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INTRODUCTION

Injuries are the third leading cause of death and disability in Malaysia. Injuries are the major single cause of admissions to government hospitals in 1995, excluding normal delivery and common type of road traffic accidents. Road traffic accidents are the leading cause of loss of disability.

per 100,000 population has increased from 21.4 in 1977 to 25.5 in 1999. However, the number of road deaths 10,000 vehicles has increased from 15.5 in 1977 to 5.8 in 1999 and is likely to decrease further due to rapid motorisation where road deaths per 10,000 vehicles may not be valid.

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1 PREVENTION OF ROAD TRAFFIC INJURIES

1.1 Surveillance of Road Traffic Injuries

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The police data is very useful to describe the epidemiology of road injuries. However, information on use of protective equipment by victims (such as helmets, seat belts, child

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TOWARDS EFFECTIVE INTERSECTORAL COOPERATION FOR ROAD SAFETY IN MALAYSIA

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"epidemiologists too often overemphasise the personal risk factors that differentiate between injured and uninjured people" while neglecting "environmental and circumstances of injury (which) dictate not only who is hurt but also the best means to prevent the injury" (Baker S, 2000)

This paper is adapted from a consultancy report to the Ministry of Health.

The views expressed here are those of the author.

INTRODUCTION

Injuries are the third leading cause of death and disability in Malaysia. Injuries are the major single cause of admissions to government hospitals in 1995, excluding normal delivery and complications of delivery. (Ministry of Health 1995) Road traffic injuries constitute the most common type of Injury. Since the young are mainly affected, road injuries are the leading cause of loss of disability-adjusted life years (DALYs). The incidence of road traffic deaths per 100,000 population has increased from 23.4 in 1977 to 25.5 in 1999. However, the number of road deaths 10,000 vehicles has declined from 15.5 in 1977 to 5.8 in 1999 and is likely to decrease further due to rapid motorisation alone. Road deaths per 10,000 vehicles may not be valid indicator of road safety in Malaysia. Road deaths per kilometre travelled is the best indicator of road safety measures. However it is difficult to estimate this unit. The economic loss due to road traffic injuries in any country, including direct and indirect costs, has been estimated to be about 1-2% of the GDP. (Asian Development Bank 1996) The total costs of road traffic injuries and crashes in Malaysia has been estimated by the Road Safety Research Centre, Universiti Putra Malaysia. (Radin Umar 2000)

1 PREVENTION OF ROAD TRAFFIC INJURIES

1.1 Surveillance of Road Traffic Injuries

Traffic police collect data on road injuries to determine "fault" and assess damages for both legal and insurance purposes. Many minor road crashes (which often does not result in injuries) go unreported and are settled by the parties concerned to save themselves the trouble of making police reports and making insurance claims (resulting in loss of their "no claim discounts"). Since the reporting of road crashes is mandatory by law all crashes which result in fatal, serious and minor injuries are captured by the police recording systems.

The police data is very useful to describe the epidemiology of road injuries. However, information on use of protective equipment by victims (such as helmets, seat belts, child

restraints, etc.), study of other risk factors e.g. speed of involved vehicle, use of alcohol/drugs and correlation with nature of injuries is not complete. It may be difficult to assess the use of protective equipment or misuse of alcohol/drug in a crash scene. Two earlier studies on role of alcohol in road crashes suggest that alcohol may play a role but the exact magnitude of the problem of drunken driving and role of alcohol could not be assessed in both studies for methodological reasons. (Shahrom, 1991, Ishak, 1999) Hence, this kind of information should be obtained by specific research. Similarly, information on nature of vehicle and type / severity / frequency of injuries is available in the police database but is not analysed and reported for ordinary use.

Currently, the traffic police spend a significant proportion of their resources in receiving and analysing all crashes reported to them. As mentioned earlier, a considerable proportion of crashes do not result in injuries but are reported for vehicle damage claims as per insurance purposes. If minor crashes (those not resulting in injury) are referred directly to the insurance sector and not to traffic police, this additional time and resources saved could be reallocated to investigation of moderate / severe crashes and, more importantly, enforcement of existing traffic rules / mandatory use of protective equipment and education of the public. The government should consider enacting that insurance claims involving only vehicle damage need to be investigated by the insurance sector.

1.2 Education of the Public about Road Injury Prevention

1.2.1 The evidence

There has been considerable amount of recent evidence describing educational strategies that have been successful in reducing road traffic injuries (Svanstrom, 2000). A variety of strategies from multisectoral targeted campaigns, community and clinic based programs have been implemented. These interventions have been described mainly from developed countries where the epidemiology of road injuries is different than that in developing countries. In developed countries, vehicle drivers constitute the majority of road fatalities while in developing countries like Malaysia, the vulnerable road users (motorcyclists, pedestrians and bicyclists) constitute the majority of road fatalities.

The following are some of the educational measures which have been proven to be effective in prevention of injuries to road users: (Svanstrom, 2000, <http://depts.washington.edu/hiprc/childinjury/>.)

- Motorcyclists - proper use of full faced helmets of acceptable quality
- Bicyclists - proper use of helmets of acceptable quality
- In both instances, head injuries are the leading cause of death and permanent disability
- Vehicle occupants - usage of restraint systems and airbags (The risk of injury is reduced with proper use of these protective devices)

Examples of strategies (in other sectors) that have been proven to be effective :

- Pedestrians – reduction of speeds of vehicle (The severity of injury and death is directly proportional to the speed of the vehicle at impact)
- Reduction in speed limits,
- Safer vehicles by use of side impact systems, enclosed vehicle concept,
- Strict enforcement of alcohol limits in drivers

There is little reliable evidence to show that the following programs result in reduction in injuries: (Svanstrom, 2000, <http://depts.washington.edu/hiprc/childinjury/>)

Motorcycle and bicycle rider education on riding techniques

Car driver education on defensive driving

Teaching young children to cross roads

1.2.2 Current Experience In Malaysia

Motorcycle helmet use

In 1994/5, University of Malaya carried out a study motorcycle helmet use in urban and rural areas for the Road Safety Council of Malaysia. The study was carried out with the cooperation of the traffic police in different parts of the country. The studies showed that a significant proportion of motorcyclists in urban and rural areas either did not wear helmets or strapped the helmets loose or not at all (Krishnan, 1995). Between 1996 and 1998, the Council launched a multimedia campaign to educate the public about the proper use of motorcycle helmets. The University of Malaya then repeated the study of helmet use in urban areas of Kulim in 1997. There was no difference in helmet use before and after the campaign. (Harif Fadzilah, 1998)

Occupant restraint use

Two studies of vehicle occupant use in Petaling Jaya / Banting and Universiti Malaya showed that a significant proportion of Malaysian vehicle drivers and front seat passengers do not wear their seat belts properly though mandatory by law (Lee, 1996; Lee, 2000). Passengers in the rear seat were also not aware of the importance of seat belts and child restraints. The use of child restraints is encouraged by the Automobile Association of Malaysia which sells as well as hires them to parents. It also offers technical advice on the fixing of these seats to its members. These child restraints are certified to Malaysian standards while some of those sold in the open market are not made to any standards. Child restraints are relatively expensive because the certified ones are imported and tax is imposed by the government. Another important issue is the fact that only two or three (with some difficulty) child restraints can be fixed in the rear seats of cars. The larger vans may be able to accomodate additional number of child restraints.

Bicycle helmet programmes

In Malaysia, bicycle helmets were practically unheard of and not worn by bicyclists except in racing activities. Over the last decade, bicycle helmet initiatives were undertaken by the Malaysian Helmet Initiatives, a consortium of organizations and which has been recognised by the World Health Organisation as a Cooperative Helmet Initiative Program (WHO – CHIP). The program was implemented in different parts of the country with the cooperation of the Ministry of Health, Road Safety Council, Ministry of Education, Royal Malaysia Police, Road Transport Department and many other agencies at district and state levels. It is an example of intersectoral cooperation at the local level. The program was targeted mainly at school children and at short to intermediate term (about 6 months to 1 year) follow up assessment, a significant proportion of children continue to wear the helmets. Details are available in <http://www.geocities.com/HotSprings/Resort/7200/index.html>. Problems with the use of helmets included lack of support by peers, non-existent storage space in schools, exorbitant price, etc. These issues are being addressed and continuing support of relevant agencies is needed.

Road safety campaigns

In Malaysia, the Road Safety Council had carried out multimedia campaigns in the past. In the initial years, the campaign was not focussed e.g. "Hati-hati di Jalan Raya" (Take care on the roads). Subsequently, the campaigns were more focussed and targeted (e.g. alcohol and Driving, Motorcycle helmet use, etc). Elliott has analysed the issue of effectiveness of road safety media campaigns (Elliott, 1989). In summary, most such campaigns in the world have been unsuccessful. The main reason is that campaigns increase sensitivity of the public to the issue at hand and does not result in behaviour change. If, on the other hand, the public perceive that enforcement is being carried out at the same time, behaviour change is more likely. The other main problem of "campaigns" is that by definition the time frame is delineated and sustainability is an issue. A longer term and well planned multifaceted "program" where media education is combined with community participation on a wide scale is more likely to be met with success. A classic example of a successful campaign which included well researched multisectoral education and concomitant enforcement is the Victorian campaign in Australia pertaining to use of alcohol or use of protective devices or speed limits.

1.2.3 Community based injury prevention programs

In principle, all community based programs should involve many sectors and should be undertaken by agencies at grass root level. Experience worldwide has shown whenever communities have "ownership" of programs, they are more likely to succeed and be sustainable than when programs are top down. Adequate resource allocation is a prerequisite. Community based programs need to follow a PRECEDE / PROCEDE model (Green, 1991) or "(health) systems" (IDRC, 1991) or an "ecoepidemiology" approach (Schwartz et al., 1999) which takes into account cultural, economic and other "soft" societal characteristics while implementing behaviour change.

2. INTERSECTORAL COOPERATION FOR ROAD SAFETY

2.1 Current situation

The Road Safety Council is a registered society, which is based in the Ministry of Transport. The patron is the Prime Minister who chairs the Cabinet Committee on Road Safety. The Chairman is the Minister of Transport and Co-Chairman, the Deputy Minister. The Council has about 100 members and has an Executive Committee. The Council meets annually to review activities of its members. The Council works with the private sector and non-government agencies in promoting road safety education of the public. There is an urgent need to effectively co-ordinate all road safety policies and activities as well as to restructure the large number of Council members. An example of an intersectoral road safety initiative at the district level is a workshop held in Kulim, Kedah on 24th November 1998, which discussed relevant issues and recommended measures. (Appendix 1)

2.2 Models of Road Safety Agencies Worldwide

There are different types of road safety agencies exists in different parts of the world. (Krishnan, 1994) Basically, there are three different models. In the first model, a road safety coordinating committee of officials exists but each agency/ministry involved remains entirely responsible for its activities from policy making to implementation. The advantage of this model is the power to take action but interministry rivalry is a problem and wider road safety interest is not represented. In the second model, a central coordinating agency exists for policy making and planning but acts through other agencies who may or may not be completely involved in the policy making process. While independent in principle, this agency may act only as an advisory body in reality since implementation of policy and programs is through relevant agencies. The third model consists of a national body consisting of key government decision-makers includes the private, professional and non-government bodies. This agency needs secure funding and a secretariat.

The World Health Organisation Report on "New approaches to Road Safety" recommended that road safety comes under the purview of the highest political authority with representatives from relevant sectors. The basis of this recommendation is the experience worldwide that road safety agencies which are within the organisational structure of the highest political agency e.g. Prime Minister's Department are generally more effective than those within a particular sector e.g. Transport. In Japan, the Interministerial Council on Road Safety is chaired by the Prime Minister. It has achieved a level of intersectoral co-operation to oversee implementation of effective five year road safety plans (Kanzaki, 1991).

2.3 Recommendation for Malaysia

A full time Road Safety Agency needs to be set up in Malaysia to plan and implement well researched and targeted plans. The agency should establish regional and local centres/committees to coordinate activities at these levels. The agency needs to be supported by full time researchers.

3 NEED FOR ROAD SAFETY RESEARCH

3.1 Introduction to road safety research

Road safety research is the scientific and objective study of road and traffic systems with the objective of reducing the suffering and losses due to road crashes. Its three specific purposes include the greater understanding of causes and problem areas, development of countermeasures and the evaluation of the effectiveness of these counter measures. One of the major reasons for the success of road safety in countries like Australia and Sweden has been the research carried out by these agencies before implementing any specific action or measure. The enormous number of scientific papers and presentations at international conferences from these countries is testimony to this fact.

3.2 Current situation in Malaysia

In Malaysia, road safety research is currently being carried out by relevant government agencies like the Jabatan Kerja Raya, Highway Planning Unit, and Universities especially Universiti Putra Malaysia, Universiti Technology Malaysia, Universiti Malaya and Universiti Kebangsaan Malaysia. Special mention must be made of the contributions made by the Road Safety Research Centre in Universiti Putra Malaysia. This centre was funded by the government through the Intensification of Research in Priority Areas (IRPA) scheme of the Ministry of Science, Technology and Environment and through consultancy projects of the Ministry of Transport. The Malaysian Helmet Initiatives is a consortium of government agencies and the Universities and has been active in the field of motorcycle and bicycle injury prevention research including helmet promotion. It was funded by the IRPA scheme. Vehicle safety research is being carried out by the Automotive R & D Group of Universiti Technology Malaysia in the Skudai campus and is partly funded by the automobile industry.

General observations on road safety research carried out in Malaysia show that :

- a) research has been often driven by committed individuals as in the Road Safety Research Centre in UPM
- b) areas of research were often decided by investigators based on their expertise/interest
- c) some areas were more often researched than others. Hence, at least initially, "engineering" aspects were more often looked into than either enforcement, educational, or policy aspects. This can be partly explained by the availability of "engineering" based institutions like IKRAM, Highway Planning Unit, UPM.
- d) there is lack of co-ordination between researchers

It cannot be denied that research is best carried out by individuals committed to their field, in environments independent of bureaucratic pressures and which offer suitable "reward" structure (as in promotions in University or a research Institute). However there is a need to balance interests of the nation and those of researchers.

3.3 Recommendations for road safety research in Malaysia

Road safety research (and other safety research as well) should be governed by the following characteristics and directions:

- (a) a critical review of all research previously conducted by all relevant agencies be carried out
- (b) driven by national needs and priorities
- (c) research function should be independent of executive function though liaison should exist and centrally coordinated (Trinca, 1988)
- (d) lead by committed individuals
- (e) intersectoral and interdisciplinary in nature (including crash and injury data, roads, vehicles, road users)
- (f) attract the best researchers from all Universities / Research Institutions
- (g) be subjected to outside peer review of program content
- (h) carried out on a full time basis rather than on a part time basis
- (i) funded commensurate to the magnitude of the problem
- (j) a proportion of funds be available to bodies outside the lead agency
- (k) provide inbuilt career / reward structure
- (l) linkages should be established with other similar agencies around the world
- (m) findings should be disseminated to stake holders
- (n) evaluated by its ability to influence policy / program and not by the number of papers of its investigators" (IDRC, 1991)

3.4 Funding for road safety research in Malaysia

The government should be the main sources of road safety research funding (an investment rather than cost). However, other sources should include the automobile manufacturers, insurance sector, consumer bodies, voluntary organisations, professional bodies, etc.

Just as Palm Oil Research Institute of Malaysia (PORIM) exists for a national commodity, a full time road safety research institute is justified in view of the economic loss in GNP due to road crashes.

3.5 Priority Areas for Research in Injury Prevention

Link between police and medical data to identify to preventable risk factors

- a. Motorcycle / bicycle injuries and use of helmets
- b. Vehicle Occupant Injuries and use of seat belts / child restraints
- c. Injuries and alcohol / drug use especially in commercial vehicle drivers

An audit of medical screening guidelines for licensing of commercial vehicle drivers
 Though motorcycle helmet laws are in place, compliance is unsatisfactory. Qualitative research may be useful in this area.
 Evaluation of pilot intervention programs targeted at young motorcyclists
 Pedestrian injuries with respect to location, pedestrian facilities

Studies of road crashes and injuries during festive seasons

REFERENCES

- Asian Development Bank, Road Safety Guidelines for the Asian and Pacific Region, 1996
- Baker S (2000). Where Have We Been and Where are We Going With Injury Control. In : Injury Prevention and Control, Mohan D, Tiwari G. Taylor and Francis (eds.), 19 - 26
- Elliott, B. (1989) Effective Road Safety Campaigns: A practical handbook, FORS, Canberra, ACT, CR80.
- Green L, Kreuter M. Health promotion planning: an educational and environmental approach. Mountain View: Mayfield 1991
- IDRC, WHO 1991. Health Systems Research Training Series. Volumes 1-5
- Harif Fadzilah Che Hashim, Abdul Samad, Cheng Ooi Tim. Program Mendidik dan Menyedarkan Penunggang-Penunggang Motosikal Tentang Cara Pengguna Topi Leledar Yang Betul DiDaerah Kulim, Kedah Darul Aman, *Annual Meeting, Road Safety Council of Malaysia*, 1998
- Ishak J. Alcohol use amongst patients with mild to moderate road injuries, Master of Family Medicine dissertation, Universiti Malaya, 1999.
- Kanzaki H et al, Trends in Traffic Accidents and Safety Measures in Japan, Proceedings of the National Road Safety Seminar, Japan International Cooperation Agency, Ministry of Works, Kuala Lumpur, 1991.
- Krishnan R. "Prevention of Motorcycle Injuries in Malaysia", Annual Meeting, Road Safety Council of Malaysia, Langkawi, June 95
- Krishnan R. The national road safety agenda. In : Injury Control and Safety, R. Krishnan et al. (eds.) Malaysian Medical Association, 1994, 57 - 63
- Lee CK et al. A Study of the Usage of Car Occupant Restraint in Universiti Malaya, First Year Elective Program, Faculty of Medicine, Universiti Malaya. 2000
- Lee LK. A Study of the Use of Car Occupant Restraint in Selangor. University of Malaya Master of Public Health Dissertation 1996
- Ministry of Health, Causes of admission to Government Hospitals, 1995
- Ministry of Health. Epidemiology of Injury in Malaysia, 1997

PDM (1999). "Laporan Perangkaan Kecelakaan Jalanraya Malaysia" 1998 (Statistical Report Road Crash). Cawangan Trafik, Ibu Pejabat Polis, Bukit Aman, Kuala Lumpur. Kuala Lumpur: Percetakan Nasional Malaysia Berhad.

PDM (1998). "Laporan Perangkaan Kecelakaan Jalanraya Malaysia" 1997 (Statistical Report Road Crash). Cawangan Trafik, Ibu Pejabat Polis, Bukit Aman, Kuala Lumpur. Kuala Lumpur: Percetakan Nasional Malaysia Berhad.

Radin Umar Radin Sohadi. Research Reports, Road Safety Council of Malaysia, 2000

Schwartz S, Susser E, Susser M. A Future for Epidemiology? *American Review of Public Health* 1999, 20: 15-33

Shahrom AW, Mohd Azman AB, Hasnah H, Mohd Yusof M. Alcohol and fatal road traffic accidents in Kuala Lumpur: a preliminary study. *The Family Physician*, April 1991,3:28-29

Trinca GW et al, Reducing Traffic Injury, A Global Challenge. Royal Australian College of Surgeons, 1988

Web References and Resources

<http://depts.washington.edu/hiprc/childinjury/> detailed resource site of the Harbourview Injury Prevention and Research Centre, Seattle, USA with links to other sites

(<http://www.aap.org/family/tippintr.htm>) site of the American Academy of Pediatrics containing details of The Injury Prevention Program (TIPP)

<http://www.geocities.com/HotSprings/Resort/7200/index.html>. Web site of the Malaysian Helmet Initiatives

Road safety agencies worldwide

- 1) Sweden- <http://www.vti.se/omvti/comvti.asp>
- 2) USA --- NHTSA - <http://www.nhtsa.dot.gov/>
- 3) UK - TRL -- <http://www.trl.co.uk/pen.htm>

APPENDIX

Appendix 1 - Recommendations of an intersectoral district level road safety workshop held on 24th November 1998

BENGKEL PENCEGAHAN KECELAKAAN DAN KECEDEeraan JALAN RAYA DAERAH KULIM 24/11/1998

HASIL PERBINCANGAN KUMPULAN NO. 1 - KEJURUTERAAN

BIL	MASALAH	CADANGAN	TINDAKAN
1.	Lubang-Lubang di jalan raya.	1. Harus dibaik pulih dengan segera	MDK / JKR
2.	Kerja membaiki jalan raya.	1. Perlu dijalankan BUKAN pada waktu yang sibuk	MDK / JKR
3.	Jalan di Hi-Tech Park	1. Perlu dibaiki dengan segera	MDK / JKR
4.	"Speeding" di taman-taman perumahan	1. Dicapangkan "Speed Hump" dibina di tempat yang sibuk	MDK / JKR
5.	Bahaya yang terdapat di Zebra Crossing	1. Dicapangkan Lampu Isyarat untuk pejalan kaki dibina.	MDK / JKR
6.	Zebra Crossing di hadapan Maybank mengelirukan	1. Zebra Crossing ini harus dipadamkan kerana orang ramai masih menggunakannya. Sudah ada Zebra Crossing di jalan ke pasar baru.	MDK / JKR
7.	Masalah mleintas di jalan yang sibuk.	1. Adakan jejentias	MDK / JKR
8.	Kawasan di hadapan sekolah-sekolah amat membahayakan semasa waktu tamat sekolah.	1. Dicapangkan satu "Zon Menunggu" dikhasakan bagi tujuan ibubapa mengambil anak-anak dan pelajar-pelajar oleh bas sekolah	MDK / PPD / SEKOLAH
9.	Kekurangan Lamp Isyarat di Kulim	1. Lampu Isyarat diperlukan di Kulim khasnya di persimpangan Keladi dan Simpang Tiga 2. Sebagai langkah sementara bantuan Polis Trafik diperlukan pada waktu yang sibuk	MDK / JKR
10.	Papan tanda NO ENTRY	1. Perlu dipasang di jalan bercabang 'Y' ke Jalan Podok Labu dan ke Kulim di Kelab Kulim lama dan mesjid Kulim	MDK / JKR

BENGKEL PENCEGAHAN KECELAKAAN DAN KECEDERAAN JALAN RAYA DAERAH KULIM 1998

HASIL PERBINCANGAN KUMPULAN NO.2 - PENGUATKUASAAN

BIL	MASALAH	CADANGAN	TINDAKAN
1.	Sistem lalu lintas sehala sibuk, [Hari Ahad & Sabtu]	<ol style="list-style-type: none"> 1.. Lorong khas untuk motosikal/basikal. 2.. Jejantas untuk "Pedestrian Crossing" 3.. Sekolah:- Lantik Waden Trafik dan beri latihan 4.. Kurangkan "Feeder Road" ke jalan utama 5.. Di hadapan Sekolah Convent:- Kenderaan ibubapa tidak dibenarkan masuk ke dalam kawasan sekolah 	MDK / POLIS / PENDIDIKAN
2.	Zebra Crossing	<ol style="list-style-type: none"> 1. Tambah lampu isyarat dan di hadapan dibina lampu berkelip 	MDK
3.	Traffic Light	<ol style="list-style-type: none"> 2. Diadakan di lokasi yang sesuai 1.. Pastikan sentiasa berfungsi. 2.. Kontak No. penyelenggara traffic light dipamerkan di tempat yang strategik 	MDK / JKR
4.	Speed Limit	<ol style="list-style-type: none"> 3.. Diwartakan dan pada had laju yang bersesuaian 	MDK / JKR
5.	Lampu di persimpangan Jalan.	<ol style="list-style-type: none"> 4.. Papan tanda yang mencukupi 5.. Perlu terang. 6.. Papan tanda yang mencukupi 	MDK / JKR
6.	Kedudukan "Parking" di pasar lama, Jln. Raya dan Jalan Tunku Putra	<ol style="list-style-type: none"> 1. Parking dihadkan di sebelah kiri sahaja 	MDK
7.	Jalan di kawasan perumahan baru tidak dibersihkan	<ol style="list-style-type: none"> 1. Perlu dibersihkan oleh syarikat pemuja 	MDK
8.	Penjaja di bahu Jalan, menghalang lalu lintas.	<ol style="list-style-type: none"> 1. Penempatan semula perniagaan 	MDK
9.	Sistem Kawalan Lalu lintas	<ol style="list-style-type: none"> 1. Kajian semula sistem lalu lintas 	POLIS
10.	Simpang Empat Kota Kenari mengalir.	<ol style="list-style-type: none"> 1. Papan tanda "Berhenti" perlu diubah kedudukan kepada laluan hospital dan Taman Kenari 	MDK
11.	Kurang papan tanda amaran	<ol style="list-style-type: none"> 1. Tambah papan tanda amaran 	MDK
12.	Bahu jalan sempit, jalan susur keluar sempit di Pondok Labu dan Simpang Empat KELADI	<ol style="list-style-type: none"> 1. Diperbesarkan/ ditarkan 	MDK / JKR

BENGKEL PENCEGAHAN KECELAKAAN DAN KECEDEeraan JALAN RAYA DAERAH KULIM 1998

HASIL PERBINCANGAN KUMPULAN NO 3. - PENDIDIKAN

BIL	MASALAH	CADANGAN	TINDAKAN
1.	<p>Kumpulan Bermasalah</p> <p>a.. Pemandu van/ bas kilang</p> <p>b. Penunggang Motosikal - Kilang Belia Murid Sekolah Men. Kawasan Luar Bandar</p>	<p>1.. Kursus.</p> <p>2.. Pengurus Kilang mengambil tindakan jika ada maklum balas terhadap van kilang yang tidak mengikut peraturan jalan raya.</p> <p>1.. Kursus yang dirancang</p> <p>2.. Pameran Bergerak</p>	<p>JPJ / Polis</p> <p>MKJR Daerah/ Polis</p>
2.	<p>Keberkesanan Sekolah Memandu</p>	<p>Kursus yang dijalankan perlu dipertingkatkan</p>	<p>JPJ / Sekolah Memandu</p>
3.	<p>Sikap pemandu tidak bertimbangrasa/ tidak bertanggungjawab</p>	<p>1.. Kempen /Peranan Massa Media</p> <p>2.. Masuk sebagai satu subjek dalam kurikulum Sek.</p> <p>3.. Adakan-aktiviti pertandingan lalulintas di peringkat sekolah dan pekerja kilang</p> <p>4.. Menubuhkan Kelab Penunggang Basikal/Motosikal Berhemah di sekolah dan kilang.</p> <p>5.. Memberi penerangan mengenai keselamatan jalan raya kepada orang ramai di kampung</p>	<p>MKJR/ Kem. Pengangkutan/ Kesihatan/ Pendidikan/ Massa Media</p> <p>Pej. Penerangan</p>
4.	<p>Kurang Pengetahuan</p>	<p>6.. Ceramah dan Pameran Bergerak</p> <p>7.. Pengistirafan pemandu yang berhemah [Tahunan] dijadikan aktiviti masyarakat</p>	<p>MKJR/Polis dan Jabatan Masing-masing</p>

HASIL PERBINCANGAN KUMPULAN NO. 4 - ISU-ISU DASAR

BIL	MASALAH	CADANGAN	TINDAKAN
1.	Masalah Pengangkutan	<ol style="list-style-type: none"> 1. Bas mencukupi tetapi beberapa bas yang lama perlu di - gantikan dengan yang lebih selesah. 2. Eloklah ditempatkan Teksi-Teksi di kawasan belakang Supermarket YAWATA 3. Adakan Zon letak Kenderaan 	MDK / JKR SYARIKAT BUS
2.	Keselamatan jalan raya dalam perancangan dan perlaksanaan penggunaan tanah	<ol style="list-style-type: none"> 1. Adakan lorong pejalan kaki/basikal dan motosikal untuk semua taman perumahan yang baru. 2. Kuatkuasakan "Speed Limit" dan "Traffic Calming" 	MDK / JKR
3.	Majlis Keselamatan Jalan Raya Daerah Kulim [MKJR]	<ol style="list-style-type: none"> 1.. Perlu dirombak semula AJK 2.. Tubuhkan "Jawatankuasa Tindakan" untuk melaksana semua aktiviti yang telah dirancang oleh J/K Induk. 3.. Harap lebih kerap bermasyuarat 4.. Merancang lebih aktiviti keselamatan jalan raya untuk penduduk Kulim. 5. Berkerjasama dengan agensi-agensi lain yang terlibat dengan keselamatan jalan raya 	MKJR [JPJ / MDK / POLIS / HOSPITAL/ DLJ
4.	Peruntukan untuk Keselamatan jalan Raya	<ol style="list-style-type: none"> 1. Wajar diadakan satu peruntukan untuk menjalankan aktiviti-aktiviti keselamatan jalan raya 	MKJR NEGERI
5.	Kajian mengenai Keselamatan Jalan Raya	<ol style="list-style-type: none"> 1. Kajian struktur jalan perlu diteruskan dari semasa ke semasa untuk menentukan <ol style="list-style-type: none"> a. Traffic Volume – Masuk dan keluar Kulim b. Penggunaan topi keledar motosikal oleh penunggang motosikal di bandar Kulim dan luar bandar. c. Keadaan kesesakan lalu lintas pada hari Sabtu dan Ahad 	MDK / JKR
6.	Latihan untuk AJK Majlis Keselamatan Jalan Raya Daerah Kulim.	<ol style="list-style-type: none"> 1. AJK MKJR dan Bahagian Keselamatan Jalan di MDK perlu diberi kursus Keselamatan Jalan Raya. [Kursus Luar/Dalam Negeri, Tempatan atau IN-House] 	MDK / MKJR / JKR

**BENGKEL PENCEGAHAN KECELAKAAN DAN KECEDERAAN JALAN RAYA DAERAH KULIM 1998
DAN PROGRAM PEMAKAIAN TOPI KELEDAR BASIKAL**

HASIL PERBINCANGAN KUMPULAN NO. 5 - PENGALAKAN PEMAKAIAN TOPI KELEDAR BASIKAL

BIL	MASALAH	CADANGAN MENGATASI	TINDAKAN
1.	Topi Keledar a. "Bulky" b. Warna "Hijau" c. Mahal	1.. "Matching" dengan warna basikal 2.. Multi-colour lebih sesuai 3.. Beli melalui MKJR / JPN 4.. MKJR maklum ke sekolah melalui JPN – buat survey dengan harga RM 25.00	
2.	Pengguna a. Malu kerana bilangan pemakai kecil b. Kurang Insentif c. Tidak Selesa d. Kumpulan sasaran tidak tepat	1.. Promosi oleh Kementerian Kesihatan & Swasta 2.. Insentif dari MKJR / KFC / Swasta – Cenderahati/Ganjaran 3.. Peruntukan dari MKJR untuk Kelab Penunggang Basikal Berhemah. 4.. Program Pemakaian Topi Keledar Basikal dimasukkan dalam perbincangan Mesy. Agung Tahunan 1999 dan seterusnya.	MKJR / KFC / SWASTA
3.	Sekolah a. Peraturan b. Tiada tempat simpanan/kecurian c. Kurang latihan kepada guru d. Masalah pemantauan e. Kekurangan aktiviti	1.. Peraturan seragan antara kelab 2.. Merantai topi keledar di basikal 3.. Pemantauan oleh pelajar / kumpulan 4.. Pertandingan kemahiran menunggang basikal peringkat negeri / kebangsaan 5.. Pertunjukan Kemahiran Menunggang Basikal semasa Kejohanan Olaharaga Tahunan Sekolah.	MKJR / JPN KELAB PENUNGGANG BASIKAL BERHEMAH SEKOLAH/ NEGERI
4.	Ibubapa / Masyarakat a. Kurang peka / kurang sokongan b. Kurang mampu	1.. Promosi peringkat sekolah / negeri / media massa 2.. Penyertaan PIBG / JKK / Swasta / NGO	MKJR/ SEK./ SWASTA/NGO M. MEDIA