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ROAD TO SAFETY CAR SEAT AWARENESS PROGRAM

The Health and Emergency Medical Services Committee recommends:

- 1. That a letter be sent to the Minister of Consumer and Business Services requesting that he ask major automobile manufacturers in Ontario to review the present design system for the installation of child car seats, and**
- 2. That major automobile manufacturers in Ontario be requested to work with the Province of Ontario to provide educational materials to purchasers of new vehicles on the proper installation of child car seats, and**
- 3. That local MPP's in York Region, the Minister of Health and Long Term Care and the Minister of Transportation be so advised, and**
- 4. That the recommendation contained in the following report, December 9, 2004 from the Commissioner of Health Services be adopted.**

1. RECOMMENDATION

It is recommended that:

1. Health and Emergency Medical Services Committee and Regional Council receive this report for information.

2. PURPOSE

The purpose of this report is to provide a summary of the results of the Road to Safety Car Seat Awareness Program ("Road to Safety") that was carried out in 37 daycare facilities in York Region from December 2003 through May 2004. The goal of Road to Safety focused on increasing parental awareness regarding proper use of car seats, booster seats, and seat belts for children from 18 months to eight years of age.

3. BACKGROUND

Incorrect use of car seats leading to injury and death in children is a recognized problem. In 2002 in Ontario, 28 children were killed and another 3,114 were injured due to motor vehicle collisions. In collisions where child restraints were used incorrectly, 17.9% of the children either suffered an injury or were killed (Ministry of Transportation, Ontario Road Safety Annual Report, 2002). Children from birth to approximately eight years of age are at greatest risk, requiring different types of restraint systems when riding in motor vehicles based on their weight, height and developmental ability.

3.1 Car Seats, Booster Seats and Seat Belts

Currently, under the *Highway Traffic Act* and the regulations hereto, all children under 40 pounds have to be restrained properly in car seats when they are being transported by their parent or legal guardian. Yet, as evidenced by York Region data, of the 190 car

seats checked in 2003 at voluntary car seat clinics, 167 (88%) were installed incorrectly and/or the improper child car restraint was being used.

3.1.1 Infant Car Seats

Infant car seats are used for newborns up to 22 pounds or 26 inches (or according to the manufacturer's specifications). These seats must be placed in the back seat and face the rear of the vehicle. The car seat is fastened by a shoulder and/or lap belt and may also require a locking clip to prevent loosening. The harness straps should be snug and lie flat at or below the shoulders. The chest clip should rest at armpit level or three inches below the newborn's chin.

3.1.2 Convertible Car Seats

Convertible car seats are used for children from birth to 40 pounds. The harness straps are fastened in the same manner as an infant car seat (see above). The seat should be rear-facing and in the reclined position for children from birth to 22 pounds. In this position, a shoulder and/or lap belt is used to fasten the car seat in place.

Once the child weighs at least 22 pounds, is close to one year of age and can pull to a stand without help, convertible car seats should be changed to a forward-facing, upright position. Forward-facing seats are required by the Ontario *Highway Traffic Act* to be tethered in place in order to prevent the child from being thrown forward in a collision.

3.1.3 Combination (Child/Booster) Seats

Combination (Child/Booster) Seats are used for children weighing 20 to 48 pounds. These seats are forward-facing with a shoulder harness and must be tethered. Once the child reached 40 pounds, the seat converts into a high back booster. At this stage, the shoulder harness is removed and the child is secured with the lap and/or shoulder belt only. Some manufacturers recommend that the tether strap be removed as well.

3.1.4 Booster Seats

Booster seats are suitable for children weighing 40 to 100 pounds (or according to the manufacturer's specifications). It is important that the child has head support (mid-ear and above) from either a high back booster or the back of the vehicle seat. These seats should be buckled in the back seat of the vehicle.

With respect to children weighing between 40 to 80 pounds, a recent report released by Safe Kids Canada (June, 2004) indicated that more than half (53%) of Canadian parents believe that children are big enough by the age of six to use a seat belt by itself. This indicates a significant lack of awareness about the weight, height and age guidelines for booster seat use.

3.1.5 Seat Belts

All children 12 and under are safer in the back seat. To fit adult seat belts properly, a child should meet the following criteria:

- Weigh between 60 and 80 pounds.
- Have a sitting height of at least 29 inches.

- Be able to sit with their back against the vehicle seat back for the entire trip.
- Be able to bend their knees over the vehicle seat.
- Be able to wear the shoulder belt across the centre of their chest.
- Be able to wear the lap belt low across the hips, touching the upper thighs.

Shoulder belts should never be placed under the arm, behind the back or across the neck or face.

Parents may not be aware of the dangers of injuries related to misuse of seat belts at a young age. According to a newswire released by the Ontario Ministry of Transportation (May 11, 2004), children using seat belts instead of booster seats are three and one-half times more likely to suffer significant injury, and four times more likely to suffer a head injury.

A survey of households in York Region (EnviroNics, 2003) showed that complete parental awareness of the appropriate type of seat required to secure their child relative to the child's age, weight, height and developmental level was low. Of the 300 parents surveyed, less than 1% gave the correct criteria for securing children between 40 to 80 pounds. Only 8% said that a child between 40 to 80 pounds requires a booster seat buckled in the back seat. Awareness of when a child was ready to graduate from booster seat to seat belt was 26%. Clearly, there is a lack of knowledge about appropriate child car restraints and their correct use.

4. ANALYSIS AND OPTIONS

The Ministry of Health and Long-Term Care *Mandatory Health Programs and Services Guidelines* (December 1997), mandate for Public Health is to reduce the disability, morbidity and mortality caused by motorized vehicles through promotion of the correct use of car restraints for children. Toward the achievement of this goal, the Injury Prevention Team designed Road to Safety, a comprehensive and innovative initiative that strived to address incorrect use of car seats focusing on children 18 months to 8 years of age. Daycare facilities were an obvious catchment site for parents of children in this target age group.

Specific program objectives included:

- To provide parents with personalized child restraint information based on their child's/children's weight, height, and sitting height.
- To identify the number of children in the program who were correctly/incorrectly restrained in their car seats, booster seats, and seat belts.

4.1 Road to Safety Activities

Road to Safety included a number of activities that entailed data collection, education and evaluation as noted below:

- Eighty York Region daycare facilities with children from 18 months and 8 years of age were invited to participate in Road to Safety with 37 agreeing to be part of the project.
- After obtaining parental consent, Public Health Nurses obtained baseline data related to current car seat use and then visited the daycare facilities and measured the children's weight, height, and sitting height.
- An educational resource was sent home to the parents providing personalized information related to the correct type of restraint to be used for their child based on the measurements.
- Surveys to gather quantitative and qualitative information related to car seat use were sent home to be completed by parents.
- Data was collected and analyzed, and a summary report was completed and letters outlining program results were mailed to the participating daycare facilities.

4.2 Results

The findings of Road to Safety added further evidence to validate the problem of incorrect use of car restraints for children. A total of 424 children were measured. Of these, 108 children (26%) were in restraints that were incorrect with 53 of these (34%) in booster seats when they should have been in forward-facing car seats and 38 (93%) in seat belts when they should have been in booster seats.

Following the education component provided by Public Health Nurses, parents were surveyed (22% response rate) to determine if they had made any changes. Results indicated that 94% of the parents who responded to the survey reported having already made or were planning to make the modifications recommended by the Public Health Nurse. One must, however, keep in mind that parents who chose to participate in the study may have been more receptive to the information and were more likely to make changes than the general population. Also, parents self-reported the types of restraints used and the changes they made. Of particular note, the results from this program overwhelmingly reinforced the belief that the majority of children between 40 to 80 pounds are not being restrained correctly. Often children are graduated to booster seats and seat belts prematurely. This places them at great risk.

4.3 Moving Forward

The Road to Safety was a specifically targeted time limited initiative. In addition to the Road to Safety, the York Region Health Services Injury Prevention Team currently offers multifaceted strategies including car seat check clinics, telephone counselling, education workshops, displays and resources regarding the correct use of car seats. The team works in collaboration with key partners and stakeholders to educate parents/caregivers and others who transport children in their vehicles regarding the safe, appropriate and effective use of child car seats. Ongoing work in this area is evidently needed and will continue.

4.3.1 Provincial Advocacy

York Region Health Services Department has also contributed to advocacy on a provincial level realizing that broad legislation is required to ensure the safe transport of

children. In 2002, York Region Health Services Department embarked on a letter writing campaign to educate the Members of Provincial Parliament from York Region regarding the importance of booster seat use. In May 2004, the Minister of Transportation introduced the *Highway Traffic Statute Law Amendment Act* for first reading, requiring the use of booster seats for children (40 to 80 pounds with a standing height of less than 145 centimetres or a maximum age of eight years). The new legislation would also amend the *Highway Traffic Act* to require everyone who transports a child, subject to limited exceptions, to use proper child car seats when children are in their vehicles. This proposed legislation received third reading on December 6, 2004 and will come into full force and effect in the fall of 2005. The direction of the province of Ontario is fully supported by staff of York Region Health Services Department.

4.3.2 Car Seat Manufacturers

York Region Health Services Department has lobbied to car seat manufacturers regarding design issues such as the quality of car seat straps (to prevent twisting), proper length of tether straps (for larger vehicles such as SUVs) and sufficient harness length in infant seats (to ensure proper fit). The Health Services Injury Prevention Team has also worked with businesses to ensure that their marketing portrays the proper fit and usage of car seats.

4.4 Relationship to Vision 2026

The Vision 2026 goal of “Responding to the Needs of our Residents” was apparent as the Road to Safety met the needs of parents and caregivers by promoting wellness through the provision of pertinent information about child car seat safety and related services offered through Public Health. Road to Safety also accessed diverse populations in York Region by reaching daycare facilities in all nine area municipalities. Finally, this program fostered a partnership with childcare centres creating an effective and sustainable working relationship.

5. FINANCIAL IMPLICATIONS

The Car Seat Awareness program utilizes the services of two Public Health Nurses intermittently throughout the year. The staff and program costs included in the Council approved 2004 Business Plan and Budget is estimated at \$59,900. This includes approximately \$57,650 for salaries and benefits and \$2,250 for program supplies. This estimate excludes GST and does not include any support costs.

6. LOCAL MUNICIPAL IMPACT

Road to Safety was carried out in daycare facilities in all nine area municipalities. Future initiatives will be region-wide in scope and will be accessible to York Region residents.

7. CONCLUSION

Incorrect use of child car seats contributes to injury and premature death in children. Road to Safety was a targeted initiative to address this problem with parents of children 18 months to eight years through daycare facilities. Overall, the results of the project validate an already identified problem laying the groundwork for further car seat safety program development in York Region. Efforts will focus on education strategies working with our partners to ensure increased compliance with car seat legislation further promoting safety in our community.

The Senior Management Group has reviewed this report.