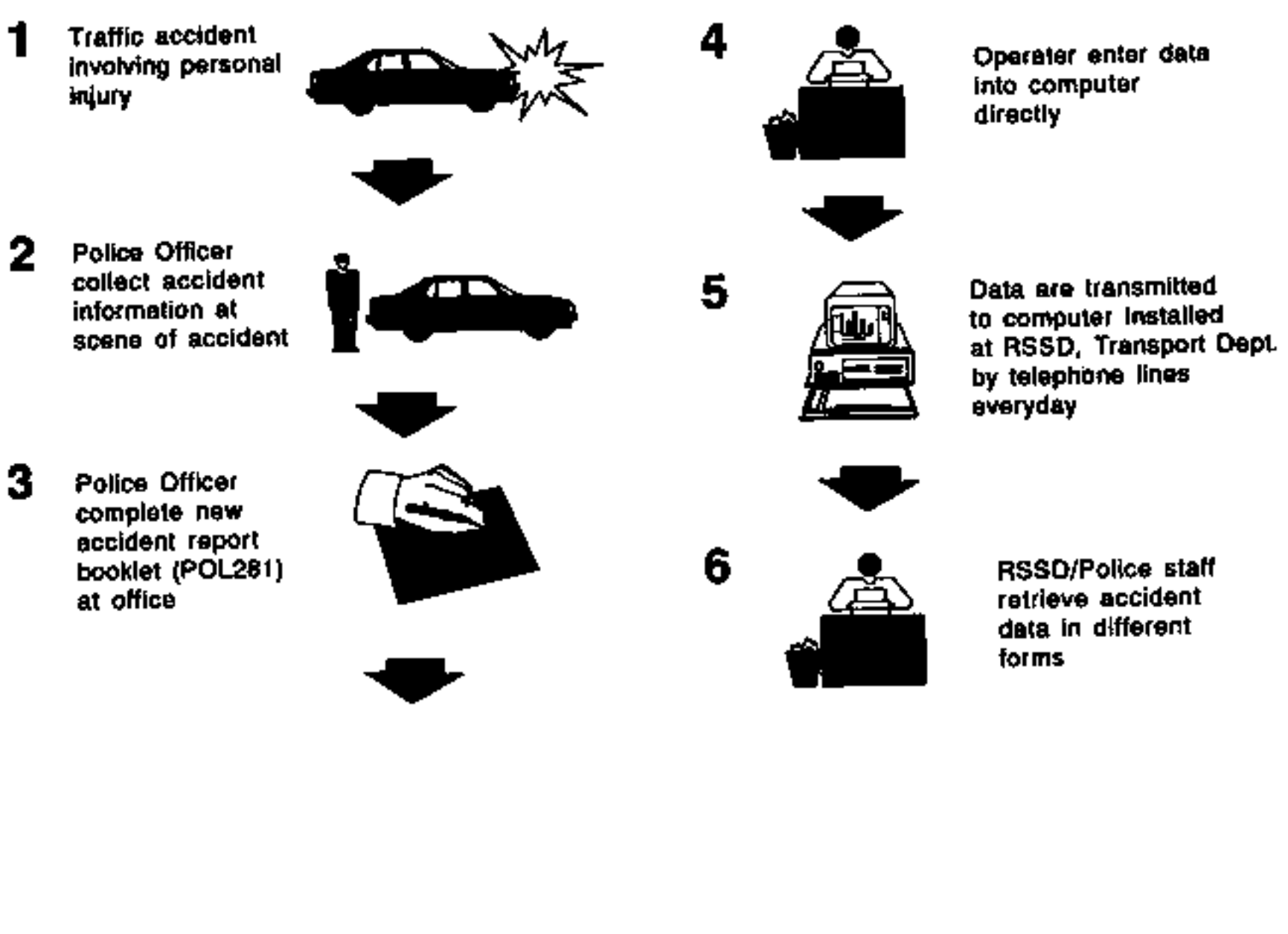
The Police will rush to the site and collect information.

i) The information collected are in accordance with a Police form known as POL 281.

v) The information are then entered into the computer through a computer terminal at the Police district office.

) The data are transmitted to the computer installed at Transport Department by telephone lines.

vi) TD/Police staff can retrieve accident data from their terminals in whatever form they like.



This is how the accident report form Pol 281 looks like. *(Appendix 9)* :

	Date	Initial
Initial Entry		
Amendment		
Amendment		
Final Entry		

TRAFFIC ACCIDENT REPORT BOOKLET
(INJURY CASE)
交 通 意 外 報 告
(涉 及 傷 人)

1 ARB Number 2 Severity 3 Pol. Div. 4 District Board Area

Fatal 致命	1
Serious Injury 重傷	2
Slight Injury 輕傷	3

Reporting Officer
Name
Number Rank
Unit
Team Inspector
Division

5 Hit and Run? (Yes 1 / No 2)

6 Date of accident (day / month / year) 7 Time (hours / mins) 8 Day of week (Mon 1 / Tue 2 / Wed 3 / Thu 4 / Fri 5 / Sat 6 / Sun 7)

Exact Location
9 Street Name
10 Within 70m of junction? (Yes 1 / No 2)
11 Second street name
12 Within 20m of junction? (Yes 1 / No 2)
14 Identifying feature (eg lamp-post number)
13 Grid reference Easting Northing
Areas are for office use only
15 Precise location
16 How accident happened
17 Number of vehicles
18 Number of casualties

ol 281 is divided into 3 parts: *(Appendix 10)*

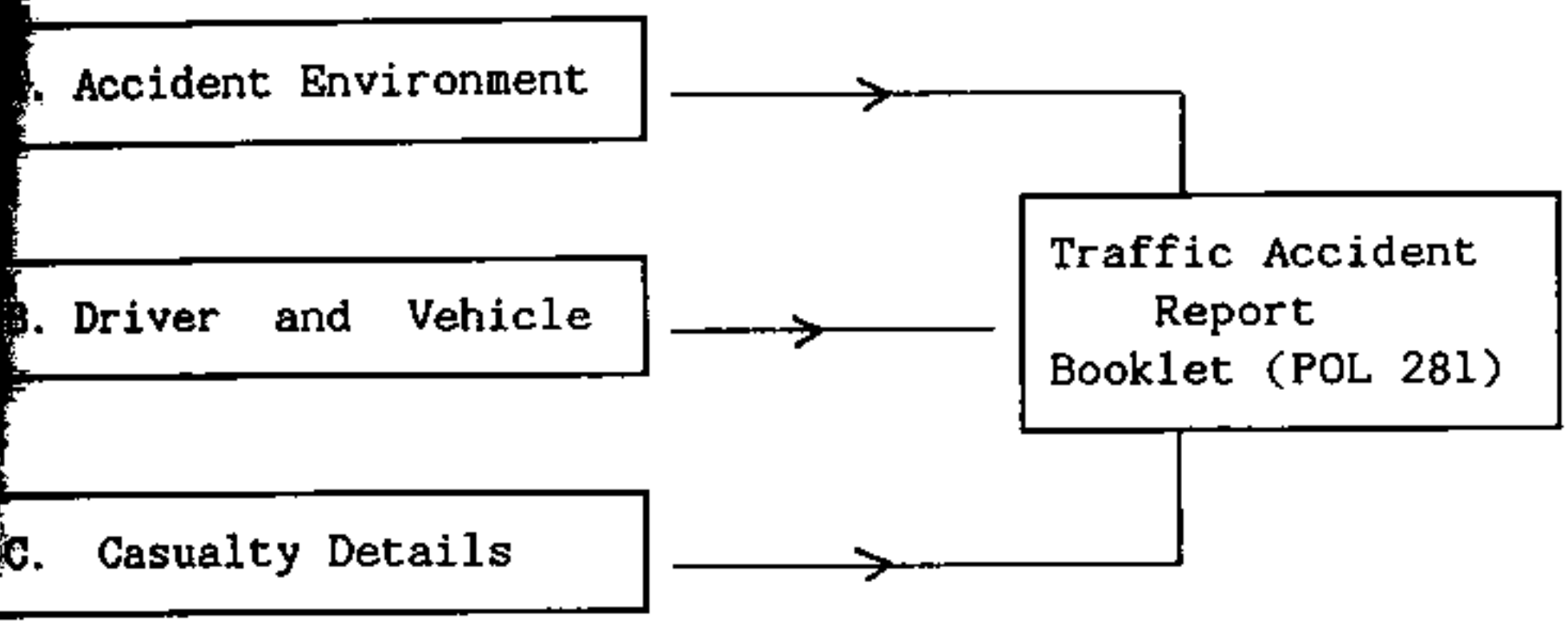
nformation on accident environment

Driver and vehicle information

Information of all casualties

endix 10 :

ACCIDENT DATA INPUT



For accident environment, we include the date, time, location of the accident, a brief description of how the accident happened, as well as the weather, road and traffic conditions. *(Appendix 11)*

Appendix 11 : *Accident Data Input*

A. Accident Environment
- *Date*
- *Time*
- *Location*
- *How accident happened*
- *Weather*
- *Road condition*
- *Traffic condition*

For driver and vehicle information, we include the particulars of the driver, his name, age, sex, the type of driving licence he holds, particulars of the vehicle, insurance details, the movement of the vehicles just before the accident, what the vehicle collided with, how the vehicle was damaged, whether the vehicle has been examined after the accident, for goods vehicles what type of load and how was it carried, whether the vehicle caught fire, skidded or overturned in the accident etc. *(Appendix 12)*

Appendix 12 : <u>*Accident Data Input*</u>

B. Driver and Vehicle
- *Name*
- *Age*
- *Sex*
- *Driving licence type*
- *Vehicle registration number*
- *Vehicle details (class, make, model, colour etc.)*
- *Insurance details*
- *Vehicle manoeuvre*
- *Vehicle collision with*
- *Vehicle damage*
- *Vehicle examiner's report*
- *Loading condition (if goods vehicle)*
- *Vehicle caught fire ?*
- *Skidding / Overturn*

For casualties, the particulars of each of them name, age, sex, degree of injury (fatal, serious or slight), whether he is a driver, passenger or pedestrian, which part of his body was injured, for driver or passenger whether seat belt or crash helmet was worn, for passenger his seating position and for pedestrian the location and the direction of movement before he was hit etc. *(Appendix 13)*

So these are the information contained in our traffic accident data system. The charts you have seen earlier on about child casualties are in fact output of this data system.

ndix 13 :

Accident Data Input

C. Casualty Details
- *Name*
- *Age*
- *Sex*
- *Degree*
- *Role (driver. passenger. pedestrian)*
- *Location of injury*
- *Seatbelt or crash helmet worn ?*
- *In which vehicle*
- *Seat position*
- *Pedestrian information*
- *(location. movement. direction. special circumstances)*

CCIDENT INVESTIGATION

would like to turn to another aspect of our road safety works, vestigation of accident black sites.

The current criteria of a blacksite is (i) sites with 9 or more accidents of any type during the past 12 months or (ii) sites with 6 or more pedestrian accidents during past 12 months. The reason for paying more attention to pedestrians is that they are the most vulnerable group of the road users and are more likely to be seriously injured in accidents. *(Appendix 14)*

Appendix 14 : *Blacksite Criteria*

Sites with 9 or more accidents of any type

- *Sites with 9 or more accidents of any type during past 12 months .*

- *Sites with 6 or more pedestrian accidents during past 12 months .*

Having established the criteria we can ask the computer to provide a list of sites which satisfy the criteria. Table 2 shows the latest black site list of Hong Kong Island. List for Kowloon and NT can also be produced. *(Appendix 15)*

Date : 04/11/92

Transport Department - RSSD
Blacksite list for Hong Kong Region
(In order of sites with most accidents)
for period between 01/10/91 and 30/09/92

1st Street	2nd Street/Ident. Feature	Total	No. of accident by type pedestrians	fat/s
HENNESSY RD	PERCIVAL ST	13	9	4
CONNAUGHT RD W	WATER ST	12	2	4
KING'S RD	POWER ST	12	10	4
DES VOEUX RD C	PEDDER ST	10	8	2
CANAL RD E	HENNESSY RD	9	6	1
DES VOEUX RD W	SUTHERLAND St	9	7	4
HILL RD	QUEEN'S RD W	9	9	3
TAI TAM RD	SHEK O RD	9	0	3
CATCHICK ST	SMITHFIELD	8	7	4
DES VOEUX RD C	POTTINGER ST	7	7	3
LOCKHART RD	O'BRIEN RD	7	6	1
TIN LOK LANE	WAN CHAI RD	7	6	0

Number of blacksites in Region : 12

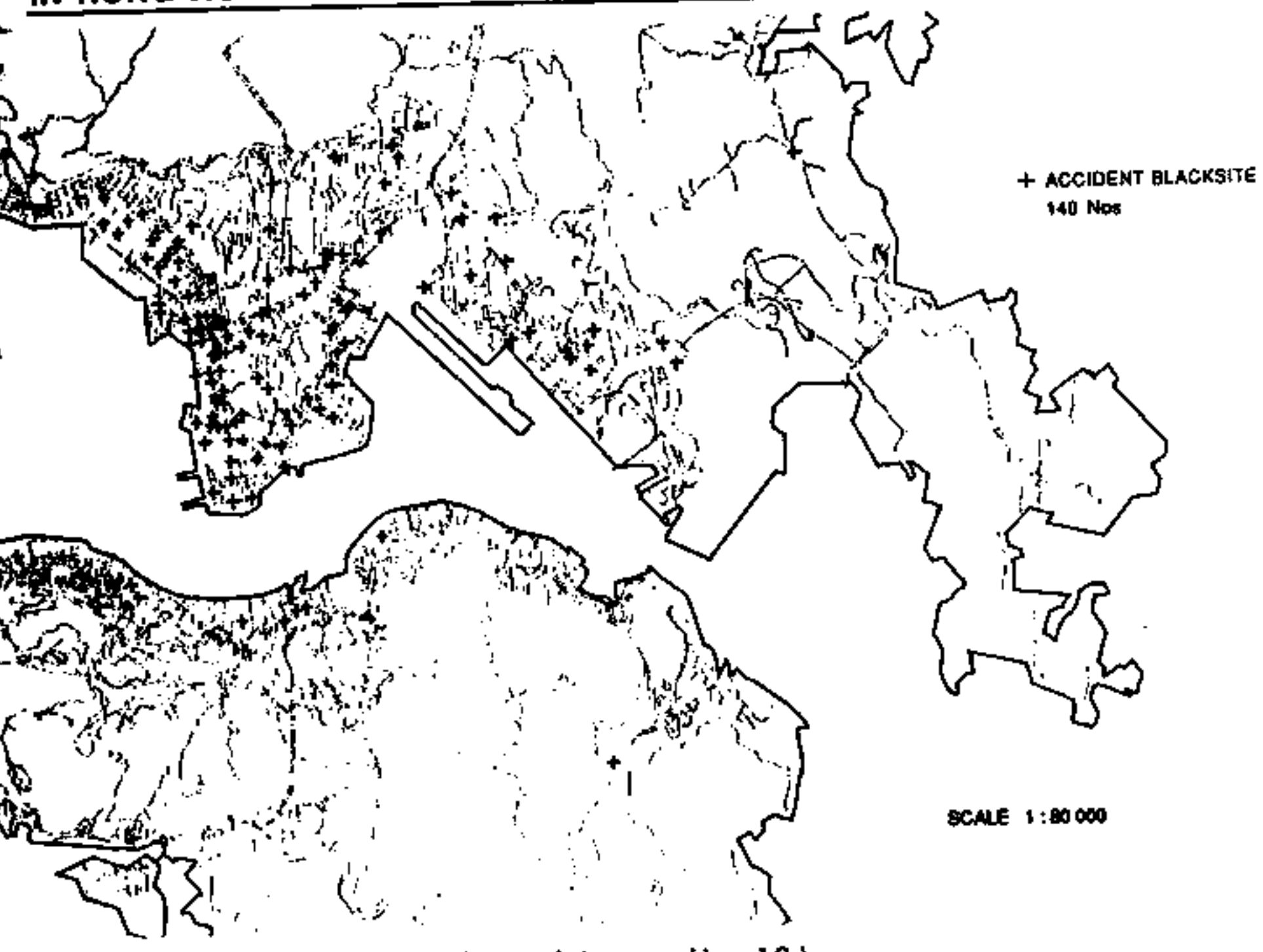
Currently we have altogether 146 black sites most of which are in Kowloon. *(Appendix 16)*

Appendix 16 :

Number of Blacksite
(October 1991 - September 1992)

Hong Kong Island	-	*12 Nos.*
Kowloon	-	*128 Nos.*
New Territories	-	*6 Nos.*
Total		*146 Nos.*

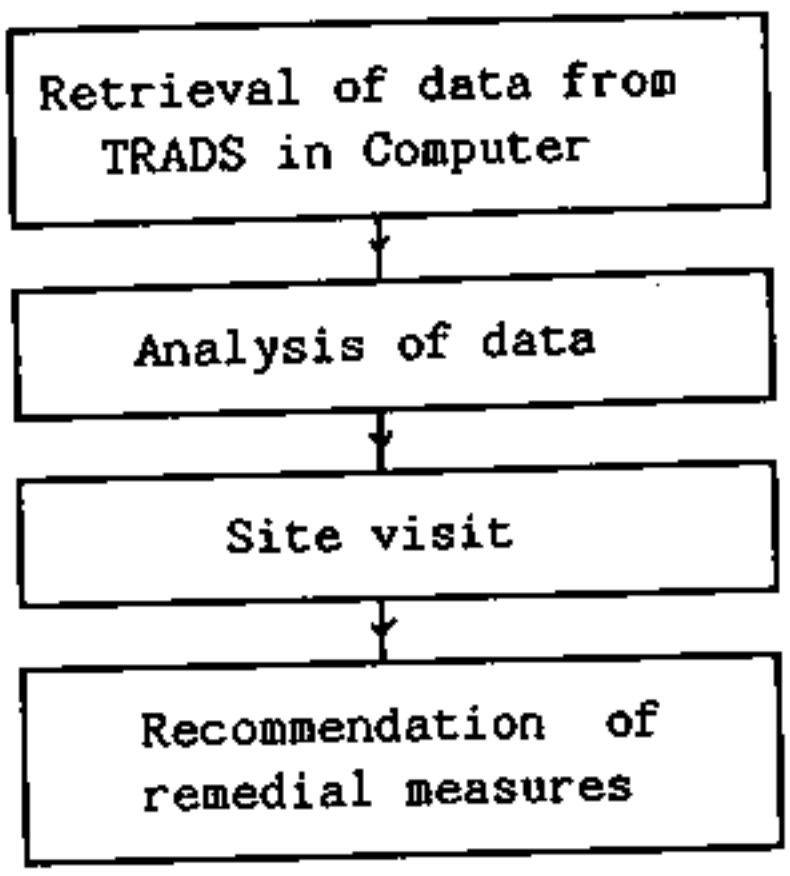
can ask the computer to produce a map plot showing the of the black sites on a map. We can see that in Kowloon, a tion of the black sites is on the western part, that is, Yau Mong Kok and Shamshuipo. *(Appendix 17)*



nvestigation of a black site involves *(Appendix 18)* :

ppendix 18 :

INVESTIGATION OF A BLACKSITE



i) Retrieval of data from the accident data system.

ii) Analysis of data. In this process we try to identify t distinct patterns of the accidents which are characteristics the site under investigation and the factors which are believ to have contributed to these accidents.

iii) With the factors contributing to these accidents in mind, then carry out a site visit to try to get the feeling of t parties involved in accident under the prevailing road a traffic conditions. In so doing we hope to identify t shortcoming of the site.

iv) We would then be in a position to recommend some engineeri measures to cater for the identified shortcomings. T engineering measures that we normally recommend for a black s are, traffic signal skid-resistant surfacing, safety fen pedestrian railing, traffic sign, road marking and some mi road improvement works etc. *(Appendix 19)*

Appendix 19 :

Type of Remedial Measures

- *Traffic signals*
- *Skid-resistant surfacing*
- *Safety fence*
- *Pedestrian railing*
- *Traffic sign*
- *Road marking*
- *Minor road improvement works*

I would like to show you a typical accident black site and t remedial measures which have been implemented as a result of o investigation.

WONG STREET IN SAU MAU PING

te is a section of Hiu Kwong Street in Sau Mau Ping area below au Ping Estate. The diagram here shows the accident situation and after the implementation of remedial measures on this site. before situation there were altogether 14 accidents comprising estrian accidents and 8 other accidents occurred in this site a period of 12 months. The problem identified is the lack of r pedestrian crossing facility and the presence of parked les which blocked the motorists' visibility of crossing rian. *(Appendix 20)*

dial measures recommended involve the installation of a pair of e islands and some pedestrian railings to guide pedestrian to at a suitable location. At the same time stopping restriction mposed to remove stopping and parking of vehicles at the vicinity e crossing.

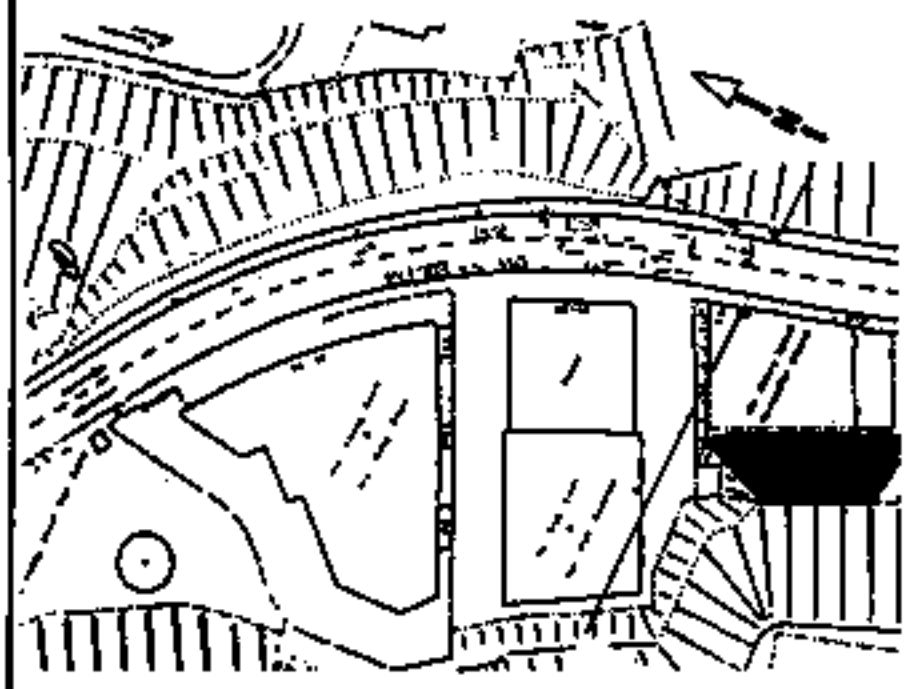
effective are these measures? Let us look at the plan on the t hand side. In the 12-month period after the measures were oduced, there were only 1 pedestrian accident and 4 other dents.

Appendix 20

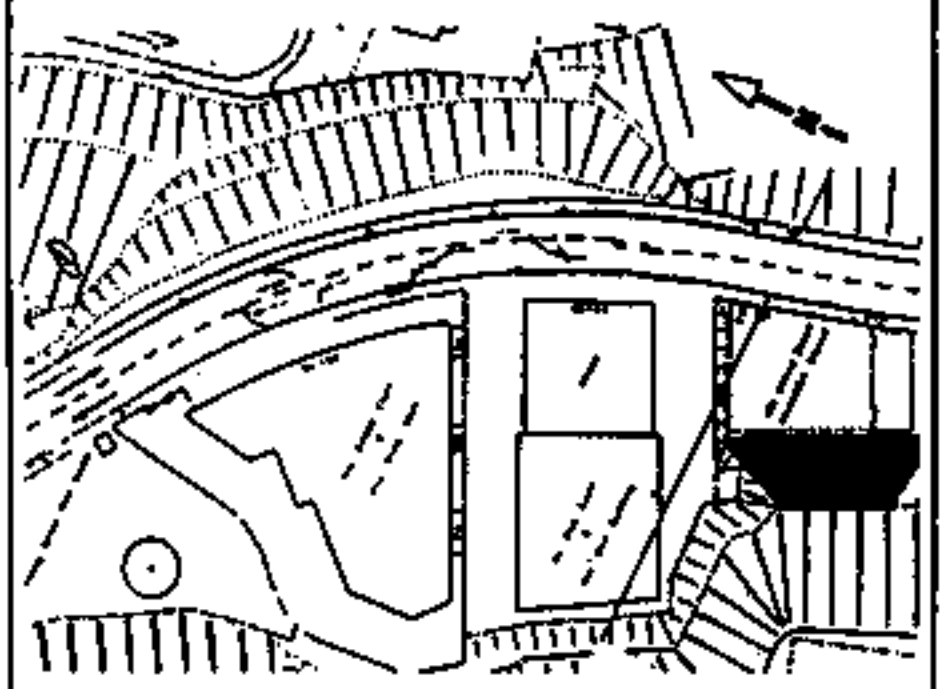
ROAD SAFETY & STANDARDS DIVISION TRANSPORT DEPARTMENT

LOCATION : HIU KWONG ST / HOUSE NO. 24-44

BEFORE



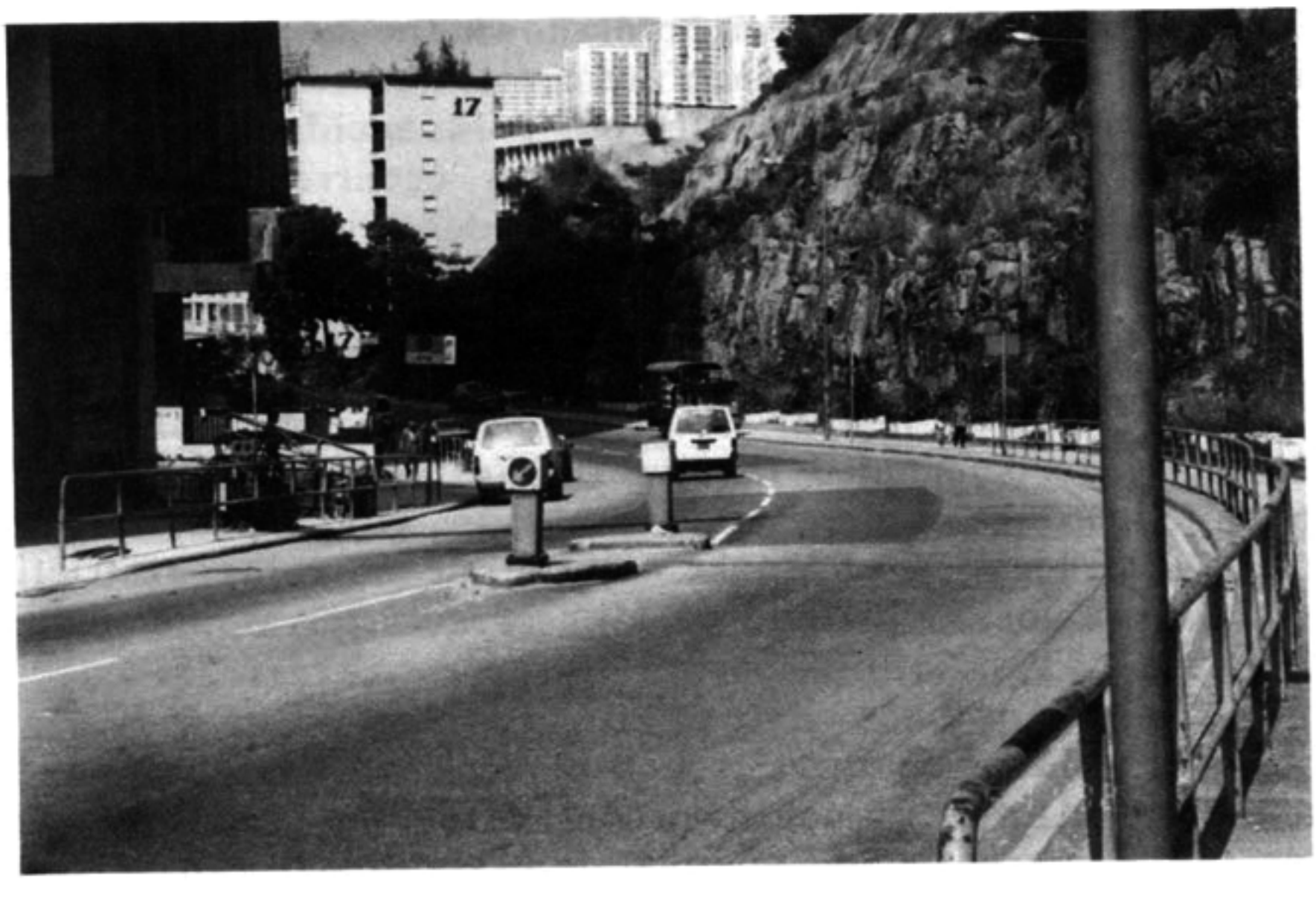
AFTER



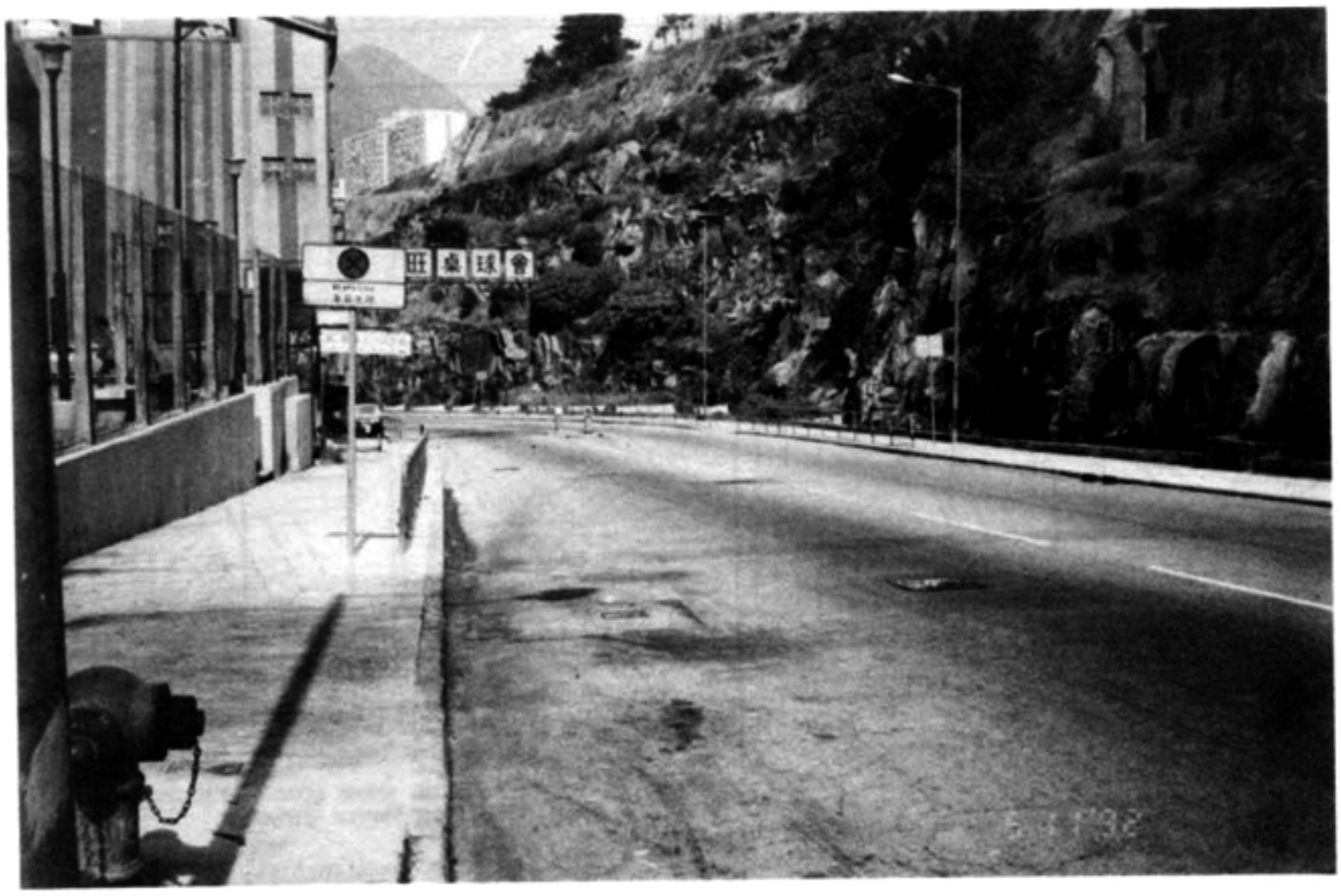
PERIOD OF STUDY : 1-4-86 TO 31-3-87	PERIOD OF STUDY : 1-3-89 TO 28-2-90
TRAFFIC ACCIDENTS : PED. 6 NON-PED. 8 TOTAL 14	TRAFFIC ACCIDENTS : PED. 1 NON-PED. 4 TOTAL 5
CONTRIBUTORY FACTORS : 1) NO PROVISION OF PROPER CROSSING FACILITY 2) PARKED VEHICLES BLOCKING MOTORISTS' VISIBILITY OF CROSSING PEDESTRIANS	REMEDIAL MEASURES : 1) INSTALL REFUGE ISLANDS AND GUARDRAILS 2) IMPOSE STOPPING RESTRICTION
LEGEND DIRECTION OF VEH ——← DIRECTION OF PED. ←— —	IMPLEMENTATION DATE : 28-2-89 COST : HK$ 33,400 ERR :

This shows the existing site condition. *(Appendix 21 & 22)*

Appendix 21



Appendix 22



our accident investigation team has completed investigation ack sites. Remedial measures had been recommended for 64 of l the average cost of the remedial measures per site is The average accident reduction per site during the first er the implementation of the remedial measures is 30%.
x 23)

x 23 :

Cost vs. Benefit

of blacksites investigated in 1991	*= 113 Nos.*
of blacksites with remedial measures recommended	*= 64 Nos.*
e cost of remedial measures per site	*= HK$40,000*
ge accident saving per site	*= 30%*

safety as I said earlier on is a wide ranging subject. What sport Department is doing on road safety is only a small portion he effort which the whole community of Hong Kong is contributing rds this main goal. Nevertheless, if we all do our part, the ort that we accumulate will enable us to take a big step forward. day I am glad to be able to share with you our experience and to rn from you your experience on road safety so that we can do our t better. Thank you.

ACCIDENT-FREE RECORD OF ROAD SAFETY PATROL (RSP)

MR. CARLOS CHAN
Road Safety Association

It is my honour to be invited here today to give a road safety t relating to injury prevention in general. Before talking about RSP, wish to give you a brief introduction of Road Safety Association.

The Road Safety Association was founded in 1961 by a group of pub spirited citizens headed by the late Fr. Patrick Kunningham. T Association is the only voluntary organization in Hong Kong to prom road safety and its main objective is to prevent road accidents and promote safety consciousness in road-users of all ages. The financ source come from keen members, commercial firms, and various fu raising projects such as raffle ticket sales and flag day. T limited amount of government subvention for the Association could meet the heavy expenditure on all activities held.

Besides establishing the Road Safety Patrol Scheme in 1963, there other works and activities organized by the Road Safety Associatio prevent traffic accidents causing injury.

1. <u>Road Safety Campaign and Demonstration</u>
   The Association has been co-operating activities with Government, City District Boards, Kaifong Associates, civil organizations, and firms in various road safety campaigns a activities. The purpose of providing such activities from time time is to promote the significance of road safety measures to general public.

   The road safety demonstration are performed by a group of drivi instructors, motorist and motorcyclist under the supervision of Road Safety Association. Demonstrations are usually presented in rather dramatic way to contrast the wrong and the correct behav of the road-users.

ds of demonstrations, emphasizing the possible disaster of r behavior of pedestrians particularly on young generation ivers and the safety of well behaved road-users have been ted in various districts and outlying islands.

Safety Town

Road Safety Town was officially opened in 1970 in Sau Mau Ping e. The project was planned by the Urban Council, the RHKP and the Road Safety Association.

aim of this Road Safety Town is to educate children in all cts of road safety by giving them the experience and the proper tructions on traffic situations and problems that they will ounter on the roads. There is another Road Safety Town located hatin serving identical purpose.

d Safety Bus

e Association was given double-decker bus by Kowloon Motor Bus 983) Co. Ltd. in 1977 and China Motor Bus Co. Ltd. in 1983. The us has been converted into a mobile exhibition centre for the romotion of road safety. The bus pays frequent visits to schools, housing estates, and also weekend visits to beaches during the ummer time and has achieved maximum publicity in disseminating road safety messages.

There are many other activities which the Association has organized to promote road safety. I am not going to present it in detail but briefly name the title of projects for your information such as The Road Safety International Conference, Road Safety Patrol Scholarship, Road Safety Competitions that include singing, drawing, slogan, photography and many others.

4. Road Safety Patrol (School) helps preventing children road accident

Sometimes you may by shocked at a murder case at which some of the persons were killed. However, not too many of us care about traffic accidents in which hundreds of people of all ages were killed every year.

Many accidents are basically caused by lack of good road manner Pedestrians of all ages tend to take chances without much thoug The elimination of or at least the reduction in bad road manne depend largely on 3 factors:

1. Engineering.
2. Enforcement and
3. Education.

I shall leave 'Engineering' to government concerned department an 'Enforcement' to the Royal Hong Kong Police Force. 'Education' probably the most vital aspect of promoting road safety. Engineerin and enforcement generally prevents accidents after it has bee happened whereas education prevents it before it has happened.

Education in road safety must start with children, even before he/sh commences school. This helps them to develop good road manner whe they are very young and to carry on that education year after yea with the result that our new generation of Hong Kong citizens wi have lived in early childhood with a consciousness of the need fo good road manners as well as good table manners by understandin traffic hazards and protective devices, following sound pedestria road using practices.

The Road Safety patrol was founded in 1983. Today in Hong Kong th operation of School Road Safety Patrols is one of the major operation in traffic improvement and reduction of traffic accident programme Most of the youngsters would like to choose road safety work as thei community service. At the moment, there are 219 patrols of 20 schools participating in the patrol movement with membership ove 13,000. These school Road Safety Patrol members are responsible fo the road safety of their schoolmates and other road users whe crossing the road.

We are proud to say that the School Road Safety Patrols have kep their accident-free record in execution of their duties for the pas 29 years. We could imagine aside from saving many lives and accident on the road particularly the youngsters that may have been killed o injured in traffic accidents, the government have also save substantially in terms of money per accident.

d Safety Patrol members are volunteers. They have received
in civic responsibility, traffic law, road sense, correct
an behavior, traffic hand signals, footdrill and patrol
n. The instructors are officers of the Royal Hong Kong Police

clusion, it is hoped that government, drivers, pedestrians, and
ions like yours will concern themselves more closely with the
s of road safety. I am confident that improvement will
ely be achieved as day goes by and I am sure we are all here
to help us make Hong Kong a more safe and better place
larly for the young generation of Hong Kong.

you.

INJURY PREVENTION IN CHILDHOOD ROAD SAFETY

MR. JAMES KONG
Deputy Chairman
Institute of Advanced Motorists
(Hong Kong)

1. The Institute of Advanced Motorists (Hong Kong)
Perhaps not known to some of you, there is in Hong Kong a voluntary non-commercial and non-profit-making organization ev since 1961 whose objective is to promote road safety in deliveri the spirit of Advanced Driving to the general driving communi The point that a Learner driver getting a pass in his driving t conducted by the Transport Department can only mean that t driver is now legitimately allowed to take charge of a mot vehicle of the appropriate class unaccompanied. It will ta years for him or her to perfect the art of driving and to be ful competent in the control of the motor car. A moving car, if it under the control of a bad driver, and worse if he is irresponsible one, can be a lethal weapon and can KILL and HUR Perhaps one should alert himself by seeing those horrible pictur showing wreckages of cars and bodies after a traffic accident TV and in the newspaper.

The Institute of Advanced Motorists is therefore established deliver this correct attitude to drivers by asking for a go standard of driving from its members and thus to set good examp to the rest of his fellow driving counterparts. If all drive can approach the driving as an art and take it as a challenge improve their driving skill, our roads will certainly be mu safer to be on.

motto of the Institute of Advanced Motorists is centered on LL and RESPONSIBILITY. The former demands an Advanced Driver e highly competent in knowing his car; how much his car can do more importantly how much his car cannot do! For example, he uld be able to negotiate a bend with the correct approach ed, in the correct gear and with the correct approach angle so at the bend can be taken smoothly, progressively and without a d. This can reduce the incidence of accidents as a result of man error. In times of danger, for example, when a car in the posite carriageway is out of control and is heading towards you, Advanced Driver can pull himself out of danger by immediately celerating. In order to do that instantaneously, he must be lert and be driving on the right part of the road, in the right ar and with the right speed. All these require skill from the river.

nother important requirement of an Advanced Driver is ESPONSIBILITY. This is even further divided into the driver's esponsibility towards his vehicle, his passengers and more mportantly, to all other road-users including pedestrians. And here, we are more concerned about children both riding as passengers as well as on the road, for example, as cyclists. The Advanced Driver will handle his vehicle responsibly and his car will show minimal wear-and-tear and is always in the best mechanical condition; so-called engine or brake failures won't happen because he will attend to his car regularly and thoroughly. Because of his driving attitude, all his passengers, including children will ride in comfort and safety; skidding and/or loosing control as the result of speeding won't be allowed in the vocabulary of the Advanced Driver. Also the Advanced Driver will foresee and therefore prevent the dangerous manoeuvres of other road-users, for example, a sudden turn by another driver without even flashing his direction indicator or a child dashing out of the pavement in chase of a ball. We can do this by concentration and by observation. We think we shall be able to spot potential dangers because we are always preparing for the worst whenever we drive. More so, an Advanced Driver will tolerate and in fact prevent the wrong-doings of others; he simply steer away from the danger !

4. Other than the driving itself, the Institute of Advanced Motoris also actively participates in Road Safety matters and we are member of the Road Safety Council in which we will suggest to th authorities recommendations to better improve road safety in Hon Kong.

5. The Institute of Advanced Motorists also participates in the Roa Safety Publicity Committee to deliver the message of Road Safet to the public by publications and TV/Radio coverage. We hope t improve Road Safety in Hong Kong.

6. The activities of the Institute of Advanced Motorists are a safety-orientated and it arouse the necessary interest i promoting Road Safety amongst its members. We hope that our roa could be safer to be on through better handling of the movin traffic. But it will take time for vehicles to be completel separated from pedestrians. This could be achieved by better roa design with pedestrian subways and overhead walkways. Sadly, lot of pedestrians still fail to observe their basic duty and fro the point of view of a driver, some avoidable accidents happene due to the carelessness of pedestrians. To this end, we seem t see less and less enforcement action and education especially fo school children. Perhaps the authorities including the Police an the Education Department should be asked to concentrate mor attention to the proper use of pedestrian road-crossing facilitie including the Green Man signal and pedestrian subways and overhea walkways.

DISCUSSION ON ROAD SAFETY WORKSHOP

Chairperson : **Dr. H.K. Mong**
Reporter : **Dr. Lau Yu Lung**

alk about reducing the incidence of traffic accidents, we are y concerned about mortality. We are more concerned about that is the residual suffering and damage done to young who are the victims of a traffic accident. Broken limbs and ent for example, will cause permanent residual disability ring to the child. Therefore personally speaking, much work be done to reduce the risk of traffic accident on our roads. hould especially be directed to children in general. So e will be listening to the views of many distinguished . Their views, whether they are official views representing e by the various Government Departments or views by some of ntary agencies in Hong Kong, will be concentrated on improving dard on our roads in general. At the end of the workshop, the on will be open to all members. The workshop will then date the views and suggestions made and put forward endations to the general meeting for discussion in the on. After the discussions, the proposals made by various ops will be put in the form of a working report and be submitted elevant authorities for their deliberation.

I have the honour of introducing our first speaker Mr. Eddy Hui who is the Acting Deputy Commissioner of Police, Operating of yal Hong Kong Police force and Mr. Hui will address us on how yal Hong Kong Police tackles the problem of road safety.

ddy Hui Ki On (see text)

rman :
nk you very much Mr. Hui. I would like to invite Mr. Tony Westgate represents the Hong Kong Automobile Association. Mr. Westgate is manager of the technical services of the HKAA and I am sure he ll enlighten us with his point of view on how voluntary agency like e HKAA have contributed to reduce road accidents

Mr. Tony Westgate (edited) :

I am afraid I haven't much time to formulate my talk. Unfortunatel am standing in for Mr. George Humble, who is our Road Safety Cou member. I do have a pet subject and that is safety of students school buses. Everyday when I travel on public transport, I look the window at the minibus carrying kindergarten children to school quite often you see them playing around at the back of the bus occasionally fighting. The law has stated that somebody should looking after them. It is often said that the driver will be supervisor, but the driver cannot supervise people behind him. there are two students fighting and he has to look around to see w is happening, what will happen next is that children in the bus be thrown everywhere. Sometimes, a mother may be doing the mindin the bus, she cannot be there and attend to every seat all the ti Her own safety is at risk if she keeps wandering around in the bus propose that all private school buses should be fitted with suit child restraints, so that every child within the bus who is eit going to school or going on a picnic will be protected by a restra If for some unfortunate reasons, there is an accident, at least child will have some protection. I won't say that it is protection against life but severe injures can be greatly reduced.

Since 1985, we have been working very closely with The Spa Association by fitting a special harness to buses holding handi children. The harness was specially designed for physically mentally handicapped children. We got this from a firm in the We fitted these for the Association free of charge, and they only for the cost of the harness. We have also introduced this t kindergarten schools and of which one have 70 buses. Slowly, we getting through to some of these kindergartens. What I would lik advise parents is that if you are paying people to bring your chil to kindergartens, you have every right to ask them to make sure buses or the transport is safe for your children.

There is a law stating that mothers should not carry their childre their lap in the front seat. I have actually seen mothers carr babies on their lap. To me, she obviously has no sense responsibility to the safety of that child. In cars and pri vehicles, I would love to see all children in safety seats or suit restraints. How much does a safety seat cost? - probably less th thousand dollars. When compared to the life of your child, it is expensive at all !

(edited) :
Mr. Westgate. I am sorry that Mr. George Humble, originally ng the Hong Kong Automobile Association cannot come to this . I would like to ask Mr. Westgate the roles of Hong Kong le Association (HKAA) in educating and prospering the spirit fety among his member. I am aware the HKAA is one of the ivate associations in Hong Kong who is entrusted with road tters in general. Is there any specific programme or series ional materials whereby the HKAA will pass on the message to ers in the effort to try to improve road safety among its ?

Mr. Humble's representation in the Road Safety Council, we can ur opinions on road safety on behalf of our members. I have apes on car safety seats for babies and have a video tape g parents on how to prepare for a baby leaving the hospital to e. The child's life is in danger as soon as he goes into the the very day he comes out of the hospital. I think people consider the precautions they should take when babies are ng in cars. We do publicize this.

nan :
ll invite Mr. Y.C. Yeung who is the Chief Engineer of Road Safety tandard of Transport Department. Mr. Yeung will enlighten us on ne of the Government Department is responsible for drawing up and ning roads, so that the roads are safer.

Y.C. Yeung (see text)

stion time :

estion :
inputting information on traffic accident, do you receive ormation from hospitals on the pattern or severity of injuries? ese may aid you in making recommendations, the design of future gislation or purchase of control equipments.

nswer :
o, because all information is collected by the police and fed into he computer. There is no information from the hospital.

Question :
Do you envisage that you would like to add in information fro hospitals.

Answer :
Yes, of course. It would be very helpful if we could also obta medical information such as the drunk-driving aspect, degree of inju etc. Such information would be very useful in tackling some of t road safety problems.

Question :
Do you have outcome data e.g. life or death in your informatio system, because this may help to provide information on t effectiveness of certain control measures for the legislator and convince them of the value of the measures.

Answer :
Yes, Our data does have information on severity of injury. As on t use of such data for legislation purposes, you may be aware that w have introduced front-seat belt law. During the preparation of t legislation, we have used local data to demonstrate the positiv effect of a seat belt in reducing severity of injury. Data collecte in the system supported by statistical analysis do help road safet workers in putting forward recommendations on road safety works.

Question :
Do you have a specific age at which bicycle injuries occur?

Answer :
Yes, we do have such data and we can do more detail analysis on th but right now I do not have the information at hand.

Question :
Injuries due to bicycles only contribute to about 3% of total traffi accidents. But if we know the number of children riding bicycles i streets, and divided by that, cycling may turn out to be a dangerou act that we may need to enforce some sort of safety measures whe children are cycling in the street. Similarly, this may also appl for school buses or mini buses. May be such denominators are ver difficult to obtain, I guess.

oint. We do have mileage figures for different types of t for pedal cycling, I am afraid such data will be obtain.

mpression, which type of vehicle is more dangerous?

umber of childhood traffic accidents occur in private cars buses as passengers.

more public buses than private school buses or private cars?

since we are talking about reducing traffic accidents, we he type of vehicles that carry the most injuries. If the s small, even if the rate is high, the chances of reducing is

:
agree.

an :
e to look at it from the administration's point of view. As the ces is limited, we have to aim at a population that gives the number of mortality or morbidity, so that we can target our ion and try to reduce the incidence in that group.

ion :
concern is on the worry of Mr. Westgate - school buses. The ntage of accidents occurring on school buses is about 2-3%, but e number of school buses in Hong Kong is small say less than 2-3% the accident rate in school buses can be very high. If we look he pie-chart again, we can obtain a better idea of the problem.

estion :
ivate cars have the highest number of accidents. Can we have the mber of school buses in Hong Kong and how many accidents are related them and can we calculate the risk from that?

Answer :
This is possible. Of course, everything that may lead to an accid will be considered no matter how small.

Question :
If we have these risk rates, it will be more convincing for government and public to consider passing seat belt law for sch buses.

Answer :
We can produce statistics in a number of ways but due to time limit cannot produce the other figures to you. I fully appreciate yo comment. Data can be expressed in many many ways.

Question :
While we are considering the exposure of children < 15, we also ne to consider mileage driving by these cars in order to get a f picture on the whole issue. But it will be difficult to get su data.

Question :
Are the black sites for all ages or only for those under 15 years age.

Answer :
It is an all-age figure.

Question :
If we can analyse black sites based on the time of injury, we may g a better insight on preventive measures.

Answer :
Although the theme of the present conference is on childhood injur prevention, road safety measures aim at reducing injury for the who community. Theoretically we can concentrate on injuries occurring children under 15 years of age. But for cost-effective sake, we hav to consider the population as a whole.

Question :
But we can express black sites in accordance to the age of the injure and produce data that will allow you to be more specific on you preventive measures.

observation, school buses do cause a small number of
ut if we add school buses, public light buses and private
ther (they are all the same type of vehicles) it comes up to
ou add in public buses, there is another 19%. We have 39%
iding in buses, that is more than private cars. But if we
it, its importance will diminish.

alking about people being injured on buses or by buses, there
rence.

N. It is important to educate these bus drivers in general.
ave to educate private car drivers.

t :
epends on how you classify your vehicle. We have school
light buses and you also have coaches which are school buses.

nt :
ches they are classified under the private bus that is 10%.

nt :
do this, you do get a better figure or a clearer picture of
n who are being injured.

ent :
k education is very important, but it only produces some effect.
u look around your friends or even myself, if you are not
elled to wear a seat belt, I may not wear it. If I am not
elled to wear a helmet, I may not wear it. So I think education
d only achieve up to a point and not beyond it, as the rest
nds on an individual's behaviour. At the end of the day, you can
achieve that much. But by legislation, after introducing the
t seat belt law there is a drastic drop in traffic accident
tality. Sometimes we have to convince the Government and the
olic. But we have to balance the views of every body.

mment :
th the passing of the seat belt law for school buses, having to fit
wear seat belts or restraints in school buses, this will be put in
e mind of young children that it is safer to wear a seat belt, and
when they grow up, it will become an automatic thing.

Comment :
I agree. It is important to pass legislation and not just depend
an individual's responsibility.

Question :
If you look into childhood casualties, 40% were injured while
walking. In other words, they were in the wrong part of the roa
That brings to home the top black sites on Hong Kong Island - t
junction of Hennessy Road and Percival Street. Just then, yo
mentioned how successful your remedial action along the Sau Mau Pi
Site was certainly, I appreciate that. With the setting up of roa
crossing facilities, the number of causalities has drastically bee
reduced. But looking at the Hennessy Road and Percival Road junctio
has anything been attempted at all as a sort of remedial action ?
would appear that your remedial action list may not be applicable
that junction because, after all, that site had been proper
equipped with road crossing facilities including the green-man signa
and also proper traffic regulations ! Why are we still having th
junction on top of the list of black sites on Hong Kong Island ?

Answer :
You may appreciate that the site may disappear from the list soo
because the fly-over has just been finished. It took nearly 10 year
for that bridge to be built.

You may be aware that during the past few years, road works have bee
constantly carried out at that particular road junction. One of ou
criteria for remedial measures to be recommended for a particula
black site, is that the condition should be stable first and there ar
no major improvement work or road reconstruction work to be carrie
out. Otherwise what we introduce or what we recommend would be
waste. So because of this, we did not really recommend any measure
at that particular junction for the past 2-3 years. So, as you ma
notice, during the part few years we have investigated something lik
113 sites but only recommended about 60 remedial measures and that i
the reason. For some sites, you really cannot recommend anythin
after thorough investigation.

Comment :
Allow me to present my second observation. The number two black sit
is the Connaught Road Central junction with Jubilee Street which has a
very sophisticated overhead walk-way system along the Connaught Roa
Central. In other words, it would be astonishing and unusual to se

s if at all on that part of Connaught Road. They are not to cross Connaught Road in any way. So, the same situation lop at the junction of Hennessy Road and Percival Street. resume that it causes tens of millions to erect this overhead so in theory everybody should be safe because pedestrians are y separated from moving traffic. But the Connaught road and treet junction is still second on the black list. Education ing we having always tried to contemplate. But what if up to education falls short of desire. Are we seeing inadequate ent or are we seeing inadequate penalty or are we seeing some rms of penalty e.g. which aim at educational rather then e so that people are educated to take proper crossing s.

:

enforcement side, we always take note of these and every I chair with my regional commanders, I always emphasize to he importance of pedestrian offenses. As far as we know, the nforcement actions we take, there will be less casualties in lack sites. This is an area in which we are concentrating on. from enforcement, we will also give a lot of warning to rians. We find that warnings sometimes are more effective se it will not jeopardize our public relationship. So we do take of all the black spots and we will take the necessary action dingly.

ent :

sad to see that a crossing so well designed for a particular tion is still heading the list of black spots. Therefore, even an overhead walker installed in due course, it may not achieve desired result.

wer :

have to strike a balance between public education, publicity and forcement.

concur with you, education is better than punishment in all aspects.

r. Carlos Chan (see text)

Comment (edited) :

Chairman :
Certainly the record kept by road safety patrol-having been accide free for the past 29 consecutive years really is something to commented. I do appreciate that Road Safety Patrol is a volunta agency but have you been able to 'penetrate' into all schools setting up their own Road Safety Patrol Unit?

Answer :
In fact, year after year, at the beginning of each academic scho year we do send letters to each school requesting them to join This year we have a joint operation with the police because both of are very concerned that all schools should set up a Road Safety Patr to reduce the accidents involving children.

Question :
I ask this question on behalf of my child because he is studying in school without a Road Safety Patrol Unit. Apparently, Road Safe Patrol and Police have written to all schools requesting them to sta their Road Safety Patrol Unit but it will fall short without the he of the Education Department. Perhaps the Education Department shou be approached officially or unofficially for their assistance registering influence on schools to set up their own R.S.U.

Answer :
Yes. This could also be done through the Road Safety Council. Yo have a representative from the Education Department.

Question :
As a parent, I certainly would like to see my son's school having R.S.P.U. I will be guaranteed of my boy's safety on going to and fro school. But it is astonishing that some schools, especially some o the so called renowned schools, they don't have one. Even if the RS & Police have asked them to set up one, I think, without the influenc of the Education Department especially without legislation, it wi fall short of the aim .

Answer :
I think one of the best things we can do is for both of us to raise at the Road Safety Council.

Question :
Figures speak for itself. That accident free record for 29 years not an easy task to achieve at all.

hat percentage of schools in Hong Kong have this R.S.P.U.

about 50%.

t now, coming back to previous presentation, it is so to dig out the under 15 traffic accidents rate and correlate lack spots. Whether these coincide with schools without ad that will be a very strong argument for Mr. Carols Chan o Education Department or whatever agency to convince thout R.S.P.U. to set it up quickly within the next year.

point. Surely such a chart can be produced. But as we all ere are quite a number of causations for accidents. It may asy to say for sure that accidents occurring near or at the of schools where R.S.P. is not formed is the direct cause of dent. It can only be used as a reference material.

:

be used as an association. In fact if we can map out this ion, we may be able to produce very strong support for the up of R.S.P.

:

this can be brought up in the Road Safety Council for eration.

n :

ery glad to learn that at present there are 3 Road Safety Towns g Kong, I would like to ask how the R.S.A. utilizes these R.S.T. cation & how do they penetrate schools?

er :

ct, schools are informed of these Road Safety Towns and they apply to visit them through the Education Department and most of ime we would send police constable there to educate the children. is open to all.

Question :
I know that the running of the Road Safety Towns is the business o the Urban or Regional Councils. How do you maintain the upkeep of t Road Safety Town.

Gloria :
Actually the R.S.Ts. are manned by police with the exception of t R.S.P in Shatin which is maintained by RSD while the other two are USD so they are really responsible for the maintenance but the manni & running are the responsibility of the police.

Question :
How about the lectures ?

Answer :
It is done by Police Officers.

Question :
Are they a special group of officers ?

Answer :
Yes. They are trained to do this.

Question :
I know that R.S.T. in Tai O is run by the traffic police.

Are there any special groups assigned to the R.S.T. so that the R.S can be better run.

Answer :
Police of Tai O office will be on duty on the streets if there is lesson. They are trained to give lectures. They understand all ideas behind the lectures they give to students. All the material the same. The R.S.T in Kowloon or Shatin are also run by traf officers. There is no difference.

Question :
In Sau Mau Ping R.S.T. there is a special group taking charge of Road Safety education. If the special group maintaining the Sau M Ping can take over the management of other R.S.Ts. it is much bet e.g. if they happen to be on duty on the streets, they don't have rush back to R.S.T. .

is for better management of resources. Theoretically it is special group can look after the R.S.T., but due to resource police officers in charge of R.S.T. will be put on duty, required, they will go back to R.S.T. to do their jobs.

Safety Patrol look after R.S.T.?

y difficult. Most R.S.T are students, they have to attend Parents may not allow them to spend too much time on Road R.S.T. . Lectures are given during school hours.

:
derstand, the R.S.Ts. in Hong Kong have small bicycles that can use on a model street, so that pupils can feel the use of . There is a similar R.S.T. in Japan and they have something They have a model showing a vehicle hitting against dummies so pils know that if they should rush across the road without the vehicle they will be hit severely. Will it be a helpful ion for pupils and can this be added to R.S.T. ?

:
at might be useful.

mes Kong (see text)

man :
k you Mr. James Kong spoke on behalf of drivers in general and how ould like to see a separation of pedestrians from cars. The take- message is really the attitude behind driving and we shouldn't be ng driving as some sort of pleasure ride. We all have to remember anything which moves, which carries a velocity is dangerous. The ent a car heads off, it can already be a lethal weapon especially t is in the hands of an irresponsible person. I think the message n important one. All drivers should drive with the right attitude.

DISCUSSION :

After listening to all the expert speakers, it is my duty now, at t conclusion of this workshop to invite suggestions and recommendatio The consensus opinions reached at the Workshop, will be presented the General Committee for discussion in the afternoon. Su proposals, if adopted by the general committee will be put into form recommendations to be submitted to relevant authorities / departme / agencies for consideration. I have received quite a number suggestions, and I will open these for discussion and hope to arr at a consensus. Also, I do welcome further suggestions from floor.

Proposal R1 :
Compulsory requirement for children travelling in rear seats to we approved seat belts or restraint devices in line with the pres requirement of a forward facing seat (front seat).

Comment :
How do the audience feel about this? Do I hear any contrary views?

Comment :
For your information, I happen to come across papers by Mr. Ko They looked into accidents happening to school children along routes from home to school using the school bus. The result sho that there were more accidents along the route when they left home a before they boarded the school bus, than after having boarded school bus. That was their observation. As to seat belts on school bus, they raised a point that there were rows of seats school buses. In case of collision and in the absence of seat be the body would hit the back of the seat in front of them which wo tend to spread out the load. If you have a lap belt, the impact wo be solely on the lap belt and hence onto the abdomen. The good po of the lap belt was that it prevented ejection and from th findings, there were not many cases of ejections. They made comment that the lap belt might not be a good idea after all.

Comment :
I agree with that, the lap belt may be dangerous, but there are ot types of seat belts e.g. the harness type which fits well into sch buses. As mentioned before, the restraint fitted for the handi buses were of a harness type and they basically prevented the ch from slipping around the seat and this could be satisfactory.

e has produced a poster which is very illustrative.

are all for the idea of suggesting to the authority at gislation control on the wearing of seat belts. After all, proved that the wearing of seat belts will greatly reduce and morbidity from traffic accidents.

:
see from the pictures that the child is being thrown from the t, he goes over the front seat and striking either the or driver.

t :
eak on behalf of those sitting at the rear seat especially for o cannot speak for themselves because they are dead. By my have been dealing with such cases. People who are riding in r seat are actually thrown through the front wind-screen onto nt of the car and got knocked down by the car itself. So you see the momentum, the inertia inherited by the occupant no whether he or she is seated in the front or rear seat. They he same inertia and it is the momentum that is causing the if not fatality.

nt :
per I just mentioned was on the school bus and not in a private

ent :
e we all for mandatory rear seat belts.

ment :
ive young kids, and it is very difficult to restrain them in the seats. Although theoretically, it is safer, but in Hong Kong, traffic condition is different from other countries like the es. There is always traffic jam. If you restrain your child and car is not moving, I don't think it is sensible and anyway it is possible for me to restrain my child in the back seat. I think it only advisable if the car is travelling on a highway or running st. When the speed is fast, of course it is much safer with the elt. But if your car is in Mongkok or Yamatei area, many a time you annot move, why bother to restrain your child.

Comment :
People have been investigating overseas that even at a low speed e 20 km/hr., if 2 cars should collide head on, the effect of such impact will be equivalent to dropping a person from a second flo onto the ground. The actual impact can be substantial and serio injury can be sustained even at such slow speed. That has been prov in laboratories overseas. Even at a slow speed, the seat belts wou still be of use in reducing the incidence of injuries or the severi of injury.

Comment :
I don't believe that the speed of our car is up to 20 km/hr., it usually less than that in the street.

Comment :
Excuse me, can I ask you a question. How many times have you be stuck in Nathan Road and when you are about to pull away, a pedestri walks in front of you. So you put your brakes on and the car sto suddenly. As your child would not know what is happening, he will thrown forward.

Comment :
I can speak from a medical perspective. If the speed is slow, we not aiming at reducing mortality. One is more concerned about reduction of morbidity, damages to the body. A bump onto say central console can cause disfigurement, facial injury, and cracking of facial bone as a result of deccleration injuries. It m be difficult to ask the child to be restrained but if they have be educated throughout the years that they should sit quietly in the where they are nicely and properly buckled up, they may. It certai will pave the way in reducing accidents. I can assure you.

Comment :
May be, I can speak as a parent. In fact, I have 3 children and t spent part of their lives in U.K. When we were in U.K., my child would not let me drive unless there were safely harnessed at the ba But after they came back to Hong Kong where nobody has such saf devices or only some cars have rear seat belt or whatever and withi year they refuse to have seat belts on. In fact, it is environment that actually modes the attitude of the children: whet they want the seat belt or not. If everybody is doing it, they do it and they think it is a very natural thing and they just pu seat belt on. I think, it is important to have a proper saf

r different ages because some seats belts in existence now are not suitable for young children and they may do more good. They can get strangled. I think the stress should be iate restrain for different age groups.

2 :
posal from Mr. Westgate is:-

e school buses are required to be fitted with suitable child

fferent from the first one. Are we for this.

:
ve a maximum age for this?

t a general recommendation.

:
y support this, but the question is the age limit.

:
king for it to be a requirement for kindergarten children.

t :
for this?

nt :
less it is a harness type or other proper ones.

nt :
his is just a general guideline. The details will have to be d out later.

sal R3 :
eorporate into the users code advising that a child under 5 years e should not be allowed out alone on the road. Parents and s should always accompany such children, walk between the child the traffic and always keep hold of their hands; if they are le to do this, they should use reins or secure the child firmly in sh chair. Children should not be permitted to run onto the road.

we for this. This is just advice.

Proposal R4 :
All children under 16 years of age are not allowed to ride a bicy on a public road irrespective of whether they are accompanied or by an adult.

As at present, children under the age of 11 years, if they accompanied by an adult they can ride on a public road. In ot words, we put a ban altogether, children under 16 years of age forbidden to ride bicycles on a public road.

Comment :
How about athletic cyclists?

Comment :
Perhaps we can lower the age limit to 14 or 15 years.

Comment :
In principle, I disagree because that will mean restricting the use road by a specific category of people.

Proposal R5 :
Perhaps that can read the proposal along with the following prop that:- "More public bicycle paths or cycling arenas or even pa should be designated. Also centres where children can be taught to ride a bicycle should be established".

Unless these facilities are provided, we will be depriving th people from cycling in an open space.

Comment :
Yes I concur with that. Are we going to make this package a recommendation. There is great difficulty in getting bicycle paths certain parts of Hong Kong and children still forget to use th paths.

Comment :
Shall we use the word "discouraged". Are we for this ! and th should be more bicycle paths ..... etc.

Proposal R6 :
All school and government departments are urged to support road sa education.

It can't be wrong.

ep a detail record of childhood injuries upon referral to hat in due course a proper analysis of their damages can l with their circumstantial data and eventually proper easures or legislative control can be recommended.

]

s ? Thank you.

:

ld be more enforcement or even heavier penalties to not using road crossing facilities and not obeying green-

within the burden of the police who is the law enforcement ny objection from the police? More enforcement action will rcement action is not adequate at present.

:

:

ut heavier penalties ?

:

e two things - legislation and judiciary. Judiciary should be o review their sentence. The present penalty is a fine of hundreds dollars and jailing is usually not required.

l R9 :

ian should not cross within 15 meters from a pedestrian subway sing over.

nt :

more enforcement action is needed by the police.

ent :

nk instead of more enforcement action, which would imply that n from the police is not enough, I think we would say "priority ld be given by police to enforce such and such, especially to dren".

Comment :
May I suggest to add a subclause to "Fly-over walk ways". We sho suggest that the design of these fly-overs/walk ways should also g due consideration to handicaps.

Comment :
As far as I know there is already existing standards catering for conditions described. It is only a matter of availability of spa Say in new towns, in open areas, where space is available, there w be provision for all these in addition to a staircase. Usually accommodate wheelchairs or carts etc. by provision of a ramp. But urban, congested, fully built areas, it may not be possible. under such circumstances, if we are to provide walk-ways. we have decide on the feasibility.

Comment :
We should then build road crossing facilities for people other th pedestrians e.g. covered walk-ways etc.

Proposal R10 :
More active participation of schools should be elicited to educate a also to monitor their school children in pedestrian crossing n their schools.

Comment :
It has been suggested that there is inadequate monitoring or educati in schools on road safety. Perhaps it may indirectly reflect a la of attention by the Education Department. Should we recommend this them ?

Comment :
I think we should use the word "encourage".

Proposal R11 :
There should be no ball games on pavements next to vehicular roads.

Comment :
This is the law. Are we for this? There may be difficulty enforcement.

Comment :
I think, again we should use the word "discourage" instead of passi it as law.

2 :
more appropriate crash barriers at traffic black spots and pedestrians from vehicular traffic.

ions ?

ed adequate resources are allocated.

13 :
e coverage and follow-up reporting of morbidity i.e. damages sequel on top of mortality on traffic accident victims, so and warn of their effect to the public.

words we will be seeing horrible pictures of people with nbs or disfigurement in the news. Are we for this ?

:
ng as it is effective.

R14 :
ish a category of provisional driving licenses for the first fter passing the driving test.

:
ll be given a "T-plate".

t :
difficult ! Many may not drive for the next few years after the test, it may not serve the purpose.

t :
matter of enforcement.

nt :
for this ? Not really ?

l R15 :
of competence required for passing the driving test conducted by ansport Department is inadequate.

Comment :
It is not easy to pass the driving test, I do not think it
inadequate.

Comment :
We should stop instructors teaching the drivers just to pass the t
More emphasis should be on instructing them how to drive on the roa

Comment :
I think the driving test in Hong Kong is adequate. It is recogni
internationally.

Comment :
One point raised is that a learner driver has no chance of driving
an express-way. After getting his driving license he is legitima
allowed to drive unaccompanied on an express way. A line has t
drawn somewhere. They have to have this part of training before
are allowed to sit for the driving test.

Comment :
We should ask for a review of the examination standard.

Comment :
Perhaps we should suggest a review of the Transport Departm
driving licence test curriculum e.g. express-way driving.

Proposal R16 :
Schools should be encouraged to set up their own Safety Patrol.

Comment :
We are all for this.

Proposal R17 :
In Road Safety Towns, there should be a demonstration of how a
is being hit by a car.

Comment :
This should have some effect on children.

Comment :
Are there any other added recommendations ?

young motor cyclists who are driving very fast in
ould restrict the age of motor cyclists, limit their
se the power of motor-cycles.

s has been done this year by the Road Safety Council.
ation is not as bad as suggested. No major change is

may be wrong. I live in Shatin, there are so many motor
worry is that young people these days really do admire
There may be more and more people on motor cycles

posing to set a minimum age for motor cyclists say 21

s is difficult. We have looked at our statistics and
with data elsewhere, the Road Safety Council has decided
ge the law.

a change ? We are against.

set up a different speed limit for motor cyclists ?

:
keep to the speed limit they should be O.K. Better
ent is sufficient.

t :
of our control.

nt :
you, we will consolidate these views and forward them to the
l committee.

PROPOSALS FOR ROAD SAFETY (R1 to R18)

R1 Compulsory requirement for children travelling in rear seats wear approved seat belts or restraining devices, in line with present requirement for a forward-facing sear (front seat).

R2 Proposal to include into the Road Users Code advising th child under 5 years of age should not be allowed out alone road. Parents and adults should always accompany such child walk between the child and the traffic and always keep hold their hands; if unable to do this, then to use reins or se the child firmly in a push chair. Children should not permitted to run onto the road.

R3 All children under the age of 11 years are not allowed to ri bicycle on the public road irrespective of whether they accompanied or not by an adult.

R4 More public bicycle paths and cycling arena / parks shoul designed.

R5 To set up more Centres where children can be taught to r bicycle.

R6 All schools are urged to support road safety educatio conjunction with the various government departments and volu agencies.

R7 To keep a record of the details of child injuries upon referrals to hospitals so that proper analysis could be ma effect better design and legislative controls.

R8 Higher priority to be given by the Royal Hong Kong Police to enforce control of pedestrians not using road cr facilities and not obeying the green Man Signal.

R9 Also heavier penalty to be given to those offenders b courts.

R10 To encourage more active participation of schools to educa monitor their school children in pedestrian crossings nea school.

s on pavements next to vehicular roads are discouraged.

l more appropriate crash-barriers at traffic black spots te pedestrians from vehicular traffic.

edia coverage and follow-up reporting of morbidity and y of road accident victims and their sequelae so as to d warn of their effects to the public.

ools are encouraged to set up their own road safety patrol

ggest to the Transport Department to review their ement for sitting and passing the driving licence, e.g. sway training.

stration of how a dummy is hit at the road safety towns.

chool private buses are required to have fitted suitable restraints.

ng more facilities to road crossings, especially elevated ways.

* * *

INJURY PREVENTION IN CHILDHOOD SPORTS AND SCHOOL SAFETY

PROFESSOR K.M. CHAN
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In the last decade, as Hong Kong is taking up the enormous investm in the development of education, we should take a priority look the organization of sports activities in school. The nurture o sporting culture in a community should start from the very begin of our education system. The teachers, parents and professi groups should work in a team approach to promote the various asp of sports programmes such that our younger generation can enjoy sp in a safe, cost-effective and productive way.

In most developed countries, the community productivity is c related to the health and physical activities of the population. Hong Kong is to emerge as the leader amongst the economic giant our neighbours, we should invest in the long term the health productivity of our younger generation.

This forum will concentrate on the deliberation of the following:-

1. The epidemiology of sports injuries amongst school children
2. The rehabilitation and prevention of sports injuries in children
3. Safety measures and prevention of injuries in school sports
4. Prevention of recreational sports facilities in the munic councils and safety measures

The exchanges amongst the different professional groups will promote mutual understanding and the development of sporting progra in schools and the community. Together we hope we would be ab achieve the ultimate objectives of "sports and health for all" for future generation.

EPIDEMIOLOGY OF SPORTS INJURY OF CHILDREN

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iology studies in sports medicine are performed to determine the ution or rate of health problems, most often injuries that from athletic participation. This information identifies the participating in selected sport. It also permits for the ng of necessary medical coverage and provides for the ation of the occurrence of specific injuries and allows for the llance and comparison of individual program and sports. onally, epidemiological studies can identify significant es that are related to occurrence of an injury.

nation on epidemiology of sports injury on adults cannot be d directly on to our children. We must know that children are uivalent to a small sized adult. They have the potential of and maturation and they have a different physiology. They nce a higher metabolic cost than adults for some endurance es, and anaerobically, they are definitely inferior to adults. humid environment, children are at increased risk for heat- d illnesses because they take longer to acclimatize, produce eat and dissipate it more slowly than adults. More than simply lly miniature and suffered from specific injury pattern, they ychologically immature as well.

miology studies in sports medicine have employed various dologies. Case studies generally review a series of patients g medical care for an injury or a series of specific injury in a ic sport. These studies provide descriptive information, but cannot establish a measure of risk. Studies that provide an "at population can make observations concerning the frequency of

specific injuries and make correlations between the chance of bei injured with select variables.

Many studies have been conducted in U.S.A. in assessing spo injuries in childhood. Gallagher et al[1] studied 87,000 children Massachusetts. An overall injury rate of 21.4% was found. With sports injury rate of 0.15% for children less than 5 years of a 3.4% for 6- to 12-year-old and 7.03% for 13- to 19-year-old. deaths were related to sports. Sports injurics represented the m common cause of injury for the 13- to 19-year-old and overall was second leading cause of emergency room visits and hospital admissio Sports injuries were also the leading cause of fractures (other th skull) and sprains. The largest proportion of injuries resulted fr football (19.9%), basketball (17.4%), roller skating (13.4%) a baseball (9.4%). Zarieznyj et al[2] studied a community of 100 school-aged children in Springfield-IL, and found that 6% (25. each year sustained traumatic sports injuries requiring at least f aid. Three percent of all elementary (5-11 year), 0.7% of junior h school (12-13 year) and 11% of high school (> 14 year) children w injured. Males sustained 67% of the injuries and fourteen-year- girls and fifteen-year-old boys were most likely to be injured. Fo percent of injuries occurred in non organised sports, 38% in phys education class, 16% in organised school sports and 0.7% in commu program.

DeHaven at al[3] in a case study at a sports medicine specialty c found that 12% of all visits during the study period were for chil under 15 years of age. Of these children, 71% were between 14 and The most common injuries were sprains and strains (25%), followed fractures (20%). The lower extremity accounted for 69% of injuries and the upper extremity 26%. Football had the most inju of any sports (38%), followed by basketball (11.1%) and soccer (This sports specific data probably reflected the popularity of particular sports.

Chow CB[6] in a surveillance study of Paediatric accident attendan the A & E Dept., PMH during the period of 1 January 1991 t December 1991 found that 12.3% of all injury sustained at school, at the playground, 0.7% at the sports area *(Table 1)*.

Surveillance at Princess Margaret Hospital

Accident & Emergency Department attendance
(1 January 1991 to 31 December 1991)

ance : 5378
: M : F = 3638:1740

Place		*Percentage*
Home	*2790*	*51.9%*
School	*659*	*12.3%*
Playground	*469*	*2.4%*
Sports area	*129*	*0.7%*
Beach	*10*	*0.2%*
Street	*1010*	*18.8%*

Injury		*Percentage*
Laceration	*1419*	*14.6%*
Haematoma	*1011*	*20.0%*
Abrasion	*740*	*28.1%*
Concussion	*207*	*4.1%*
Fracture	*515*	*10.2%*
Sprain	*247*	*4.9%*
Burn	*135*	*2.7%*

Outcome		*Percentage*
Discharge	*3319*	*51.7%*
Admission	*1517*	*28.2%*

The commonest injury being laceration (14.6%) followed by haema
(20%), abrasion (28.1%), fracture (10.2%) and sprain (4.9%) *(Table 2)*.

The breakdown of data on injuries sustained in school, playgroun
sports are as follows :

Table 2 :

School Injury *<< Total: 659 (12.3%) >>*

Age		*Percentage*
< 2	*24*	*3.6%*
2 - 5	*71*	*10.8%*
6 - 9	*219*	*33.2%*
10-14	*345*	*52.4%*

Cause			*Percentage*
1. Falls :		*291*	*44.2%*
level ground	*(250)*		
stairs	*(21)*		
height	*(13)*		
chair	*(6)*		
window	*(1)*		
2. Hit by objects		*155*	*23.5%*
3. Sports injury		*97*	*14.7%*
ball games	*(47)*		
4. Assault by others		*46*	*7.0%*

Injuries		*Percentage*
Lacerations	*154*	*23.4%*
Haematoma	*122*	*18.5%*
Abrasion	*102*	*15.5%*
Fracture	*75*	*11.4%*
Sprain	*61*	*9.3%*

Outcome		*Percentage*
Discharge	*451*	*68.4%*
Admission	*146*	*22.2%*

yground Injury

layground Injury << *Total : 469 (8.7%)* >>

Age	*Percentage*	
< 2	*37*	*7.9%*
2-5	*108*	*23.0%*
6-9	*138*	*29.4%*
> 10	*186*	*39.7%*

Cause		*Percentage*	
1. Falls :		*253*	*53.9%*
level ground	*(115)*		
stairs	*(5)*		
height	*(130)*		
2. Hit by objects		*68*	*14.5%*
3. Sports injury		*108*	*23.0%*
balls games	*(53)*		
cycling	*(30)*		
skating	*(19)*		

Injuries	*Percentage*	
Lacerations	*135*	*28.8%*
Haematoma	*73*	*15.6%*
Abrasion	*69*	*14.7%*
Fracture	*84*	*17.9%*
Sprain	*32*	*6.8%*

Outcome	*Percentage*	
Discharge	*282*	*60.1%*
Admission	*145*	*30.9%*

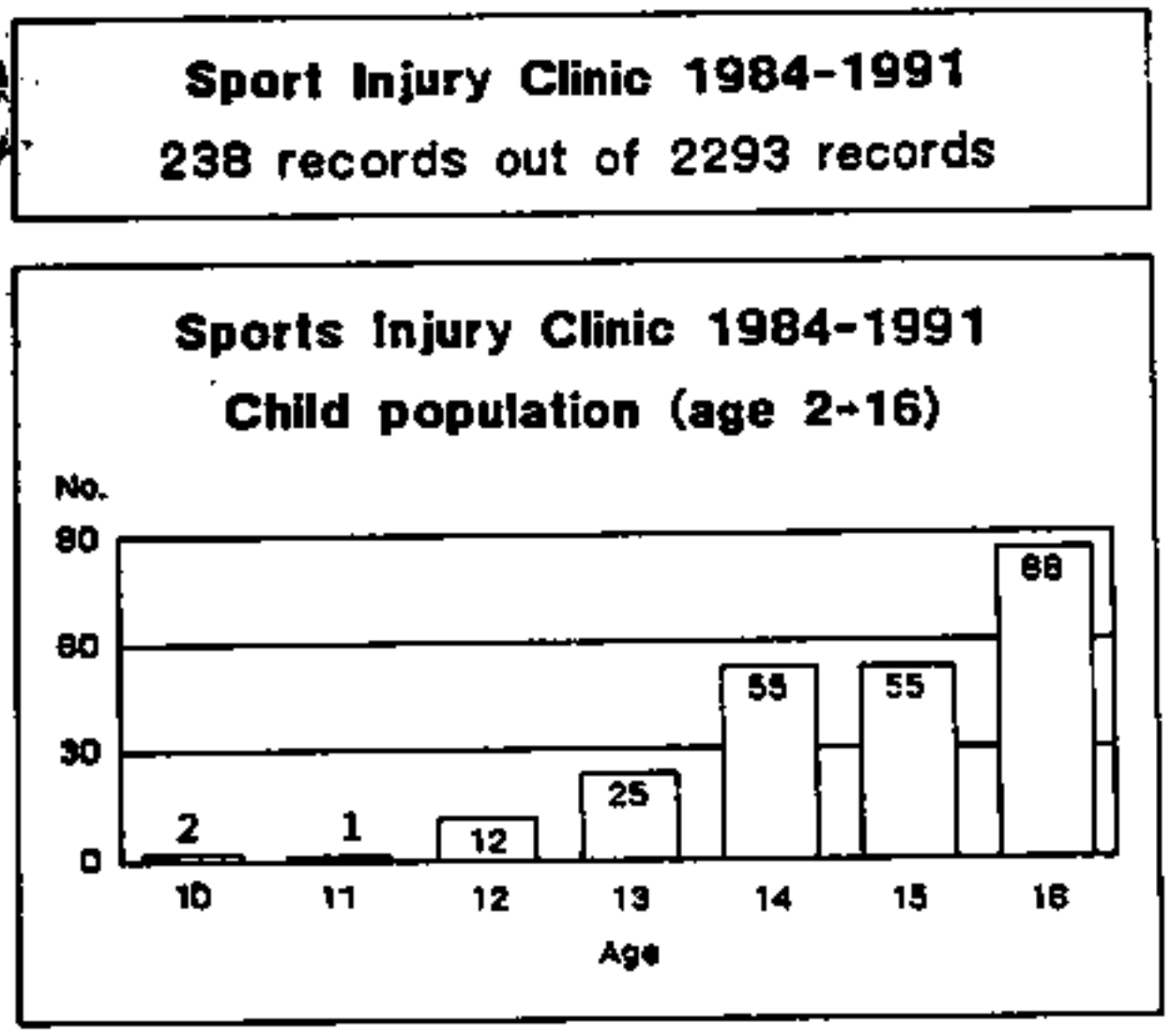
Table 4: Sports Injury

Sports Injury	*< < Total : 129 > >*
Age	
< 2	*5*
2 - 5	*8*
6 - 9	*18*
> 10	*98*
Sports	
Ball games	*33*
Skating	*26*
Cycling	*4*

Injuries		*Percentage*
Lacerations	*27*	*20.9%*
Haematoma	*20*	*15.5%*
Abrasion	*37*	*17.1%*
Fracture	*37*	*28.7%*
Sprain	*16*	*12.4%*

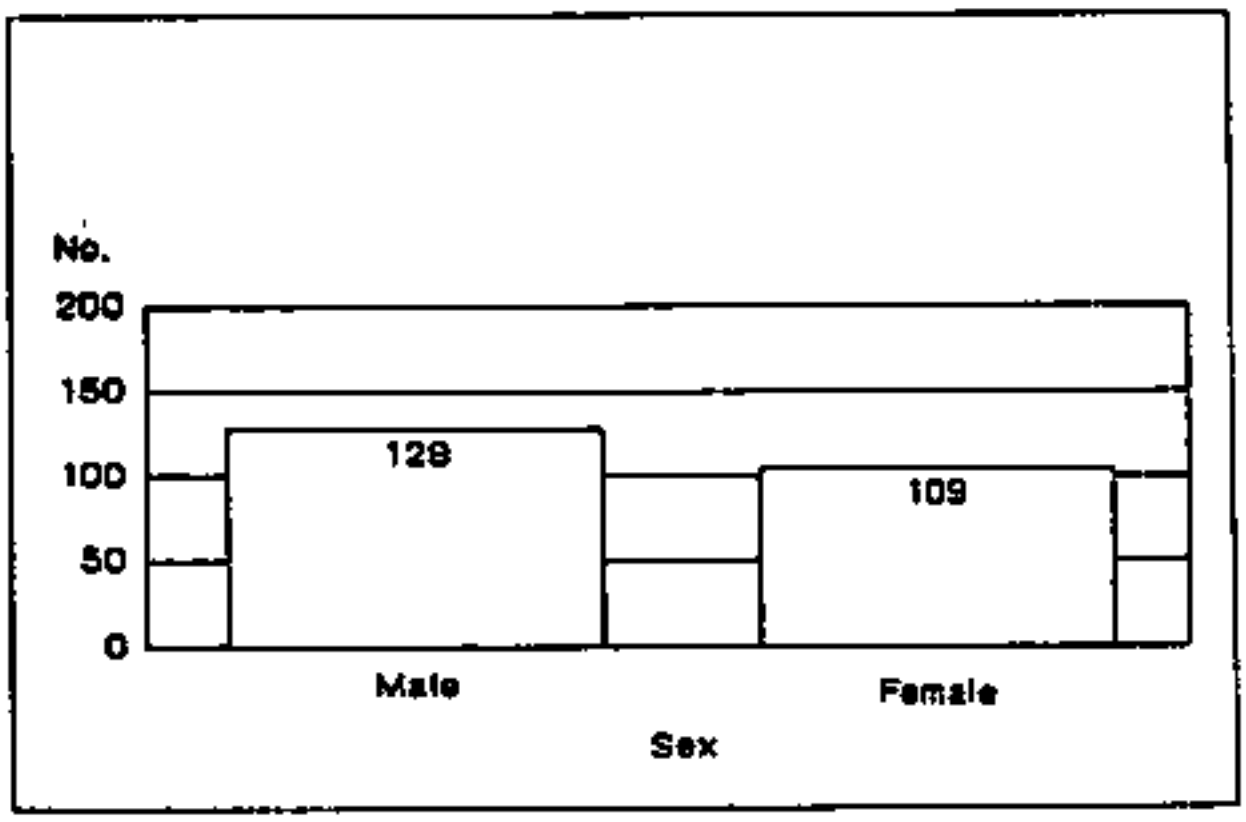
Outcome		*Percentage*
Discharge	*73*	*56.6%*
Admission	*49*	*38.0%*

In a review of paediatric attendance at the sports injury clini Department of Orthopaedic and Traumatology, PWH during the perio 1984-1991. There were 238 injured athletes under age of 16, 36.9 them were between 15-16 and 23.1% between 14-15. *(diagram 1)*



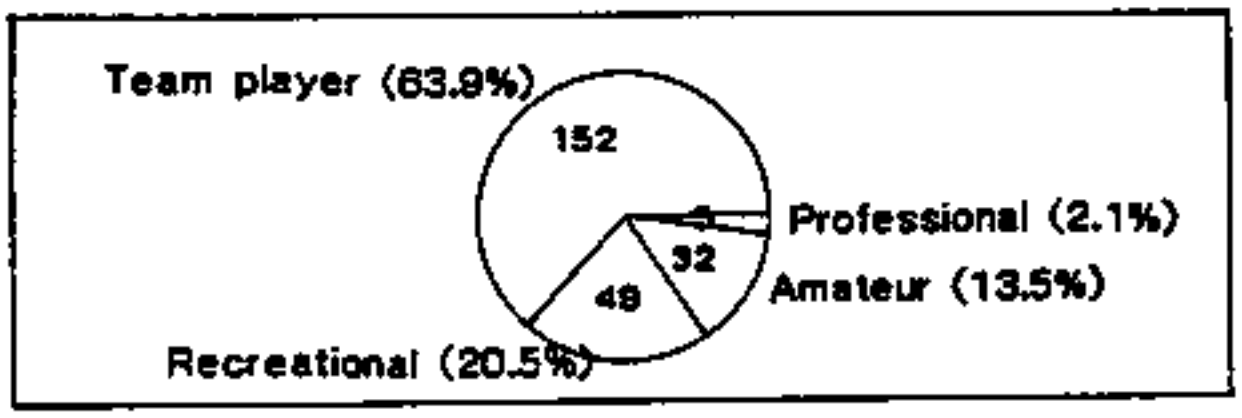
female ratio is : 129 : 109. *(diagram 2)*

2 :



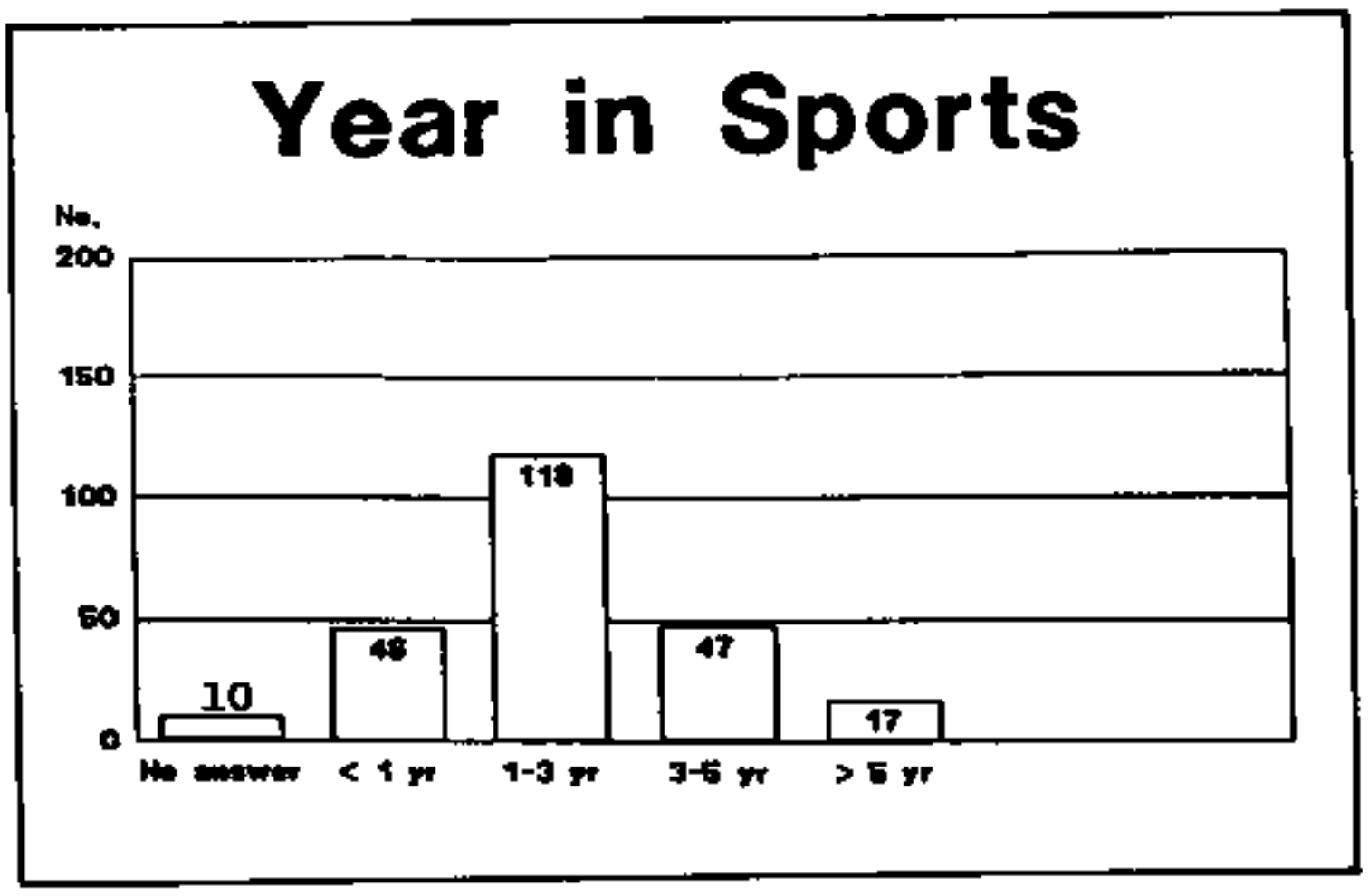
ng the athletes injured, team players constitute 63.9%, ational player 20.5%, amateur 13.5% and professional player 2.1%. *gram 3)*

gram 3 :



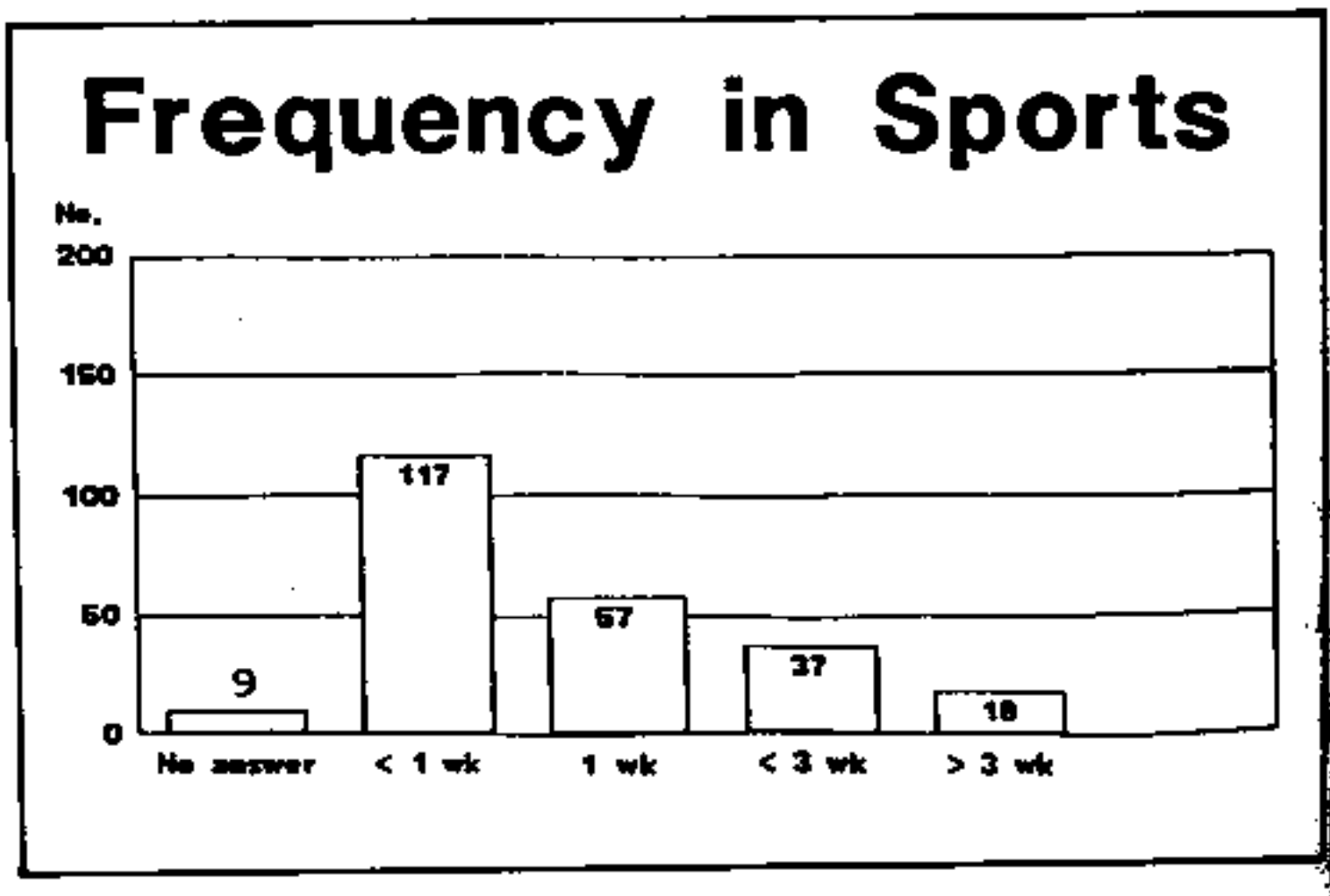
More than 49% of them have engaged in sports for 1-3 year and 19% them have experience in less than 1 year and equal percentage w more than 2 years experience. *(diagram 4)*

Diagram 4 :



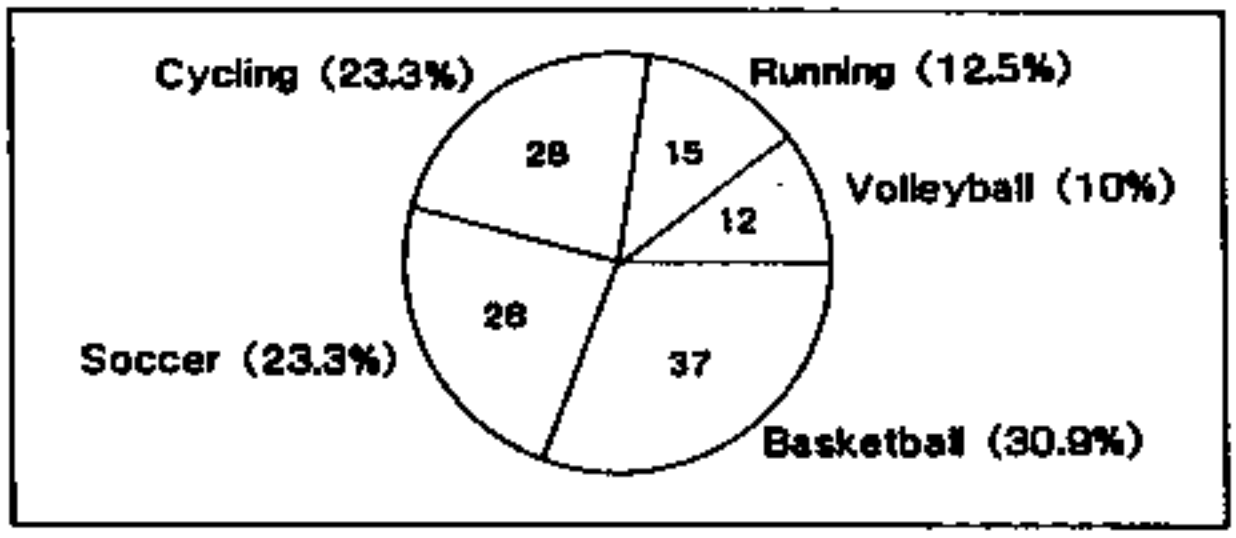
Among these patient, 49% of them participated in that sports frequency of less than once a seek. *(diagram 5)*
This probably reflected the referral system and the athlete popu only and does not indicate that higher frequency of participati sports would have a lesser chance of injury.

Diagram 5 :



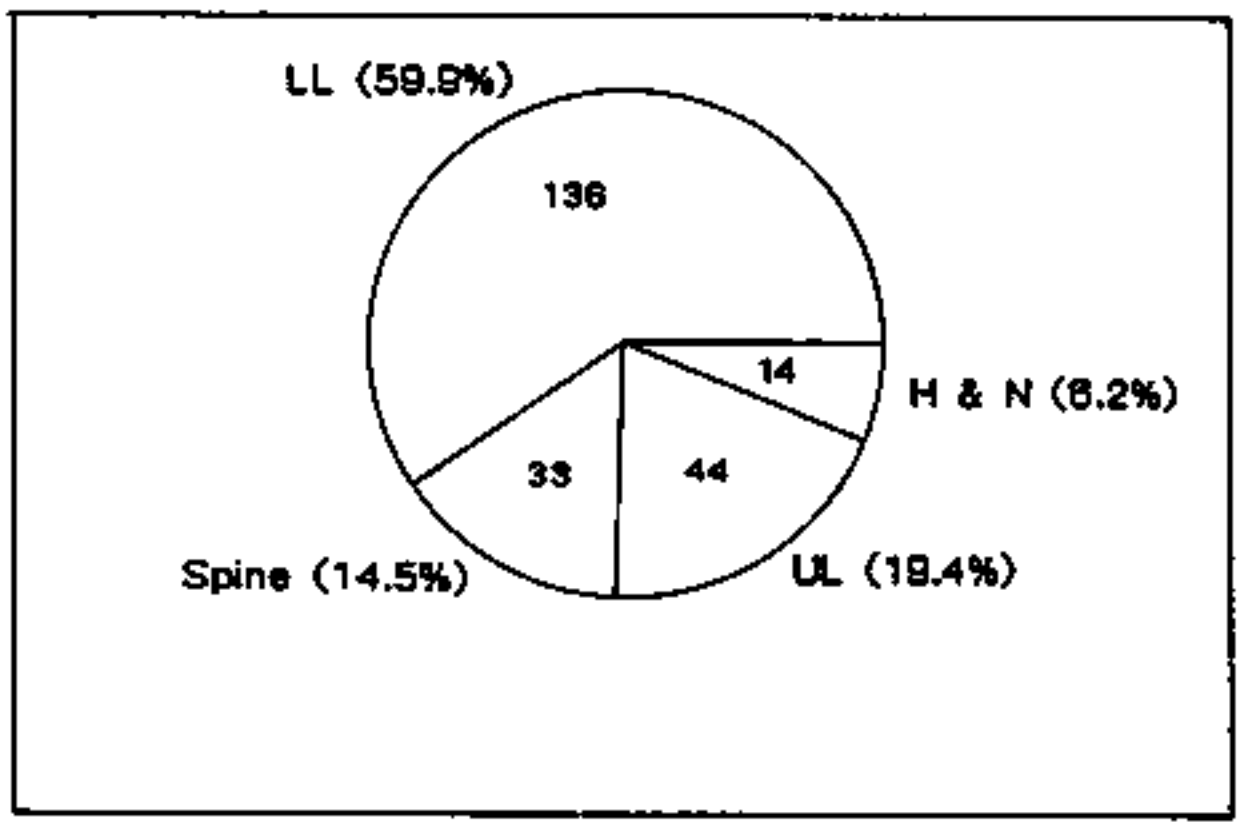
ball players and soccer player constituted more than 53% of all t athletes. *(diagram 6)*

am 6 :



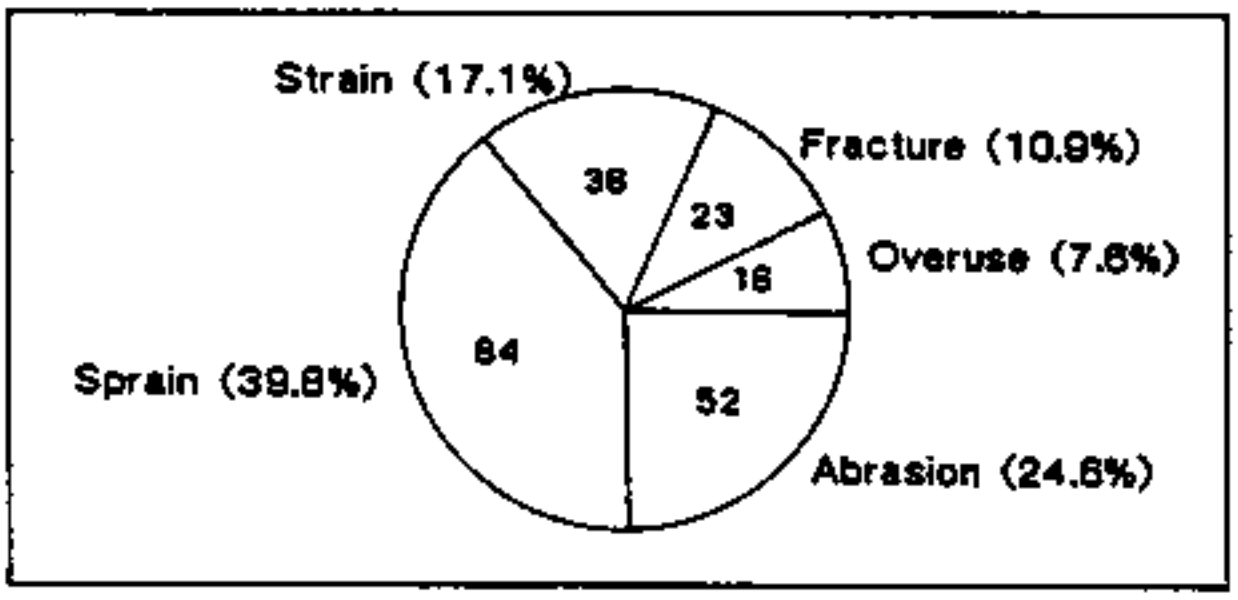
er limb injuries are encountered in almost 60% of all injuries er limb in 19.4%, spine in 14.5% and head & neck in 6.2%. *gram 7)*

gram 7 :



ost of them (39.8%) suffered from ligament sprain, 24.6% with rasion, 17.1% with strain, 10.9% with fractures. *(diagram 8)*

Diagram 8 :



Both international and local epidemiological studies showed t adolescents sustain a great number of injuries than younger childr Younger children appear to be most often injured during nonorganis sports activity, and adolescent sustain most injuries in competit organised sports.

Further research into the basic epidemiology of sports activity in c children should be conducted by joint efforts of schools, physi education scholars, and sports community, not mentioning t epidemiology of sports injury. We should know about who, when and h do they participate in which sports and why they were injured.

To prevent sports injury in children, the following is a recommen check list:

1. Proper conditioning.
2. Avoidance of excessive in training.
3. Appropriate competitive environment.
4. Complete resolution of a prior injury.
5. Appropriate supervision
6. Rule changes.
7. Instruction in correct biomechanics.
8. Appropriate equipment.
9. Complete preparticipation physical assessment.
10. Appropriate matching of competitors.

To protect the health of our second generation, bill of ri *(Appendix 1)* for young athlete should be endorsed and reinforced. sports community of our society and specialists from sports scie sports medicine and children education should unit together to pro a better physical fitness and sports activities and at the same t to prevent sports injury of children.

PPENDIX 1 :

lls of Rights for Young Athletes

. Right to participate in sports.

. Right to participate at a level commensurate with each child's maturity and ability.

. Right to have qualified adult leadership.

. Right to play as a child and not as an adult.

. Right of children to share in the leadership and decision-making of their sport participation.

. Right to participate in safe and healthy environments.

. Right to proper preparation for participation in sports.

. Right to equal opportunity to strive for success.

9. Right to an equal opportunity to strive for success.

10. Right to have fun in sports.

REFERENCE :

1. Gallagher S et al. The incidence of injuries among 87,000 Massachusetts children and adolescents: results of the 1980-1981 state-wide childhood injury prevention surveillance system. Am J Pub Health 1984; 74: 1340-1347.

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3. DeHaven KE et al. Athletic injuries in adolescents. Paediatric Ann 1978; 7: 704-714.

4. Chow CB et al. Paediatric Accident Surveillance PMH 1991 (personal Communication).

5. Bill of Rights for young athletes.

SPORTS INJURY PREVENTION AND MANAGEMENT

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An increase in sports activitics for children has its advantages t they can learn the proper sport technique at an early age. A pro technique is important as it improves skills and reduces the chance getting sports injuries. Firstly, children usually find that there more fun when participating in group activities. Secondly, unde supervised participation they can learn at the same time the rules regulations of sports. Observations of rules and regulations essential as this not only introduces the sense of fair-play but does reduce injuries caused by fowl-play.

On the other hand, when a child participates in an organized sp activity, he spends more time in training and practising in the ga If the training intensity is too great for a child to cope w injuries may occur. Growth cartilages and growth plates especially susceptible to overuse injuries. Sometimes, such inju may cause irresistible damages to the growing bones and joints o child. A child has further mental stress if parents and/or coach h a too high expectation in the individuals performance.

Hong Kong Sports Institute has a sports training ground for the el as well as, potential young athletes. Some sports require athletes start training at a very young age, such as gymnastics. I important for coaches and athletes to recognize the higher poten of athletes sustaining sports injuries with an increase in train hours and training intensity. The institute has an unique set-up w a sports medicine and sports science department. The sports medic department with doctors and physiotherapists provide an easy ac medical service for the athletes. The injury management progra follows a "Treat and Train" principle. That is, while treating injured part, athletes are able to continue their training of the u

arts. This could minimize the unwanted effect of de-training also a close-linkage between coaches and medical personnel planning of a rehabilitation programme for the injured

physiological testings provide coaches with information ing individual athlete's physical capabilities. Sports hanic analysis provides data concerning various sports ues. All these testing results enable the coaches to identify n and weakness of individual athletes, thus keep the coaches a ead in the design of various training programmes. Athletes etter physique and better technique are less prompt to injuries.

Kong Sports Institute provides excellent facilities for sports ng. Although not every region in Hong Kong can have such an condition, children can still participate in sports safely and lots of fun. The followings are a few points that parents and es need to observe. In every sport, a proper conditioning amme should be provided to each child to build-up his physical ss. It is advisable that a child should involve in more than one for an all round body development. They should have sufficient g time for recovery. A proper warm-up programme should be ht from the very beginning. Warm-up exercises include general cise for large muscle groups, e.g. jogging, stretching of muscles joints, and specific warm-up exercise for individual sports. A warm-up can help to prevent over-stretching of muscles, joints as l as ligaments and improve co-ordination, thus enhance sports formance. The coaches or parents should set-up a realistic goal the child to achieve in order to maintain his interest in sports. tch chronological age or body size is essential for a fair-play. ildren should never be treated as a miniature adult. Training ogrammes should always be flexible and are to be adjusted according the growth and development of a child.

INJURY PREVENTION IN CHILDHOOD SPORTS AND SCHOOL SAFETY

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Senior Recreation & Sports Officer
Regional Council

Recreation and sport activities introduced at a young age can h develop a firm base for a lifelong interest in physical fitness health. The Regional Council, as provided by the Regional Cou Ordinance has these mandates in the area of recreation and s (shown by transparencies) -

a) to establish and maintain places and facilities for recreat relaxation, the performance of sport of any kind

b) to provide, promote, sponsor, assist or collaborate with person or group of persons whether incorporated or not in organizing or presenting of:-

   i) dancing, ... performances of any kind

   ii) demonstrations, displays or competitions of and training sports

   iii) to provide recreational activities

In the area of facility management, the Regional Council ha involvement at the initial stage of planning with input to the s architect pertaining to design and choice of equipment with consideration to public safety at play. Appropriate planning help make their community a nurturing, safe and educational pl grow up. It is evident that the fundamental principle in desig successful play area is to design according to the characteristic