



HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

Standing Committee on Transport, Infrastructure and Communities

TRAN • NUMBER 135 • 1st SESSION • 42nd PARLIAMENT

EVIDENCE

Tuesday, April 2, 2019

—
Chair

The Honourable Judy A. Sgro

Standing Committee on Transport, Infrastructure and Communities

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• (1100)

[English]

The Chair (Hon. Judy A. Sgro (Humber River—Black Creek, Lib.)): I'm calling to order the meeting of the Standing Committee on Transport, Infrastructure and Communities. Pursuant to Standing Order 108(2)—

Mr. Churence Rogers (Bonavista—Burin—Trinity, Lib.): Madam Chair, if I could interject for a second, I'd like to propose a motion for the committee to consider. It reads as follows:

That in light of the committee not travelling to Atlantic Canada and Quebec, the Standing Committee on Transport, Infrastructure, and Communities conduct no less than 4 meetings to continue their study on a Trade and Transportation Strategy with witnesses from both Atlantic Canada and Quebec and that the Chair be empowered to coordinate the necessary witnesses and schedule.

The Chair: This is the motion that you tabled at our last meeting before we took the break. Madam Clerk, it's the exact same as the previous motion he had tabled, so it's in order.

Are there any questions or comments?

Monsieur Aubin.

[Translation]

Mr. Robert Aubin (Trois-Rivières, NDP): Thank you, Madam Chair.

I have no objection to either the basics of the motion or the powers that you have to structure our program until the end of the session, which is fast approaching. However, in terms of all the planned studies to be added—that one is not really new, because the study has already been started—I would like us to make sure that we keep the various studies that this committee has proposed and agreed to in chronological order, unless one of those studies is urgent in nature. That is a gentle hint that I do not want our study on passenger safety to be left for the next government.

[English]

The Chair: Mr. Jeneroux.

Mr. Matt Jeneroux (Edmonton Riverbend, CPC): Thank you, Madam Chair.

I can't believe you're interrupting a committee when there are witnesses here, Churence. I don't know who would do such a thing.

However, I want to propose a friendly amendment to your motion, and hopefully this may help address Mr. Aubin's concern as well. You say “conduct no less than 4 meetings”. If you reduce it to two meetings, I think we could probably get enough of those

stakeholders in, plus include a lot of the focus of the study, which I think we all agree is important, and then get unanimous consent for this motion.

The Chair: There's an amendment on the floor by Mr. Jeneroux that it be changed to two meetings.

Mr. Vance Badawey (Niagara Centre, Lib.): Can I just have clarification on that? Can you repeat it, please, Mr. Jeneroux?

The Chair: The motion says “no less than 4 meetings” and Mr. Jeneroux suggested that it be two meetings.

Mr. Matt Jeneroux: Where it says “conduct no less than 4 meetings”, it would say “no more than 2 meetings”.

The Chair: Is there any further discussion?

(Amendment negatived)

The Chair: Now we'll vote on Mr. Rogers' motion.

(Motion agreed to)

The Chair: We'll have to see how we manage all of this.

Ms. Block.

Mrs. Kelly Block (Carlton Trail—Eagle Creek, CPC): Thank you very much.

Notwithstanding the very important subject that's before us and the fact that we do have witnesses here, given Mr. Rogers is taking the opportunity to table a motion that he put on notice, I would like to take a minute or two to do the same.

This is in regard to the motion that you would have received on March 27. It reads as follows:

Given the recent tragedies involving the Boeing 737 Max 8 aircraft and the ongoing investigations, that the Standing Committee on Transport, Infrastructure and Communities undertake a study of four meetings in regards to Transport Canada's aircraft certification process including, but not limited to, the nature of Transport Canada's relationship to the Federal Aviation Administration and other certifying bodies as well as the role of airplane manufacturers in the certification process.

I submit that it's a pretty timely study, given the recent tragedies, and I put that forward for the committee to consider.

• (1105)

The Chair: Is there any further discussion on the motion?

Mr. Aubin.

[Translation]

Mr. Robert Aubin: Thank you, Madam Chair.

Once again, I have no problem with the basics of the motion, because I tabled quite a similar motion. However, I do have a problem with the time allocation.

To me, it seems a little hasty to conduct that study without knowing, for example, the findings that may come from the black box data, or those from the FTA in the United States. We will not have all the answers that we are hoping to get, to understand.

Although I am not opposed to the motion, I would put that study a little further down the list of things we are working on.

[English]

The Chair: One suggestion could be that we have our meetings all summer, too. We could clean up a lot of really important issues like this, because it is important.

Some hon. members: Oh, oh!

Mr. Vance Badawey: I'm good with that.

The Chair: You were good with that last year.

It's certainly an appropriate motion, for sure.

Not seeing any further discussion, we'll vote on Ms. Block's motion, as she has read it out and it is properly before us.

(Motion negatived)

The Chair: Thank you very much.

We'll move on to the orders of the day. Our apologies to our really important witnesses, but we have to try to keep business going in the two hours that we have.

From the Canadian Transportation Accident Investigation and Safety Board, Ms. Fox is before us again, as well as Jean Laporte, chief operating officer, and Kirby Jang, director of rail and pipeline investigations.

From the Royal Canadian Mounted Police we have Superintendent Jamie Solesme, director of policy and programs, national criminal operations, and Sergeant Trent Entwistle, manager, national collision reconstruction program.

Welcome to all of you and our apologies for the delay.

Ms. Fox, would you open up the discussion, please.

Ms. Kathleen Fox (Chair, Canadian Transportation Accident Investigation and Safety Board): Thank you, Madam Chair. I have very brief opening remarks.

[Translation]

Madam Chair, ladies and gentlemen of the committee, thank you for inviting the Transportation Safety Board of Canada today to discuss the topic of bus safety, as the committee undertakes its study on the subject.

[English]

This issue has received significant public attention lately, notably in light of fatal accidents such as the Humboldt tragedy in Saskatchewan and the OC Transpo double-decker bus accident here in Ottawa last January.

[Translation]

Road accidents in general, and bus safety in particular, fall outside of the TSB's mandate as defined in the Canadian Transportation Accident Investigation and Safety Board Act.

[English]

We would only be involved if a bus accident also involved one of the four modes of transportation specifically mentioned in our enabling legislation, such as in the fatal 2013 collision between an OC Transpo bus and a VIA Rail passenger train. In that accident, TSB identified 15 causal and contributing factors and we issued five recommendations. Three of them were directly related to the safety of buses.

The first of those was for Transport Canada to work in conjunction with the provinces to develop comprehensive guidelines for the installation and use of in-vehicle video monitor displays to reduce the risk of bus driver distraction. The second recommendation was for Transport Canada to develop and implement crashworthiness standards for commercial passenger buses. The third recommendation was for Transport Canada to require a dedicated crashworthy event data recorder on all commercial passenger buses.

The board also issued a safety concern regarding the lack of any recent comprehensive study that specifically deals with the risks associated with all buses stopping at all railway crossings. Although some progress has been made regarding our recommendations, more remains to be done.

In terms of more generalized data on the subject of bus safety, what we have available at the TSB is limited. As I said, the subject is usually beyond our mandate and therefore, we do not collect or analyze information about road accidents or bus safety.

Nevertheless, we are prepared to answer questions to the best of our ability.

Thank you.

• (1110)

The Chair: Will anyone else from your department be speaking now, Ms. Fox?

Ms. Kathleen Fox: No, thank you.

The Chair: We will go now to the representative from the RCMP.

You have five minutes, please.

Superintendent Jamie Solesme (Director of Policy and Programs, National Criminal Operations, Royal Canadian Mounted Police): Good morning, Madam Chair and members of the Standing Committee on Transportation, Infrastructure and Communities. Thank you for inviting us here to discuss bus passenger safety from the perspective of the Royal Canadian Mounted Police as it relates to collisions and related investigations.

I am Superintendent Jamie Solesme. I am the acting officer in charge, responsible for the national criminal operations section of the RCMP's contract and indigenous policing branch. I am joined here today by Sergeant Trent Entwistle, manager of the national collision reconstruction program within the RCMP's national traffic services.

By way of context, the RCMP is under contract to provide front-line policing services to all provinces and territories in Canada, with the exception of Ontario and Quebec. This means the RCMP provides policing services across the vast majority of Canada's territory.

Contract policing ensures a consistent quality of service across Canada, but the level of policing services provided in each province and territory ultimately rests with the provincial or territorial governments, as do the objectives, priorities and goals for policing in each of the respective jurisdictions.

Keeping roads safe for Canadians is an important aspect of front-line RCMP officers' efforts irrespective of where they are located.

The RCMP has collision analysts and reconstructionists across the country who use the knowledge and skills they have gained through extensive training opportunities to identify and interpret forensic evidence at collision scenes and to reveal the potential causes. This work contributes to improved road safety for all Canadians.

Collision analysts and reconstructionists obtain their expertise through work in the field and extensive training. To join the program, officers are required to pass an aptitude test and subsequently complete the collision analyst course. Once they obtain practical experience and receive additional collision-specific training, such as pedestrian and bicyclist collision investigation, motorcycle collision investigation and heavy-duty commercial vehicle collision investigation, members are then invited to attend the collision reconstructionist course, which deals with momentum calculations and some more heavily involved investigations.

Investigative efforts around vehicle collisions by these experts include: working with local and provincial governments and highway engineers to discover design flaws in roadways; conducting technical traffic collision investigations and analysis; arranging and guiding mechanical examinations of vehicles involved in collisions; providing advice on traffic collision investigations by interpreting collision investigation evidence and providing expert testimony in court; assisting in division collision investigation training; attempting to determine collision-causing factors of vehicles being investigated; and producing reports based on their observations.

As per the RCMP's national policy on collision analysis and reconstruction, trained RCMP members are called to attend collision scenes that are fatal, where a serious injury has occurred, for files where the RCMP at the scene cannot determine the cause, and/or where a police car was involved.

After a scene is attended, the attending collision analyst-reconstructionist completes an analysis of the evidence gathered and prepares reports outlining their opinions on the cause of the collision. If it is determined that something criminal may have occurred, the files are referred to the Crown for charge recommendations. If there are vehicle defects or failures are suspected, collision analyst-reconstructionists are mandated to contact Transport Canada for further investigation.

In addition, some investigations include collaboration with engineers working with Transport Canada, for instance, in school bus crashes or in the 2018 tragedy involving the Humboldt Broncos hockey team.

When a collision leads to a legal court process, RCMP members attend court to determine if their expertise related to collision analysis and reconstruction can be admitted. If they are qualified as an expert by the court for evidentiary purposes, collision analyst-reconstructionists can provide their opinion as expert evidence, which supplements other evidence provided by officers.

• (1115)

In doing so, the RCMP is able to contribute invaluable expertise to the criminal justice system as it pertains to vehicle collisions, as well as to the overall public interest in road safety. Thus, the collision reconstruction program offers and enables the provision of practical experience in bus safety.

The RCMP remains committed to road safety and will continue its efforts to protect Canadians across the country.

Thank you again for inviting us here today to discuss bus passenger safety. I would be happy to answer your questions.

The Chair: Thanks very much to all of you.

Ms. Block.

Mrs. Kelly Block: Thank you very much, Madam Chair, and thanks to our witnesses for joining us today for this very important study.

As you noted, Ms. Fox, this issue has received significant public attention in the past year, certainly as a result of the tragedy that took place with the Humboldt Broncos and, as you pointed out, the more recent accident with OC Transpo. I've already learned something through your opening remarks in terms of the role of the TSB when it comes to road accidents and bus safety in particular and what mandate the TSB has in those circumstances.

I am going to drill down just a little in terms of trying to understand what it is that we could possibly glean from your time with us today. I know that we are required to wear seat belts on airplanes during takeoff, landing and taxiing, and during turbulence. I'm just wondering if you could tell me who created that rule. Is it a law or a regulation? Was it the airlines or was it through Transport Canada?

Ms. Kathleen Fox: The answer to that question is that it's a regulation under the Canadian aviation regulations, under the authority of the Aeronautics Act.

Mrs. Kelly Block: Okay. Thank you very much for that.

Knowing that different acts regulate different modes of transportation when it comes to that kind of safety, I'm wondering if it's within the TSB's mandate to make recommendations to the aviation industry or even on bus safety.

Ms. Kathleen Fox: As I indicated in the opening remarks, road accidents are outside of the mandate of the Transportation Safety Board except when a road accident involves a train. In the case of the OC Transpo-VIA Rail collision back in 2013, the board did make five recommendations, three of which touched directly on bus safety even though bus safety per se was outside of the mandate, but these were things that we learned through that investigation.

We would only make recommendations with regard to vehicle safety in the context of an investigation that we're conducting under the CTAISB Act.

Mrs. Kelly Block: Right. I do appreciate that and would hope that what you do find throughout your investigation would be taken very seriously and implemented based on your recommendations.

Would commenting more on the safety aspect of something outside of accident investigations be something you feel would be a good addition to your mandate?

Ms. Kathleen Fox: To be clear, our mandate includes accidents and incidents in the air, rail, marine and pipeline modes under federal jurisdiction. There would be changes required to our mandate and to other legislation to take on road accidents. It's really up to parliamentarians to decide whether commercial buses should be under the mandate of the TSB.

I would note that the National Transportation Safety Board in the United States, our equivalent agency, and some European countries and possibly others do have that mandate and do investigate commercial road accidents involving commercial passenger buses and trucks.

• (1120)

Mrs. Kelly Block: Does the TSB keep statistics on crashes involving buses?

Ms. Kathleen Fox: We only keep statistics on those types of events if they involved a train or some other federally regulated mode of transportation that we investigate. It's most likely to be a train as opposed to one of the other modes. Those are the only statistics that we keep.

Mrs. Kelly Block: Okay.

I will now turn to the representatives from the RCMP.

Does the RCMP keep statistics on crashes involving school buses and/or commercial passenger buses?

Supt Jamie Solesme: The RCMP has a records management system that contains the information from all our occurrences, such as accidents or whatever incidents we're responding to. That does not necessarily mean we can pull the information out as people want it presented.

For example, when the officer enters the information on a bus accident, it could be added as a commercial vehicle. So it would take more data mining to actually bring out those statistics. I'm not saying it's impossible, but it would require some analysis.

I should also point out that the RCMP only has records management for where we are contracted to police, not for other police jurisdictions such as Toronto city police, Ottawa or others. We wouldn't be tracking for all police forces.

Mrs. Kelly Block: What was the system that you referenced where these statistics are kept?

Supt Jamie Solesme: It's the PROS, the police reporting and occurrence system, and there are two other systems. B.C. has another system called PRIME, and in Nova Scotia they use a system called Versadex.

Mrs. Kelly Block: Thank you.

Hon. Judy A. Sgro: Thank you very much, Ms. Block.

We'll go to Mr. Hardie.

Mr. Ken Hardie (Fleetwood—Port Kells, Lib.): Thank you, Madam Chair.

Thank you, witnesses, for being here.

The key thing and catalyst that got this discussion going was certainly the Humboldt Broncos tragedy. We've held off having these hearings until now because there was a lot of healing that had to be done in the community. So in the course of our discussions here, some information may come out that will be sensitive for the people who have had a loss. I think that the focus here isn't so much what caused the crash or legal liability in the case of incidents like the Humboldt Broncos or the OC Transpo ones; rather, the purpose of these hearings, at least as I had them in mind, is to consider the survivability of these crashes. The survivability really depends on two things. One is the available safety equipment and how effective it is in the event of various types of crashes, and the other is the integrity of the vehicle. This certainly was pointed out in a very stark way with the pictures of the Humboldt crash. That coach came apart. The top part literally separated from the chassis.

I'll start with you, Ms. Fox. I've always appreciated your visits here because you have brought clarity to a lot of issues for us. You mentioned that part of what you look at is crashworthiness. Maybe that's a good place for us to start.

Can you comment on the general crashworthiness of highway coaches, transit coaches or school buses?

Ms. Kathleen Fox: The motor vehicle safety standards in Canada are set by Transport Canada, by the motor vehicle safety regulations themselves. We looked at that very closely in the context of our 2013 investigation into the OC Transpo-VIA Rail accident. What we learned there is that, for large passenger buses in excess of 26,000 pounds—excuse me if I stick with pounds—there are no crashworthiness standards, or they don't have the same stringent crashworthiness standards as you would find for school buses or passenger vehicles. There are no frontal impact, side impact, crush or rollover protection standards for that category of bus, for two reasons, we learned. One was their accident history, and the other was that they're one of the largest vehicles on the road, so they're more likely to withstand or survive a collision.

Given what we learned from the OC Transpo investigation, we actually recommended to Transport Canada that it develop crashworthiness standards for commercial passenger buses. We made that recommendation in 2015. There has been very slow progress to date, and given the most recent accident in Ottawa, we believe more needs to be done. The action plan needs to be accelerated to deal with that.

•(1125)

Mr. Ken Hardie: Thank you.

Sergeant Entwistle, you and your name are familiar. Did you work out at the coast at one point?

Sergeant Trent Entwistle (Manager, National Collision Reconstruction Program, Royal Canadian Mounted Police): I did not, no.

Mr. Ken Hardie: Oh, you didn't, okay, then it must be your evil twin—hopefully not an evil twin.

Sergeant Entwistle, anecdotally, what can you tell us about the nature of the types of crashes, the impact on the integrity of a bus—the coach integrity—and the types of injuries suffered by the occupants? I'm thinking of a head-on versus a T-bone versus a rollover.

Do you have anything to offer in that area?

Sgt Trent Entwistle: Typically, when buses are involved in collisions, be it a school bus or a motorcoach, they're the larger vehicle involved in the collision and the injuries are more serious in the other vehicles.

Collision dynamics are very different when you go from a front-end collision to a T-bone type of collision, but anecdotally, when a bus hits a larger vehicle, there's going to be more damage to the bus, as opposed to when it is struck by, say, a pickup truck or a passenger car.

Mr. Ken Hardie: Can you explain why?

Sgt Trent Entwistle: Size, mass is the base answer. Typically, coaches are much larger and have much more mass to them than a passenger car.

Mr. Ken Hardie: I want to call on your experience more generally as a police officer—both of you, in fact. You have probably attended your share of car crashes.

When the Humboldt crash took place, the immediate thing we heard was that safety belts should be installed. However, as parents, we know that safety belts have to be used with care, particularly with younger kids, lighter kids—kids under a certain size or weight.

Without going into the kind of detail we don't need to hear, can you give us, again anecdotally, what happens when a seatbelt is improperly used, and the nature of the injuries that a younger, smaller person may suffer?

The Chair: Please give a short answer, if that's possible.

Sgt Trent Entwistle: If a seat belt is improperly worn, it won't do what it's designed to do in protecting your body in the event of a collision. If you don't have the torso strap over your chest or torso, it is not uncommon for you to be able to slide out from underneath of the seatbelt. For people who are smaller in stature, such as toddlers

and youth, they don't just wear the seatbelts; they have to wear the seatbelts in addition to a car safety seat or a booster seat, to put them in a place where the seatbelt will be able to do its job.

Mr. Ken Hardie: Thank you.

The Chair: Thank you very much.

We will go to Mr. Aubin.

[*Translation*]

Mr. Robert Aubin: Thank you, Madam Chair.

I also thank our guests for joining us.

First, I would like to mention that, all through this study, I will be thinking of all the families who have lived through tragedies that may be greater or smaller, depending on the way the crisis played out. We are conducting this study for them. We must ensure that better decisions are made in order to decrease the number of accidents year after year, although we will never be able to prevent them entirely.

My first question goes to Ms. Fox, the chair of the TSB.

In your report on the accident in 2013, your proposal to the government was to have stricter crashworthiness standards for buses. You specifically suggested the American Public Transportation Association standard.

Can you briefly tell us about the difference between Canadian standards and the American standards that you were recommending in that report?

Ms. Kathleen Fox: There are no major differences between standards in the United States and those in Canada. However, the American Public Transportation Association has given its members some directives. For example, when they buy a bus, they have to meet certain criteria, including reinforcing the body. That is not a required standard; it is a directive from that association.

Mr. Robert Aubin: Yes, but in terms of reinforcing the bodies of the buses on Canadian roads, we have subscribed for a very long time to the compartmentalization theory. The thinking was that, in school buses, the children were better protected because the bench seat in front of them was higher and could therefore absorb the impact. However, we did not really realize that, when we were talking about that space and that theory, we were actually talking about head-on collisions. But the most catastrophic accidents are those involving lateral collisions. In those cases, the compartmentalization theory no longer holds water, in my opinion. We have seen videos showing unrestrained passengers, and, because of the force of the impact, they were flying almost weightless for a few seconds.

Is it also important to review the standard for the chassis of our buses, in the same way as we have reviewed the construction of the DOT-111, for example, because we could clearly see that their crashworthiness was inadequate?

•(1130)

Ms. Kathleen Fox: Is that question for me?

Mr. Robert Aubin: Yes, it is.

Ms. Kathleen Fox: Okay.

With the OC Transpo accident, we noted that there are no standards on the strength of buses when they are involved in a head-on or a lateral collision, a rollover or a crash.

In the investigations we conducted on accidents involving buses that were much stronger than other large buses, we observed that those buses fared better in accidents, even in collisions with trains, because they had reinforced sides. In that respect, there is more protection in a school bus than in a city bus.

We believe that the government should establish standards requiring all passenger buses to be reinforced, whatever their size.

Mr. Robert Aubin: Thank you.

My next questions go to the members of the RCMP.

You have experience with accident scenes, including those where buses have been hit laterally. That is what happened with the Humboldt Broncos bus, but it also happened in other accidents. You are suggesting that, because of the force of the impact, the bus was literally cut in two.

Let us say that the impact was at the centre of the bus. The people directly at the point of impact had little chance. However, if the passengers had been wearing seat belts at the moment of the impact, would those seated at the front or the back of the bus have had a better chance of surviving or of avoiding injury?

[English]

Supt Jamie Solesme: I'm going to refer this question to Sergeant Entwistle, but I'd like to point out to the committee that he was actually at the scene there, so we'll just deal with it with some sensitivity.

Sgt Trent Entwistle: I've never seen a collision where a coach or a bus was broken in half in the centre. When I spoke about that earlier, it was in regard to the car or the truck striking the side of a bus that is typically damaged more than the bus because of the size and design of the buses. Each collision is a different beast all of its own. It's really difficult to talk about the kinesiology, about how a person would move in any specific situation.

[Translation]

Mr. Robert Aubin: My apologies.

[English]

The Chair: Mr. Aubin, your time is up.

Mr. Iacono.

[Translation]

Mr. Angelo Iacono (Alfred-Pellan, Lib.): Thank you, Madam Chair.

My thanks to the witnesses for being here this morning.

Superintendent, in your opening comments, you mentioned that the RCMP does not provide policing services in two provinces, Ontario and Quebec. Is there any close collaboration with those two provinces in terms of accidents of all kinds, especially those where school buses or other buses are involved?

[English]

Supt Jamie Solesme: There's always collaboration between police forces. We're oftentimes called to help investigate with other police forces depending on where the expertise lies. It's also possible that we would rely on another police agency or other expertise to assist us. When I say the police, RCMP, you'll see police, RCMP, obviously, in Ontario and Quebec, but not for the contracting policing services, but there is collaboration and there are opportunities for joint training and trying to maintain a national standard with respect to all training when it comes to collisions.

• (1135)

[Translation]

Mr. Angelo Iacono: According to the National Collision Database, the trend with collisions is relatively stable. On average, 2,000 buses are involved.

In your experience, what are the most common factors in collisions involving buses?

[English]

Sgt Trent Entwistle: Inexperience of drivers tends to be a large one. When I say drivers, I don't mean the bus drivers, I mean other drivers on the road and their inattentiveness. A lot of the collisions happen at intersections. Personally, I've never investigated a bus-related collision that did not happen at an intersection, so people not paying attention and driving through a stop sign or whatnot is typically what the root cause is.

[Translation]

Mr. Angelo Iacono: For passenger safety in cars, wearing a seat belt is the thing to do. However, in buses, wearing a seat belt can cause problems.

What other avenues must be explored to ensure the safety of bus passengers? When safety measures are established, do we have to distinguish between city buses and highway buses?

[English]

Supt Jamie Solesme: I don't have an opinion on your question, one way or the other.

[Translation]

Mr. Angelo Iacono: In school buses, seat belts are a problem. In your experience, and from the conclusions you have been able to draw from your investigations, where should we put the priority in order to ensure the safety of children using school transportation?

Have you ever looked at studies or procedures in other provinces, in the United States, for example, in terms of seat belt use?

[English]

For example, California requires three-point seat belts on all school buses manufactured after July 1, 2005. New Jersey requires lap belts be installed on all school buses.

[Translation]

In your studies on this issue, do you look at what is happening in the United States?

[English]

Supt Jamie Solesme: We follow what's dictated by Transport Canada with respect to safety rules in buses. That's not to say we're not aware of different reports.

Again, I think we have to go back to two points.

Bus safety is not just a responsibility of bus drivers and the buses on the roads. It's everybody's obligation on the road. We're talking about other drivers, passing a school bus, the intersections and not paying attention. All the different dynamics that relate to school bus crashes I think have to be taken as a whole.

With regard to seat belts, there was a reference to Humboldt. If the accident had a different scenario and the bus had T-boned the truck, we'd be looking at a different set of dynamics and the implications of not having seat belts or having seat belts.

To conclude, we do follow what's provided or dictated by Transport Canada, adding that when we have dynamics in investigations, that information is relayed to Transport Canada so that they can make their decisions.

[Translation]

Mr. Angelo Iacono: If you have studies or documents that you could pass on to the committee, we would love to get them.

Thank you.

[English]

The Chair: Thank you.

Mr. Rogers.

Mr. Churence Rogers: Thank you, Madam Chair.

Welcome to our witnesses today.

A few weeks ago I watched I think it was a CTV *W5* investigation on school bus safety, as Mr. Iacono just referenced, not only in Canada but in the U.S. and other jurisdictions, where they talked about seat belt use in school buses in particular. Actually, it was disturbing, when you think about kids riding on school buses, particularly buses that have to travel on high-speed highways during the school day.

The focus of that investigation was on seat belts and three-point seat belts, as they've adopted in California and other jurisdictions, and so on.

This is for the Transport Canada representatives. Why haven't we reached the point where, as some people suggest, we should consider implementing laws around seat belts? Are there studies and are there past incidents to suggest one way or the other that seat belts would or would not be beneficial on school buses? Do you have studies to support that kind of opinion or contention?

• (1140)

Ms. Kathleen Fox: Thank you, but that would be a question for Transport Canada. Transport Canada is the regulator that determines

when seat belts are required. The Transportation Safety Board isn't a regulator. We don't have any authority to require people to do something or not do something. We can only speak to investigations that we've conducted involving school buses.

There were seven reported accidents between 2013 and 2018 involving all manner of buses. We conducted three full investigations, one of which was the OC Transpo-VIA Rail accident that I mentioned earlier. Then we did two investigations involving school bus-train collisions. In neither of those investigations did we make any findings or recommendations relating to seat belts, based on the dynamics of the crash and based on the lack of injuries. We can only speak to the data that we have, and that's only based on a very limited sample set, which are the few investigations that we've done.

Mr. Churence Rogers: Thank you, Madam Fox, and in fact, the safety board.

Given the different safety requirements for vehicles of different types and weight classes, as we've referenced already, to what extent, if any, do different types of buses, such as coaches, transit buses or school buses, represent unique safety issues that should be addressed individually rather than through more general regulations?

Ms. Kathleen Fox: Again, I can only speak to the recommendation that we made following the OC Transpo-VIA Rail accident in 2013. We recommended that Transport Canada should enact crashworthiness standards for commercial passenger buses that would fill the gaps that we identified with respect to frontal and side impact crush and rollover protection. Transport Canada is slowly working its way through that recommendation.

But, yes, as the RCMP sergeant has indicated, the crash dynamics are very different depending on whether it's a frontal crash or a side crash, depending on the mass of the vehicles involved, depending on their speeds and so on. Really, it's up to the experts to analyze those situations and determine when it is best to require seat belts, for example.

However, we believe that, overall, the actual structure of the bus needs to be reinforced, even though it's a large vehicle and it may be larger than anything else it meets on the road.

Mr. Churence Rogers: Thank you for that.

The Chair: Are there any further questions?

Mr. Churence Rogers: Yes, I have a quick question for Madam Superintendent on school bus issues around seat belts.

Obviously, you have talked about investigations around different incidents and so on. From a safety perspective, do you think having seat belts would add any value to school buses versus not having seat belts? Do you have any opinions on that?

Supt Jamie Solesme: I have no opinion, and I'm definitely not the right expert to weigh the pros and cons for both sides of the argument.

Mr. Churence Rogers: Okay. Thank you.

The Chair: We will move to Mr. Jeneroux.

Mr. Matt Jeneroux: Thank you, Madam Chair.

I have just a quick question for you, Ms. Fox. You mentioned the crashworthiness standards submitted in 2015 and the need to expedite some of those.

What are some of the holdups now—in hopes that the committee can help to push through some of those?

Ms. Kathleen Fox: Well, I would say two things. First of all, that is a question for Transport Canada. It has recently provided us with an update on its action plan. We reassess our recommendations on a regular basis. We've just completed the reassessments of the five OC Transpo-VIA Rail 2015 recommendations. We haven't made them public yet. We will be doing that in the coming weeks, so there will be more details forthcoming.

What I can tell you is that the board is concerned by the slow progress on addressing crashworthiness standards. A year ago we assessed Transport Canada's responses as having a satisfactory intent, meaning a satisfactory plan. Now we're concerned that it's taking a lot of steps to try to address the issue of bus safety, but it's not moving fast enough on the issue of crashworthiness, so we have downgraded our response to satisfactory in part.

I can say that within the next few weeks we'll be able to provide more details. Right now we're going through the editing and translation process on our specific...and we will be publishing our assessments or reassessments publicly.

• (1145)

Mr. Matt Jeneroux: Good.

I imagine you've raised it with the minister. We'll certainly have the opportunity to do so here at this committee, as well as with Transport Canada.

Do you have a formal response at this point in time as to when to expect some of that response?

Ms. Kathleen Fox: As I have indicated, the board has officially approved the reassessments, but now they just have to go through internal editing and translation. We expect to post them very soon.

Transport Canada's response to us should already be in the public domain. I believe it posts its responses. Ours will come, certainly, in a matter of weeks, our reassessment, but I have given you the bottom line.

Mr. Matt Jeneroux: Great. Thank you.

I have a quick question for our friends in the RCMP before perhaps turning it over to my colleague, Mr. Liepert.

First of all, Sergeant Entwistle and Superintendent Solesme, thank you for your service. I'm sure you've seen certain things on the highways and the roads that none of us in this room can even fathom, so again, thank you for what you do for our country.

I have a quick question for you. Is it within the RCMP's mandate to make policy recommendations to the federal or provincial governments?

Supt Jamie Solesme: I think that, if there's a national issue that can't be resolved, we would engage with Transport Canada or others to try to resolve the issue, and if warranted, then move it up for policy decisions to our appropriate minister.

Mr. Matt Jeneroux: Would it be provincial as well, or would that just be...?

Supt Jamie Solesme: I would say provincial, because most of the highway traffic acts that we deal with are in the provincial realm.

Mr. Matt Jeneroux: Right. Thank you.

I guess I have a minute left for Mr. Liepert.

Mr. Ron Liepert (Calgary Signal Hill, CPC): I'm not quite sure how two organizations work together. Are you involved in this task force on school bus safety that the minister announced in January?

Ms. Kathleen Fox: The Transportation Safety Board? No, we're not involved in that.

Mr. Ron Liepert: I'm trying to figure out where the line is between transportation and yourselves.

Ms. Kathleen Fox: Our mandate is to advance transportation safety by conducting investigations into occurrences in the federally regulated modes of transportation. Specifically cited in our act are air, rail, marine and pipeline. To the extent that a bus hits one of those or interacts with one of those modes, trains typically, we would conduct an investigation. We have conducted investigations, and in those cases, we made findings. In the case of the OC Transpo-VIA Rail collision, we have made specific recommendations to address bus passenger safety.

Mr. Ron Liepert: So Humboldt is not one. You have no jurisdiction.

Ms. Kathleen Fox: That is correct, because it was strictly a road accident.

Mr. Ron Liepert: Yes. I understand.

I have one quick question. I guess it always concerns me why it's left up to government to implement regulations, laws and standards. Anyone who wants to answer this, does it make sense why bus companies wouldn't on their own make this a standard policy?

Sgt Trent Entwistle: I can't speak to anybody's thought process when they go along with that. As an organization, we're just mandated to uphold the laws and conduct our investigations in the collisions we happen to be called to. I can't speak to anybody else.

Mr. Ron Liepert: Are there any thoughts from the Transportation Safety Board as to why that wouldn't make sense?

Ms. Kathleen Fox: Regulators normally implement regulation to make sure of at least a minimum level of safety for the public in all modes of transportation. Of course, operators are always free to increase what they do, but that also comes at a cost. I don't want to speculate about what the motivation of different companies would be.

Manufacturers of buses can also increase the crashworthiness of their buses without waiting for regulations.

• (1150)

Mr. Ron Liepert: I agree.

Thank you.

The Chair: Thank you very much.

Mr. Badawey.

Mr. Vance Badawey: Thank you, Madam Chair.

I have a question for the RCMP. What proactive measures are you taking with other organizations, whether they be law enforcement agencies, agencies, boards or commissions? What proactive measures are being taken in a broader sense when it comes to traffic collisions but in particular when it comes to multi-person vehicles like buses or anything of that sort?

I ask the question because there is, obviously, a need to look at... Although a lot of emphasis is being placed on smaller vehicles with airbags, seat belts and things of that nature, when we look at buses and bigger vehicles that carry a lot of individuals, with your background with a law enforcement agency, what proactive measures are you taking with other law enforcement agencies as well as community organizations, boards, commissions and agencies?

Supt Jamie Solesme: I don't think we can speak to proactive if you're speaking of proactive in the sense of implementing preventative measures. Collaboration may exist, as I previously indicated, in the realm of investigations and relying on each other for expertise, but for proactive initiatives, I'm not aware of any.

Mr. Vance Badawey: Essentially, just to close this out before I pass the rest of my time to Mr. Hardie, basically the RCMP is reacting versus acting proactively.

Supt Jamie Solesme: That would be correct.

Mr. Vance Badawey: Thank you.

Mr. Hardie.

Mr. Ken Hardie: Thank you, Mr. Badawey.

Ms. Fox, the watch-list of the TSB has been quite a valuable tool for raising issues and keeping them raised until action is taken. Is the crashworthiness of highway coaches, school buses or transit coaches on your watch-list?

Ms. Kathleen Fox: They are not, because we don't have enough data to support escalating it to the watch-list. We have lots of safety issues that concern the board, but they can't all be on the watch-list, because the watch-list is used for those posing the greatest risks or that can do the most to advance transportation safety. We simply don't have the data to date, partly because we've only conducted a few investigations involving buses and trains.

Mr. Ken Hardie: Okay, thank you for that.

Sergeant Entwistle, I was unaware that you actually attended the scene of the Humboldt crash. That has to be continuously difficult for you. Understanding the severity of that crash, much of what we could talk about here might not have applied to that. That was just so severe as to make survivability extremely difficult.

Again, based on your observations as an officer who attends these scenes, yes, there are seat belts that could be applied. Are there other safety measures in a bus that we should at least be thinking about, regardless of whether or not they are practical?

Sgt Trent Entwistle: I can't speak specifically to any types of additional safety measures that are in a bus. Typically, with passenger vehicles, we are dealing with supplemental restraint systems, such as airbag systems. I can't speak to the practicality of adding those throughout a bus.

Mr. Ken Hardie: Going back to my first comments that this is all about survivability, there is one aspect in which the RCMP or any investigating force would play a role, and that has to do with liability. Liability, of course, goes to whoever caused the crash in the first place, but there is also contributory liability if people don't take reasonable measures to protect themselves. In the case of a school bus scenario where there are seat belts available and everything is right, where would the liability lie to ensure that the kids were buckled up? Are we layering on an impossible management regime, if you will, in that situation?

Supt Jamie Solesme: You have raised a very good question. I think in the discussions about seat belts, it needs to be considered. In buses where there are numerous children, how would the bus driver be responsible for securing children and ensuring that they maintained their seatbelts during the entire trip?

• (1155)

Mr. Ken Hardie: Okay. I think if I have any time left, Mr. Sikand has a question.

The Chair: Mr. Sikand.

Mr. Gagan Sikand (Mississauga—Streetsville, Lib.): That's perfect.

This is for anyone who wants to answer it. Has there ever been any discussion in regard to a governor or something that would limit the speed of the coaches, or anything that large?

Perhaps Ms. Fox could answer that.

Ms. Kathleen Fox: I'm not aware of any such mechanism.

Mr. Gagan Sikand: Has this ever been suggested or discussed with the RCMP?

Supt Jamie Solesme: I know that in some provinces, governors are required on commercial vehicles. I don't know if that relates to buses or not.

Mr. Gagan Sikand: Okay, that's great. Thank you so much.

The Chair: Are you folks okay? Do you have any additional questions? Mr. Aubin, are you okay? All right.

Thank you very much, witnesses, for coming and sharing your thoughts and testimony with us today.

We will suspend for a moment while we connect to our video conference.

• (1155)

(Pause)

• (1200)

The Chair: We have with us, by video conference from Toronto, representing the Canadian Paediatric Society, Dr. Daniel Rosenfield, pediatric emergency physician.

Welcome, Dr. Rosenfield, and thank you so much for joining us. Your tie looks fabulous. We were talking about it representing all parties.

We will give you five minutes for opening remarks, which will be followed by questions from the committee.

Dr. Daniel Rosenfield (Paediatric Emergency Physician, Canadian Paediatric Society): Thank you so much for inviting me today. As mentioned, my name is Daniel Rosenfield and I'm a pediatric emergency specialist at SickKids hospital in Toronto, where I completed training in additional trauma care and injury prevention. I'm here today representing the Canadian Paediatric Society as a member of its injury prevention committee.

One caveat to put up front is that I'm speaking specifically about children, and I have no expertise or knowledge with respect to injuries in the adult population.

The first thing I'd like to say is that school buses are actually a very safe method of transportation for Canadian children. When children are injured or killed, it is actually typically around or outside of the bus as opposed to being a passenger on it. School buses typically operate during the day on city streets at relatively low speeds. This is where children are the safest.

The majority of injuries or fatalities that do occur happen off hours on evenings and weekends or holidays and typically on major arteries or highways as opposed to on city streets. School bus safety, as you may have heard previously, is based primarily on the compartmentalization theory: the idea that each seat, and the back and front of it, is its own little compartment. The relative safety of this model is actually somewhat debatable, although most research to date suggests that it performs quite well in front-back collisions but quite poorly in side or lateral collisions and rollovers, which of course are actually more common at night, on weekends and on highways.

Seat belt use with specific reference to lap belts has a mixed history and safety profile. While they do keep the passengers in the seat, they're actually associated with significant spinal and internal organ injuries, which can result from front-back collisions, and head injuries in side and lateral collisions. We do know that if seat belts are to be used, three-point restraints that are appropriate and fitting well are the best we have to prevent injuries.

As we know, children don't come in one size and thus proper-fitting restraints are essential when they are being used.

Overall, from the average trip to and from school, I would say that current standards are likely sufficient for buses. However, when looking at longer trips and trips on the highway, it's hard to definitively make any clear recommendations. However, if we were to implement mandatory seat belts, we would have to make sure they are three-point restraints, as lap belts have just not proven to be safe enough.

It would be important to mention that other technologies that have come into existence over the past 10 years with technology and electronics have made buses potentially safer, although no good robust research has actually looked at them. These include blind-spot cameras, other detection things and other sorts of technologies that can help bus drivers see around their bus to help avoid the injuries to children that occur around them.

With respect to coach buses, there's almost no literature examining children specifically. We know that fewer children use them. Obviously, it's not a primary method to get to and from school most of the time. However, with respect to safety, the comparten-

talization theory applies once again. The coach buses use the idea of a seat front and back to keep kids compartmentalized, but research on this is much more sparse in this realm. We do know that if kids were to be using coach buses more regularly, most buses would require booster seats similar to how they are used in private vehicles.

Overall, the messages I'd like to convey to the committee today are that buses represent a very safe mode of transportation for Canada's children. Most crashes occur after regular hours, on highways and on roads that are not typically travelled by the drivers. Seat belts do offer a way of improving safety, but they're only one way in a potentially larger scheme of improving safety resources and technologies.

Thinking about other potential options, better driver training, background checks, using GPS technology to monitor bus patterns and driving behaviour, and other technologies that have largely become standard in today's cars may be worth investigating as ways to potentially improve bus safety, although none of these has been robustly evaluated in any academic sense.

I thank you for your time and I welcome any questions.

The Chair: Thank you very much, Dr. Rosenfield.

We'll go to Mr. Jeneroux.

Mr. Matt Jeneroux: Thank you, Madam Chair.

Thank you for joining us via video conference.

Here is a quick question to get it out of the way. Are you representing the Canadian Paediatric Society in your role here?

• (1205)

Dr. Daniel Rosenfield: Yes.

Mr. Matt Jeneroux: That's great, thanks.

You touched on it at the beginning, and I apologize for the repetitiveness of it, but can you outline what, in your opinion, are the main causes of death and serious injury from bus crashes?

Dr. Daniel Rosenfield: It's important to distinguish between passengers in the bus and passengers outside the bus.

The vast majority of fatalities in children occur around and outside the bus. After children have exited the bus, they're either hit by a car or unfortunately hit by the bus itself.

Mr. Matt Jeneroux: Do you mean when they're crossing a street, that kind of situation?

Dr. Daniel Rosenfield: That's correct. That's why there's been a lot of emphasis on putting in the stop arms and emphasizing legislation and penalties for drivers who go through the stop arm, because that's actually where most fatalities occur.

Mr. Matt Jeneroux: Okay.

In your opinion, would seat belts reduce deaths or serious injuries involving bus crashes?

Dr. Daniel Rosenfield: Again, it's a hard question to answer definitively. The numbers are actually, as I mentioned, quite low overall in terms of how many fatalities there are annually or over a number of years.

There's no doubt that certain fatalities would likely have been prevented. They prevent passengers from being ejected, and so if a passenger died from being ejected, in all likelihood, there's a chance they would have survived, but it's hard to say definitively one way or the other.

Obviously, if they got injured or killed outside of the bus, a seat belt wouldn't do anything on that one.

Mr. Matt Jeneroux: Right.

I guess where we're coming from in terms of the study is specifically looking at bus crashes and bus safety. You raise a very interesting point in terms of safety around buses, inside and outside of buses. I'm not sure how we'll blend that into our final report at the end of the day, but I think it's certainly something worth raising.

Trying to stick specifically to the actual crash of the bus—and you've said there are actually not that many instances of it—does the Canadian Paediatric Society have a formal position on the question of when it comes to seat belts on buses?

Dr. Daniel Rosenfield: They do not. There's a formal position statement with respect to auto safety, but there has not been a formal position statement or outline on that. We haven't gotten there yet.

Mr. Matt Jeneroux: Okay.

I'll turn the rest of my time over to Mr. Liepert.

Mr. Ron Liepert: Thank you.

These comments are very interesting. I guess what you're telling us is that if we're going to study this issue, maybe it's too narrow a focus. It seems that we're focusing on something that you are saying in your experience hasn't been a real problem, and yet the situations you are dealing with are transportation safety issues around the outside of the bus. Is that a fair comment?

Dr. Daniel Rosenfield: I think so. Can I get clarification? When you say “study”, are you specifically referring to seat belts on school buses, or are you referring to—

Mr. Ron Liepert: Just to be clear, I don't have the motion right in front of me, but it effectively talks about the safety around school buses and passenger buses. It's a study of bus passenger safety, so I guess it would in fact cover what you raise as an issue.

Maybe elaborate just a bit more to help us, then. You mentioned a couple of things, like maybe increasing fines for blowing through a security arm—those sorts of things. Could you elaborate a bit on what you would see as potential recommendations we could make for what you see as the biggest problem, which is passenger safety on the outside of the school bus?

Dr. Daniel Rosenfield: Yes. Again, I think the epidemiologic trend sort of supports that. The largest number of injuries occur around the bus and not in the bus, with respect to crashes. That's just

due to the fact that most kids go to and from school, as I mentioned, at low speed on city streets, and they are transported very safely.

In terms of broader recommendations from that perspective, I'm certainly not an expert in the technologies that exist, and I'd probably defer to other colleagues with respect to how we make the buses safer, but I would actually implore the committee to look at that as a primary motivator.

In terms of absolute number of lives and morbidity, the biggest bang for your buck is going to be in making sure that when kids get off the bus, when kids are walking around the bus and when kids are going to and from school, from that end, the part where they are pedestrians, they're actually at the highest risk.

The idea that with the technologies that exist today a kid can get hit by the bus that they just walked off becomes more and more unacceptable in my mind, especially when we now know.... As we can see in passenger cars, most of us probably drive cars that have rear-view cameras now. The idea of hitting someone behind me if I have a camera now is almost unthinkable, whereas 10 years ago that was an unfortunate occurrence.

I would certainly encourage the committee to look into that in particular. Certainly strengthening rules, safety and things that we can do for kids when they're on the bus is very important, but if we're trying to impact the most safety for the most kids, it's going to be when they're around and off the bus.

• (1210)

Mr. Ron Liepert: Thank you.

The Chair: Next is Mr. Hardie.

Mr. Ken Hardie: Thank you, Madam Chair.

Thank you, Dr. Rosenfield, for being here.

The purpose of this study has been to focus as much as we can on survivability in the event of a crash. What we've heard so far, for instance, has had to do with the integrity of the coach itself, and there has been some discussion thus far with the RCMP and the Transportation Safety Board on the effectiveness of seat belts and the considerations that have to go into the proper use and design of a seat belt.

In addition to survivability, we also have to look at injury mitigation. In other words, what steps can be taken in terms of the design of the coach, etc., that can allow more people to walk away from any kind of a crash—a rollover, as indicated, or other—as uninjured as possible?

I'll leave that open to your comments.

Dr. Daniel Rosenfield: As a trauma physician, I always tell parents, families and residents I work with first of all that the best way to save someone is to prevent the crash from happening in the first place. When we're talking about these crashes—and I'll talk about what we can do to improve survivability, as you discussed—the best thing is to avoid having them happen in the first place. We know that, again, when we—

Mr. Ken Hardie: I would prefer you not spend a lot of time there, because that's a given.

Dr. Daniel Rosenfield: Yes.

Mr. Ken Hardie: We want to look at a situation in which a crash has happened, and I guess you've ministered to kids who have survived those crashes, or perhaps not—

Dr. Daniel Rosenfield: Yes.

Mr. Ken Hardie: —in some cases. What makes the crash more survivable and what mitigates the injuries?

Dr. Daniel Rosenfield: Obviously, the biggest mitigator is speed. I won't spend much more time than that in terms of if the thing that it collides with or the bus itself is speeding; that's going to make the injury less and less survivable. With each increase of 10 or 15 kilometres per hour of speed, your survivability certainly does decrease. That's the first thing I look at with respect to survivability.

The next thing is going to be your injury patterns based on what happened to you in that compartment. As we discussed earlier, in a front-back collision, you're in a compartment, and you're typically more likely to survive if you're not belted. However, in the case of the rollovers and the ejections, if you're not contained within that compartment, you're more likely to sustain significant head injuries, and those are actually the number one killer, traumatically, in children.

Any way we can keep kids in their compartment, either by being belted or with other technologies that I've read about but won't discuss because I'm not an expert, would be the best way to mitigate potential injuries.

Mr. Ken Hardie: Obviously, being ejected from a vehicle significantly lowers survivability and certainly makes the injury suffered more severe. Part of the exposé, if you will, that took place not long ago on CBC, as I recall, was going back to the theory that the compartmental strategy with the padded seatbacks, etc., was what everybody focused on, but side collisions or rollovers were not necessarily considered in the argument against having safety belts. When you look at videos of crash test dummies with safety belts, there's a lot of whipping side to side of heads. There is as well, in front or rear collisions, forward and back, so there are certainly, at the very least, significant soft tissue injuries, which can be a lifelong sentence. As a former insurance company guy, in auto insurance, I know that.

Looking at that aspect of it, the safety belt is maybe only one thing that should be considered. If you were designing a bus, what would you do to try to prevent some of the other activities that are going on in a crash?

Dr. Daniel Rosenfield: I have to concede that that's sort of beyond my level of expertise.

I will acknowledge that the first comment you made is spot-on. Belts will mitigate, but not eliminate, injuries. In fact, you see different injury patterns depending on the type of belt being worn. Certainly, as I mentioned, there's actually what's called a seat belt syndrome, where only a lap belt is worn. There's also the concern if a three-point restraint is worn inappropriately or isn't fitting correctly that you can potentially have more significant injury than if it weren't worn at all.

Again, any other sort of technology is a little bit beyond my expertise, so I'm going to stop my comments there.

•(1215)

Mr. Ken Hardie: You mentioned, of course, that your focus is particularly on pediatrics. What is the threshold? What size, weight, etc., should we be considering when we think of school buses, perhaps, that are transporting elementary school and preschool kids?

Dr. Daniel Rosenfield: Typically, our centre actually sees kids up to 16, but of course, you can have a 15-year-old who looks like they're 25, and you can have a 19-year-old who looks like they're 13. We actually typically go more on what their body habitus is like in terms of whether they have gone through puberty and whether their growth plates have fused and things like that. I think, with respect to pediatrics, if you're talking about elementary school buses, those would certainly encompass everything under my scope.

Mr. Ken Hardie: When we look at the interior design of buses, one aspect I think we need to consider, particularly where.... Well, it doesn't matter whether or not safety belts are present; the collision with other things in the bus, and not necessarily the seatback in front of you, obviously would contribute to all kinds of injuries, in the case where a person is unrestrained, and definitely more head injuries where the person is sitting next to a window or a stanchion. Would that be a valid observation?

Dr. Daniel Rosenfield: I think so. Again, that's probably more of an engineering or physics question.

I can certainly tell you from experience that we absolutely see kids who are injured from hitting things within the bus. They're actually often not necessarily severe injuries, but lower-speed potential crashes that were the equivalent of fender-benders, in which they bumped the side and they have a big laceration on the side of their head, or something in that vein, from a stanchion or a metal post or something like that.

I can't speak further than that.

Mr. Ken Hardie: What about head to head?

The Chair: Sorry, Dr. Rosenfield, but I have to go to our next committee member.

Monsieur Aubin.

[*Translation*]

Mr. Robert Aubin: Welcome, Mr. Rosenfield. Thank you for joining us.

I listened carefully to your comments. I confess that I have some difficulty with a statistical approach, such as when you say that most accidents involving school buses happen at off-peak times. But having been a high school teacher, I get the picture.

When bus drivers are driving their routes in town and getting the children to school at about 50 kilometres an hour, the risk of an accident is low and, even if there was one at that speed, the impact would be reduced.

When I was a teacher, those were the same buses that I was on to go to the theatre or to a sports or cultural event with my students. We would be doing 90 kilometres an hour on the highway, which is more or less the standard in all provinces.

You were talking about speed just now. In your experience, is a speed limit of 90 kilometres an hour appropriate for that kind of vehicle?

[English]

Dr. Daniel Rosenfield: That's a good question. It's hard to answer definitively.

Obviously, the vehicles are capable of going those speeds. As I alluded to at the beginning, most fatal crashes and severe injuries occur when buses are going at that speed. It's a hard thing to say. It's more of a value judgment as to whether or not a bus.... You're at a higher risk of injuries and fatalities when you're in a bus at that speed. I guess the question is if you're going on that after-school trip, what's the value of the trip versus the relative risk?

Again, as I pointed to at the beginning of the talk, they're still exceedingly safe. The odds of kids and teachers being killed or severely injured in school bus crashes, even on highways or in off hours, are still exceedingly low and much safer than private vehicle transportation. I do need to put that grain of salt in there. If the alternative is now we send 20 children in 20 different cars to that trip, absolutely not, the school bus is 100% going to be the safest way to do that every time.

That being said, the faster it goes, the more likely if something bad happens, there's going to be a worse outcome.

[Translation]

Mr. Robert Aubin: Thank you.

I ask that question because it is very important. When we say school bus, practically everyone has in mind the 47-passenger school bus we see all the time. However, in a school situation, there are many other modes of transportation. For example, a sports team with a small number of students often uses minivans long enough to take up to 12 passengers. There are also smaller school buses that can carry 20 or 25 passengers.

Do we have to look at standards that are specific to each type of vehicle? Could the three-point restraint be the common denominator for all types of transportation?

• (1220)

[English]

Dr. Daniel Rosenfield: That's a really great observation and point.

Unfortunately, we're flying blind with respect to research and evidence here in terms of relative safety. Most of the studies that have looked at school bus crashes have not distinguished between full-size buses, minibuses, van combinations, etc. It would be very hard for me to advocate for one versus the other.

In absolute terms, if you're going to implement these policies, then I think we would have to think about them pragmatically and ask if it is reasonable to expect there to be seat belts and certain things in 47-chair buses versus smaller buses where it might be more feasible.

That's not my area of expertise, so I can't speak to that. I think that's certainly a very valid point.

I would just echo that we aren't guided by.... There's not even that much research out of other centres. I looked through what's coming out of the U.S. and other places around the world, and unfortunately, there's certainly nothing distinguishing between full-size buses, minibuses and so forth.

[Translation]

Mr. Robert Aubin: After a lot of pressure, the government has moved up the replacement of the DOT-111s, those tanker cars that carry crude oil because it was found that they were not sufficiently impact-resistant. That transportation is for natural resources. For transporting our children, should we not be demanding stronger buses?

We fully understand the compartalization theory in a head-on collision, but the consequences are completely different with a lateral impact. Should we not simply err on the side of caution and require manufacturers to make school buses stronger, given that they are allowed to make those kinds of trips?

[English]

Dr. Daniel Rosenfield: I would agree with the statement that any manufacturer should make their products as safe as possible. With respect to the individual buses and how they're constructed and what compartments they have, that's not my area of expertise. I certainly can't comment more than that.

The Chair: Make this very short, Mr. Aubin.

[Translation]

Mr. Robert Aubin: Is there a difference between transporting students by school buses and transporting students by highway coaches, which are much more luxurious? Does the seriousness of the injuries differ in the two cases?

[English]

Dr. Daniel Rosenfield: Unfortunately, empirically, as I mentioned earlier, coach buses have not been studied. There haven't actually been a good number of large-scale epidemiologic studies to compare coach buses to school buses, so we can't actually make that comparison.

The Chair: Okay.

Mr. Iacono.

[Translation]

Mr. Angelo Iacono: Thank you, Madam Chair.

Dr. Rosenfield, thank you for being here today.

I have been able to gather that you are particularly interested in preventing injuries. Let us look at the case of a school bus built according to the compartmentalization system of seating, in order to protect the students by mechanisms other than traditional seatbelts.

Is it your opinion that, today, compartmentalization is the optimal system for protecting young passengers in collisions?

[English]

Dr. Daniel Rosenfield: Do you mean the current compartmentalization system that exists as it stands now?

[Translation]

Mr. Angelo Iacono: Yes.

[English]

Dr. Daniel Rosenfield: All right.

Again, stating, of course, that I'm not an engineer and I'm not at the forefront of what's out there, in a little bit of the reading I did in preparing for this, I recognized there are some potential other technologies that have yet to be really formally validated, such as airbags and things like that.

Unfortunately, in the absence of any evidence to the contrary, I think the system they have now and that's being tested is what's available. As for whether or not there's better technology out there, I can't really speak to it.

[Translation]

Mr. Angelo Iacono: From your analysis of accidents, damages and injuries to victims, is that system the best there is, or is there a way to improve it? What do you suggest? Do you have any comments for us on the issue?

• (1225)

[English]

Dr. Daniel Rosenfield: The first thing I would say is that you can always improve. Until no children who are in crashes suffer any injuries or fatalities, there's always room to move. Given that we're talking about Canada's children, it's always worthy of further investment, time and innovation.

Even the compartmentalization theory has changed over the years. I know that engineers have spent lots of time investigating and testing different ways to make the compartments safe. We still see a lot of injuries from other things that are potentially related to the compartments. I think with one of the other committee members we were talking about potentially hitting stanchions and other metal things within the bus.

There certainly are a lot of places where we can work to minimize injuries, mitigate the injuries they have or prevent them altogether. There is definitely a lot of work to do from that end. As for how that work gets done and what it looks like, that's not my area of expertise, but I still see kids who get hurt on school buses and so on. Until the day when I don't see those anymore, there's room to move.

[Translation]

Mr. Angelo Iacono: If you had to choose one thing that we could do to improve the situations as quickly as possible, what would it be?

[English]

Dr. Daniel Rosenfield: It's a really tough question. Again, unfortunately, this would be more my opinion as opposed to what's rooted in evidence, so I'm actually going to hold off on that, because I think we should be guided by research and not one individual opinion.

[Translation]

Mr. Angelo Iacono: Thank you.

[English]

The Chair: Mr. Sikand is going to share your time.

Mr. Gagan Sikand: Picking up where Angelo left off, from what you've said, I think the safety arm would probably be the one single thing we could do to prevent the greatest number of deaths, right?

Dr. Daniel Rosenfield: When you say "the safety arm", do you mean the one in front of the school bus that prevents children from...?

Mr. Gagan Sikand: Yes.

Dr. Daniel Rosenfield: Again, because that's never been individually evaluated, I wouldn't say that specifically. I would say that it's some sort of system that prevents children from being hit in front, whether or not that's a camera, a loud alarm or flashing lights. A lot of these have been piloted in districts in the U.S. and elsewhere. Unfortunately, robust evaluation is quite challenging to do, so I would say that avoiding children from getting hit around the bus by whatever means you're doing that would be a good way to focus efforts, for sure.

Mr. Gagan Sikand: I'm trying to compare it to the seat belts, but it would be external to the bus, not inside the compartment. In a collision when all the passengers are involved, the one thing we could do would be the safety belts. Is that correct?

Dr. Daniel Rosenfield: I don't want to call it low-hanging fruit because it's obviously very complicated logistically and practically, and I won't even begin to think about all those down the line. That's not my area of expertise or knowledge. At this point, however, certainly we do know that well-fitting, three-point restraints will minimize injury and prevent fatalities. That's clear.

Mr. Gagan Sikand: If we take the example of Humboldt, the speed was from an external vehicle so you don't necessarily have speed as a factor.

What's the contribution of speed when it comes to the numbers of deaths that you were talking about?

Dr. Daniel Rosenfield: Because bus crashes in Canada are so rare...an upcoming study is looking at the last decade and specifics around the actual crash. I wish the results were published; they're coming in the next couple of months. In the absence of that, we do know that it's very rare, one or fewer fatalities per year over the last 20 years, which is, I think, very positive. When it does happen, the bus has been travelling at a higher speed more often than not.

Mr. Gagan Sikand: Dr. Rosenfield, thank you.

The Chair: Thank you very much.

Mr. Jeneroux, I believe you had a point you wanted to make.

Mr. Matt Jeneroux: Thank you, Madam Chair, for allowing me to do that.

Dr. Rosenfield, you raised that very few crashes happen when it comes to kids on buses. I'm wondering if you have any statistics that you can provide our committee, because I think the only thing we have in talking with our analyst is that there have only been eight or nine accidents or deaths since 1999.

Dr. Daniel Rosenfield: Yes, when this meeting was originally scheduled, my co-witness was the new chief at St. Mike's, who is the lead author on that study using the Canadian hospital injury reporting and prevention program. She has that data. Unfortunately, she's been out of the country, and I haven't been able to get it from her. Otherwise, I was going to present it to you today. When I reach her, and once the paper is published, we'll be happy to send the results and the specifics.

• (1230)

Mr. Matt Jeneroux: All right, thank you.

The Chair: Thank you all very much.

Thank you, Dr. Rosenfield. We very much appreciate the work you do every day in looking after the country's children.

Dr. Daniel Rosenfield: Thanks so much. It was a pleasure.

The Chair: We will suspend for a moment.

[Proceedings continue in camera]

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