

Legislative  
Assembly  
of Ontario



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**Official Report  
of Debates  
(Hansard)**

SP-20

**Journal  
des débats  
(Hansard)**

SP-20

**Standing Committee on  
Social Policy**

Defibrillator Registration  
and Public Access Act, 2020

1<sup>st</sup> Session  
42<sup>nd</sup> Parliament  
Monday 24 February 2020

**Comité permanent de  
la politique sociale**

Loi de 2020 sur l'accès public  
aux défibrillateurs  
et leur enregistrement

1<sup>re</sup> session  
42<sup>e</sup> législature  
Lundi 24 février 2020

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Chair: Natalia Kusendova  
Clerk: Eric Rennie

Présidente : Natalia Kusendova  
Greffier : Eric Rennie

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LEGISLATIVE ASSEMBLY OF ONTARIO

ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

**STANDING COMMITTEE ON  
SOCIAL POLICY**

**COMITÉ PERMANENT DE  
LA POLITIQUE SOCIALE**

Monday 24 February 2020

Lundi 24 février 2020

*The committee met at 1400 in room 151.*

**DEFIBRILLATOR REGISTRATION  
AND PUBLIC ACCESS ACT, 2020  
LOI DE 2020 SUR L'ACCÈS PUBLIC  
AUX DÉFIBRILLATEURS  
ET LEUR ENREGISTREMENT**

Consideration of the following bill:

Bill 141, An Act respecting registration of and access to defibrillators / Projet de loi 141, Loi sur l'accès aux défibrillateurs et leur enregistrement.

**The Chair (Ms. Natalia Kusendova):** Good afternoon, everyone. Happy Monday. The weather is getting better, so it's a lovely day to be here with all of you.

I call this meeting of the Standing Committee on Social Policy to order. We are meeting today for public hearings on Bill 141, An Act respecting registration of and access to defibrillators.

I would like to remind members that, pursuant to the order of the House dated February 20, 2020, we are meeting for clause-by-clause consideration of the bill tomorrow at 4 p.m. Since we are meeting for clause-by-clause consideration tomorrow, the deadline to send the Clerk written submissions on the bill will be 6 p.m. today. Is there agreement?

Madame Gélinas?

**M<sup>me</sup> France Gélinas:** Could we make that 7 p.m.?

**The Chair (Ms. Natalia Kusendova):** The amendment submission deadline is at 7. If we get agreement from everyone, we can move it to 7 as well for written submissions.

**M<sup>me</sup> France Gélinas:** So for written submissions it's 6, and for amendments it's 7?

**The Chair (Ms. Natalia Kusendova):** That's correct.

**M<sup>me</sup> France Gélinas:** I'm all good with that.

**The Chair (Ms. Natalia Kusendova):** So we have agreement from everyone? Agreed? Agreed.

Also, since I'm already seeing some props in the room today, I would like to seek unanimous agreement for presenters to be allowed to use props during their presentations. Agreed? Agreed.

Each witness on today's agenda will receive up to 10 minutes for their presentation, followed by 20 minutes of questioning by the committee members. The government will have seven minutes for questions, the official opposition will have seven minutes for questions, and the

independent Liberal member will have six minutes for questions.

At our last meeting, in Sudbury, the government began the round of questions for our last presenter, so today the official opposition will begin the round of questions for our first presenter.

Are there any questions before we begin?

**PREPARED CANADA CORP.**

**The Chair (Ms. Natalia Kusendova):** At this time, I would like to invite Alex Vezina and Greg Vezina, from Prepared Canada Corp.

**Mr. Greg Vezina:** Good afternoon, Madam Chair, members of committee. I'm Greg Vezina, and this is Alex Vezina.

**The Chair (Ms. Natalia Kusendova):** Good afternoon. Thank you so much for being here. You may now begin your official submission to this committee by first stating your name for the record. You will have 10 minutes.

**Mr. Greg Vezina:** My name is Greg Vezina, and I'm the director of Prepared Canada Corp.

Prepared Canada Corp. is an emergency management and operational risk organization that, amongst other products and services, is a defibrillator distributor and a medical skills training provider, and works with a variety of organizations to improve their response time in casualties and chance of survival. We help build profitable, sustainable companies through collaborative training workshops that assess operational risk and develop test plans for their mitigation.

CEO Alex Vezina has both a master's and a bachelor's degree in disaster emergency management from York University, along with professional certification in business continuity, incident command/management systems, emergency management and other highly specific skills related to emergencies. He has completed emergency and contingency planning for public health agencies, hospitals, and the manufacturing, accounting, food service, logistics/distribution, transportation, agricultural and construction sectors.

Outside of external factors, two particularly important things are necessary for successful use of defibrillators. First, the machine needs to be in physically working order. Second, it can be accessed quickly, which means it's physically located close enough in distance to the scene to

be usable, and the individual responding actually knows where it is.

On June 24, 2014, Prepared Canada made a deputation before the city of Mississauga with respect to directional signs that point to nearby locations of AEDs. We spoke to the importance of public awareness of AED locations, and requested that signs with directional arrows be placed at intersections so people become familiar with the locations of nearby AEDs in their everyday life. We further suggested signs in front of all city buildings where an AED is located.

The council approved a recommendation that staff be directed to follow up on the issue of signage for defibrillators in city facilities, but no further action was taken.

The Ontario Automated External Defibrillator Registry only applies to AEDs that are in government locations, funded by government.

Many municipalities, such as the region of Peel, maintain an AED registry database which keeps track of every private and public AED. These are opt-in programs.

In early 2019, the province of Nova Scotia started publishing a searchable online map with the locations of AEDs in their communities, to allow people to zoom in and see exactly where the devices could be found. That province has nearly tripled the number of devices on its registry since 2017. Interestingly, this was done by the CBC. The CBC used freedom of information to go find out where they are, and then they pushed the government, saying, “Look, do this,” and the government did. So, for those of you that are critical of the CBC, once in a while they get it right.

There were initially 684 devices registered from business and community locations in 2019, with an additional 164, or almost 25%, of AEDs registered with the province not listed in the map, since the owners did not want to authorize their address to be shared.

When people register, they can decide whether to list their device as publicly accessible and whether to list it for responders, meaning they will be notified when there is a cardiac arrest within 1,200 metres of a defibrillator, so that people can get to them. Similar programs have been running for years in other parts of Canada.

Programs like this have been furthered with publicizing AED locations to the public, while remaining an opt-in program. Some of the AEDs registered are not disclosed to the public, due to private individuals or organizations not wanting to disclose their locations publicly. That’s really where the knot is going to be in this.

There are also NGO- and charity-based AED registries available for first responders, and there are many. We put a couple here, and there are a couple of others.

AEDMAP has developed Staying Alive, a free mobile application that has won awards and is widely acclaimed by the public, that identifies AEDs around the world and helps to locate the nearest defibrillator in case of emergencies. Versions of this application have been published in Switzerland, Canada and Belgium. These applications are developed in partnership with local NGOs and are based

on the Staying Alive technology. There is another one that is now available in 21 countries.

We have PulsePoint, which is also a mobile app that allows users to view and receive alerts on calls being responded to by fire departments and emergency medical services. PulsePoint allows public safety agencies to record and display their life-saving resources at AED locations, including bleed control kits, naloxone and epinephrine.

If we’re going to do the AED registry, you might want to think about the availability of these other things. We’re just throwing that out there, boys and girls, so that when you get down into the weeds on this, it’s not as easy as it should be—because it shouldn’t be easy, this stuff. We’ve got to get it right. We’re going to get one chance to get this right. We’ll talk about it in a second.

Many AED manufacturers are also offering complete AED response systems that include online locator services using WiFi, cellular and USB. So you buy the AED, and it’s already enabled for next-generation uses. Whether we work with non-government organizations or charities, or whether we let the private sector do it, the bottom line is that we’ve got to congeal all of this data somewhere.

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Notwithstanding many initiatives to improve the use of AEDs, there is a real need for a searchable, comprehensive central registry—especially with location mapping so you can find the things—that includes an online locator so that the public and first responders have access to these things. Again, there are two levels of access.

In reviewing Bill 141 from an operational risk perspective, a serious issue arises with respect to the difference between publicly and commercially or privately available AEDs.

I will let Alex, who has the master’s degree, take over from here.

**Mr. Alex Vezina:** Alex Vezina, CEO, Prepared Canada Corp.

Ontario’s health and safety laws do not require employers to provide AEDs in the workplace, regardless of how many workers they have. Currently, Ontario’s health and safety laws require certain first aid requirements and certain things with first aid kits and health and safety boards etc., but nothing around AEDs specifically.

Part of the challenge in getting broader access to their AEDs, otherwise known as defibrillators, is that some private sector businesses have a primary interest in defibrillators for their employees and/or for their customers and the general public, but not necessarily for all of the above, depending on the place of business. Many of these businesses are resistant to extra layers of government regulation for a variety of reasons not necessarily related to compliance.

Bill 141 may act as a disincentive to some businesses, NGOs or individuals that otherwise would have gotten defibrillators and maintained them appropriately. This may have the unintended consequence of having a lower density of defibrillators in a given area, potentially leading

to lives that could have been preserved not being preserved. A big thing ends up being how many defibrillators you have in a given area, so how easy it is to find one. If you have more defibrillators, then it's easier to find one.

A potential solution is to allow for a different category of registrant so that those who wish to have a defibrillator registered for emergency use do, but those who do not wish to be subject to government involvement also have a way to register and let you know without being as involved.

An alternate solution is to make the registry strictly opt-in so that businesses can decide if they wish to interact with the government in this way. Other provinces are doing this. Private businesses and individuals are on board to help. Let's do this right and save many more lives.

**Mr. Greg Vezina:** Our big concern is the government inspections. That, to be honest—we like this bill. We actually really like this bill. I've written legislation, and this bill is fuzzy enough that it allows different types of interpretations. It's not hard and fast. People like the ability to make some of the decisions on how they will do things themselves. But as soon as you tell a small businessman that an inspector can come into his business—

**Mr. Alex Vezina:** They're not buying the defib.

**Mr. Greg Vezina:**—they're not going to buy the defib. They're just going to say, "Why should I? I'm not going to take the risk."

**The Chair (Ms. Natalia Kusendova):** You have one minute remaining.

**Mr. Greg Vezina:** Great.

That's really the big concern we have: the regulatory overburden. We understand the need for businesses to maintain their defibrillators. There's already a law about that. There are many ways to skin a cat. One of the ways is to say, "Okay. You can register B without inspections," or you can take out the inspections and leave that up to the other legislation.

But again, our big concern is disincentives to people getting AEDs. The Nova Scotia example is perfect, because not only were there 25% more defibrillators that weren't registered that they knew of; there was another 75% that weren't registered. So they had double the amount of defibrillators available for use and half the amount registered.

I think we're better off having the defibrillators available for use and letting the legislation for negligence deal with maintenance, to do the opposite of what this bill will do, to encourage rather than discourage the broadest use.

**The Chair (Ms. Natalia Kusendova):** Thank you very much. Now I invite the official opposition to begin their round of questions. You have seven minutes. Madame Gélinas.

**M<sup>me</sup> France Gélinas:** Thank you for coming. If I understand you well, you've read the bill, and you saw that there's a big section in the bill that deals with penalty. What you're saying is that if we were to get rid of the penalty and just make it available so you can opt in to register, we will take it for granted that if a business goes to the trouble of buying one and putting it into their

business, it's because they want to do good. The risk of it not being maintained is a whole lot smaller than the risk of all of those businesses opting out of the registry in the fear of not meeting the criteria of this person who will be allowed to come into your premises, tell you what to do, when to do and everything. Way more people won't participate—versus the risk of having one that could be poorly maintained.

**Mr. Greg Vezina:** Yes. The difference between a defibrillator that hasn't been maintained and cannot be used and one not existing is exactly the same—it's not available. The difference between a defibrillator that is available, that could be used, but nobody can find versus the ones they can find—there it is.

Look, businesses don't like government in their drawers; they just don't. We'll obey the laws. We don't have to have a defibrillator. We went and got one. We only have nine people in the whole building, and four of them are the bosses, who are overweight. So we got this defibrillator, and then the boss finds out that some inspector with a white hat and a blue logo can walk into his business and say, "Get that thing out of this building."

So our concern is that, again, you do everything you can to have as many defibrillators there—and don't use the regulation or the fear of failure for non-maintenance etc., or the inspection process related to that, to defeat the whole purpose of the bill.

**M<sup>me</sup> France Gélinas:** I agree.

When you talk about "opt in," you talk about leaving it to—so the government building is a given. I would say that the municipal building would also probably be a given. But everybody else that has an AED—and there are many, many businesses. I'm from Nickel Belt. There are a lot of big mines. All of the mines have them. All of the suppliers have them. We have them everywhere. But nobody knows where they are, unless you—you get the point. So the idea is, all of those that exist in the "private system"—I'll call it like this—would have the opportunity to opt in.

But then you said, "two systems." Once they opt in, what would be different from—

**Mr. Greg Vezina:** Well, the question is whether you're going to keep the inspection. If you get rid of the inspection, then there's a single, "Do you want on the list, or you don't want on the list? Do you want the public to know where your AED is or not?"

Nova Scotia had a second opt-in, and that was, you can opt in for only first responders, only people who are trained in emergency management, to find the AEDs. They connected with 911. So when someone is having a heart attack and someone phones 911, if that 911 operator can connect with a first responder and knows where the nearest AED is, that 911 responder can say to the person who called in, "We've dispatched that AED. It's 500 feet away. Someone is going to run over with you—try to use it until the first responders get there."

The most important thing is for access to the AEDs. The privacy of the business is a secondary condition. Great—you can opt in so that the public can access it, and then there's the issue of the public running into your business,

or you can opt in to the process where just first responders and professionals can access it. You cover all of the bases that way and get rid of governments coming into my business to inspect the thing. If someone dies because my defibrillator didn't work because it wasn't maintained, the legislation covers that. Deal with me then.

One other thing, briefly: We might want to give anybody who gives users their AED in an emergency a free replacement. We replace their pads and their battery. Do you know what we should do? "If you save a life with an AED, here's a free one." That's just an outside—

**M<sup>me</sup> France Gélinas:** Good idea.

Have you ever looked at maps—having a formal process to map out where they are needed?

**Mr. Greg Vezina:** It's on the fourth page of our submission. You'll see the CBC article. The first thing there, at the top, is the Nova Scotia map. That map shows all different kinds—

**M<sup>me</sup> France Gélinas:** No, that's not what I mean—not a map of where they are, but a map of where they should be.

**Mr. Greg Vezina:** I haven't done that. That's something that the committee might want to—if you have time for someone to do any research. Generally, they're needed where there are large numbers of people.

**Mr. Alex Vezina:** It's a combination of the ones that you know where they are—so some sort of list of where they are, against population density, against ease of access. You would have to use data from your response agencies that would know the response times in certain areas and if there are defibrillators around and overlay it with what you know. The data exists. Whether or not it has been done yet—the database of all the defibrillators and where they are isn't done yet, so you can't really know that until you know the first thing.

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**M<sup>me</sup> France Gélinas:** In your view, if we have a tiered opt-in, it could be on the app that everybody has on their phone. You have all the AEDs that everybody wants to know where they are, all of the public. Then you could still have a business that registers their AEDs, but then only after you dial 911 would the 911 operator know that there is an AED at the Coleman mine. They have trained people you dispatch—

**Mr. Greg Vezina:** Get the AED there—exactly.

**The Chair (Ms. Natalia Kusendova):** You have one minute remaining.

**Mr. Greg Vezina:** We think that's an elegant solution.

**Mr. Alex Vezina:** Also, one other comment on that: Generally speaking, when people call 911, or when there's an emergency situation from a member of the public, the public awareness training has been done that 911 is who you call if something bad happens. People haven't been trained on, "I need to check my app on my phone."

So, more than likely, what will happen is that this type of database will be a function of a 911 operating centre. Even though they may have it on their phone, a bunch of people won't have it on their phone. But if it's integrated into 911, they will have access to the information, which I

think is really where this is best seen, on more of an expert—

**Mr. Greg Vezina:** For example, in the bill the requirement is that you have a sign outside, so people can see it from the outside. This is another example of: We think people need to know where these things are in their daily life. The more they see these signs in their daily life, the more they become familiar with them: "Oh, Buddy used an app. Here's another article that someone used it." The more familiarity in utilization of the various technologies, the better we are.

**The Chair (Ms. Natalia Kusendova):** Thank you very much. This concludes the time. I now invite Mr. Fraser, the independent Liberal member, to begin his round of questioning. He has six minutes.

**Mr. John Fraser:** Thanks very much for being here. I just want to go back to if there's an incident and a defibrillator doesn't work. Actually, as a legislator, I'm not interested in going back on anybody, because if it's not working when somebody needs it, the problems are already done. The problem is done. Right? The result is bad. It doesn't matter what happens after that.

I see these as analogous to fire extinguishers. Follow my line here for a second. It does make an argument for prescribing where they should be, in some broad sense—they should be in gymnasiums, they should be in schools, they should be in X. I think there's an argument around that, because we do that with fire extinguishers. With fire extinguishers—I come from the grocery business, and we had to have them. I don't see any difference. It may be a more rudimentary technology, but it's still having the same impact.

I struggle, too, with if it's going to be a disincentive. But we have to create the environment where the machine works, and people understand it's important that it works. Incent them to have it, either by prescribing where they go or by supporting the ways that you've said.

I think that not to have some consequence for the machine not being there—however we do that, it's not going to help them for the machine being functional. I think that that is, you know—

**Mr. Greg Vezina:** There are two parts to what you're saying. There's the unintended consequence.

The fact of the matter is, a government inspector doesn't walk in and inspect my fire extinguishers every six months and then have the ability to charge me.

**Mr. John Fraser:** The fire marshal could.

**Mr. Greg Vezina:** The fire marshal could, but they generally don't show up at businesses.

**Mr. John Fraser:** Well, they do. Then all the companies who produce those, like Viking and whatever, will sell you a fire extinguisher, and they go and they say it's good.

**Mr. Greg Vezina:** But it's the employer's responsibility to maintain the fire extinguisher—whether it has to be inspected, and there has to be a log etc. Defibrillators are exactly the same. Every 90 days, you have to do an inspection. You have to keep a log. Every two years, you have to replace the batteries and pads.



The problem is not analogous to the fire extinguisher, for two reasons: First, AEDs are not mandatory in the workplace; fire extinguishers are.

**Mr. John Fraser:** Why?

**Mr. Greg Vezina:** Because it's under the fire code. Fire extinguishers are mandatory in public and in private.

**Mr. John Fraser:** No, I understand. Why?

**Mr. Greg Vezina:** Why? Yes—

**Mr. John Fraser:** What's the difference? I just see the technology doing exactly the same thing. You have an urgent situation that can threaten life, and you have an ability to prevent that from happening. So I—

**Mr. Greg Vezina:** I may be wrong, but my reading of the bill is that you're not going to make this mandatory for employers. If I've got that wrong—

**Mr. John Fraser:** There are actually three bills, so there's some prescribing you can do within regulations as to where they go, where they should be located—"designated premises." So that's one of the things—

**Mr. Greg Vezina:** Okay. Philosophically, I don't like big government, and I would love you to pass a law that says that defibrillators are mandatory in workplaces. I agree; I'd love to have that.

That said, now let's go back to the issue of access and utilization, okay? You've got the same problem. So having the hammer in the bill for inspectors I don't think is helpful. You can accomplish the same thing with the existing defibrillator legislation that says, "You have to maintain your defibrillator or it's an offence, and here are the penalties for not."

Now, the fact is, there's no difference between a defibrillator that isn't there and a defibrillator that isn't maintained and won't work. What percentage of defibrillators, when they're needed, won't work? One tenth of one hundredth of a percent? It's such a small number that the bogeyman of government inspection is not worth the consequence for the number of people that it would have changed the outcome for. The outcome won't change.

**Mr. John Fraser:** So you would agree that you could make the same application to fire extinguishers.

**Mr. Greg Vezina:** Absolutely.

**Mr. Alex Vezina:** With the exception of the fact that defibrillators are not mandatory—

**Mr. Greg Vezina:** Right. I'm saying that that's if you make it mandatory.

**Mr. Alex Vezina:** —which is a significant difference.

**Mr. John Fraser:** Yes, it is.

**Mr. Alex Vezina:** If they're mandatory, then—

**Mr. John Fraser:** How much time do I have, Chair?

**The Chair (Ms. Natalia Kusendova):** You have a minute and 15 seconds remaining.

**Mr. John Fraser:** Okay. I'll use it wisely. That's actually the kind of argument that I'm making here, which is: Look, we've got a device. It works; it saves lives. The more prevalent it is, the better it will be for us. The more accessible it is, the better it will be for us.

I understand what you're saying about it. I don't like the idea of suing. But the thing is, you've got to figure out

the carrot and the stick with it, because I think you need a bit of a stick. That's just my take on it.

**Mr. Greg Vezina:** Well, I think you need a carrot. I think if you have the carrot, you won't need the stick.

**Mr. John Fraser:** Well, we could debate that. I think you have the carrot and the stick—

**Mr. Greg Vezina:** I've been selling defibrillators for 10 years. I have had one client in 10 years that didn't replace their batteries without me telling him, "Hey, your batteries need to be replaced." We do that for every one of our clients. You don't normally. I've had one person that didn't have his batteries ready, and two weeks later, he had them up to date.

**Mr. John Fraser:** You're providing a service. My point in this is that what will happen will be a culture with companies, like there is with fire extinguishers. Viking is not going to send a fire extinguisher unless they send someone to check that out, right? They do that yearly inspection. So I would anticipate that anybody who makes a defibrillator and sells it will want to take some responsibility to support the client and to support the industry.

**Mr. Greg Vezina:** They won't—

**The Chair (Ms. Natalia Kusendova):** Thank you very much. That concludes the time we have.

I now invite the government to start their questions, and you have seven minutes. Ms. Martin?

**Mrs. Robin Martin:** Thank you very much for your presentation. It was very interesting. Certainly, I think we all want the same thing, which is to have these defibrillators available wherever possible, and functional, so that people can use them and access them. That's sort of the intention of the act.

One of the things I tried to do in this act was leave some of these more particular decisions to regulation, so that, for example, it's only for "designated premises" in the act, and the premises will be designated by regulation. So I think we can have some of these discussions more around the regulations and making sure we get them right.

But I can tell you that I was concerned, not necessarily about the inspection power, because having the power there doesn't actually mean the inspections are happening on a regular basis. Government has lots of inspection powers and not enough inspectors, probably, to get everywhere all the time.

But I was more concerned about the fines, the financial penalties that we put in here. Working with legislative counsel initially, I had asked them to reduce those fines, to make them not so hard. We don't want to be too hard on people so that they don't get the defibrillators, obviously, but we want to have some kind of stick, as MPP Fraser put it, or carrot to get them to do this.

I have in there—it's under section 7(2), if anyone wants to follow along—that an individual who is convicted for a first offence is liable to a fine of not more than \$3,000, and for a subsequent offence, liable to a fine of not more than \$10,000. The corporate penalties are \$5,000 and \$25,000, and then there are penalties for officers and directors.

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Would you have similar comments or any comments, really, with respect to those fines that you'd like to share with us?

**Mr. Greg Vezina:** If the fine is twice the price of purchasing an AED—

**Mrs. Robin Martin:** It's too high, you think?

**Mr. Greg Vezina:** Yes. If someone disobeys the legislation as it already exists for defibrillators, there's a consequence. I believe it's a summary conviction; it's up to a judge.

Businesses don't like liabilities. If you're going to have a fine, you want the fine to send a message, but you don't want the fact that there's a \$3,000 fine to tell business people—"Why should I do this?"

**Mrs. Robin Martin:** Did you want to suggest what you think is an appropriate fine?

**Mr. Greg Vezina:** Well, I don't like it when you fine individuals for trying to do the right thing. You're making a mistake anyway.

**Mrs. Robin Martin:** I knew you were going to say that.

**Mr. Greg Vezina:** I'm a little bit libertarian. On the other hand, I was a good Conservative, so I think you should leave my business alone. But then there's the prevailing public interest.

**Mrs. Robin Martin:** Yes. We're trying to strike a balance.

**Mr. Greg Vezina:** There's a public interest component.

I think a very small fine for personal violation and a larger fine for corporate—and if you're going to do that, I would also consider the fine doubling every time there's a subsequent conviction. The first time they mess up, you give them a little slap. And the owner knows, and his lawyer knows, and his accountant who's doing his contingency and emergency planning says, "Okay. Here's the liability for this friggling box over here."

**Mr. Alex Vezina:** The other thing with designated premises is, individuals have them in their homes because they have family members who are at high risk for cardiac arrest, and in many cases, these could be centres for communities, effectively, to be able to access this in a residential environment. It's an inspector coming to my home to check it—

**Mrs. Robin Martin:** Well, I don't think we would designate homes.

**Mr. Alex Vezina:** No, I agree. But the point is, "designated premises" is fairly broad, and there's that very small business that's still a business, that might want to be that community centre—but where a government inspector might be a loss to them in a day that's greater than the fine.

**Mrs. Robin Martin:** Again, that is something we can work on in the regulations, to narrow down the kinds of places that that would be appropriate for. This leaves that to people who can have more time to think about what kinds of premises should be designated.

**Mr. Greg Vezina:** We like the fuzziness in the bill. Normally, good Conservatives don't like fuzziness. But we like the fuzziness because it allows some flexibility and

it allows for the regulations to be proposed, and then input from industry and input from the hospital sector and the emergency sector to say, "That was a great idea, except," because no matter who drafts these—it's not going to be a first responder; it's not going to be an AED manufacturer; it's going to be you guys, through the bureaucracy.

**Mrs. Robin Martin:** There are a lot of things we might not know that we might need to hear about.

**Mr. Greg Vezina:** Regulations are a lot quicker to change than laws. Regulations get changed by cabinet order. Political tax credits are refundable in Ontario because I beat up on Mike Harris for 10 years, and on January 1, 2000, he said, "Okay, they're refundable." That was it. I appeared before 15 committees.

**Mrs. Robin Martin:** Wow. We have Mike Harris here.

**Mr. Greg Vezina:** Yes, I think I know him.

The point is that at the end of the day, government can do by regulation a lot quicker and a lot better than what you can do by committee in law.

**Mrs. Robin Martin:** We're not going to be insulted by that. We appreciate that.

**Mr. Greg Vezina:** Please don't be.

**Mrs. Robin Martin:** Did anyone else have a question? I don't mean to occupy all the time.

Mike Harris, are you beat up, up there?

**Mr. Mike Harris:** I'm black and blue right now.

**Mrs. Robin Martin:** All right. Is there any other thing you wanted to tell us about, where you think we might be discouraging people? Because I certainly don't want to do that.

**The Chair (Ms. Natalia Kusendova):** You have one minute.

**Mrs. Robin Martin:** Oh, sorry.

You've mentioned this inspection, but as I said, I don't know that that is something that is going to actually—

**Mr. Greg Vezina:** Get rid of the inspection. Let the existing legislation handle the inspection. Get rid of the inspection or let businesses opt out. That would be where I would go.

Go ahead, Alex.

**Mr. Alex Vezina:** Excepting if you make it mandatory. If you make it mandatory, then, yes, inspect it—the same way that you do with everything in health and safety. Frankly, this is a great place for the Ministry of Labour. Roll it into health and safety, make it mandatory for certain businesses past a certain category, and then there's no issue here, because it's labour law. But if it's not mandatory, why would I want to be regulated by it?

**Mr. Greg Vezina:** The same as you don't need a nurse or a first aid room if you have less than 200 employees or a different first aid kit when you have between 16 and 200 employees—pick a number. If you're going to make it apply to businesses, pick a number of employees and then let businesses with less than that number opt in or opt out.

**The Chair (Ms. Natalia Kusendova):** That concludes the time we have. Thank you. Just as a reminder, the deadline for written submissions is today at 6 p.m.

**Mr. Greg Vezina:** Okay. Well, we've done our—thank you very much, Madam Chairman. Thank you, committee members, for having us.

**The Chair (Ms. Natalia Kusendova):** Thank you.

MS. TIFFANY JEFKINS

**The Chair (Ms. Natalia Kusendova):** I would now like to invite Ms. Tiffany Jefkins to come forward. Good afternoon. Thank you so much for being here. You may now begin your submission. You have 10 minutes. Please begin by stating your name for the record.

**Ms. Tiffany Jefkins:** Good afternoon, MPPs and Chair. My name is Tiffany Jefkins and I'm a lifetime resident of Toronto and a PhD student in health services research at the University of Toronto.

I'm pleased to present to you today my submission on Bill 141 that you have in front of you. I've trained and taught CPR and ADUs for over 20 years in a wide range of contexts. From my experiences as a teenaged lifeguard to educating my fellow allied healthcare professionals, I've taught approximately 1,000 people how to use an AED.

This ingrained knowledge served me particularly on April 23, 2018. I was at Mel Lastman Square, picnicking with my friend and daughter, when I witnessed the Toronto van attack before my very eyes. When I instinctively responded, I ran towards four victims near the road to assist in any way I could. I began CPR and used my knowledge of first aid. Very soon afterwards, two security guards brought two AEDs to me and offered them to me, as I was clearly coordinating some type of rescue effort. It was very difficult to make the decision that day to decide who would receive the potentially life-saving device.

Weeks afterwards, I had a question of, "What if?" It plagued me, because I knew there were not enough defibrillators on that day. But what if the security guards didn't know where they were? In fact, at Mel Lastman Square, in approximately a 100-metre radius, I found six AEDs in the following weeks, all within 100 metres: one at the entrance of North York Centre subway station; one in the food court, less than 50 metres away, which was the closest one; one locked behind two gates at the library, which is inaccessible to everyone; one at the Toronto District School Board offices; and one underground in the grocery store entrance across the street. Including the two that the security guards brought, that actually brought us to a total of eight.

In my attempt to locate the AEDs that week, when I asked the staff in these locations if they knew where they were—or even where one AED was—I was often met with confused expressions. Less than half the people I knew even had any idea what the defibrillator was.

Cardiac arrest affects about 8,000 Ontarians every year, and survival rates vary between 9% and 25% across Canada. As we know, the early application of cardiopulmonary resuscitation, or CPR, when an automated external defibrillator—which I have here with me today,

an AED—is used by a lay responder, has the potential to improve survival rates up to four times for a victim of an out-of-hospital cardiac arrest. International guidelines currently recommend defibrillation for a person suffering from cardiac arrest as quickly as possible. Understand that: Time is of the essence here. In the event of a cardiac arrest, lay responders are encouraged to obtain an AED by medical dispatch but not given any indication as to where they might be precisely. No system currently exists in the Ministry of Health that has an updated and current registry of AEDs that is available by the emergency response system that may be accessed by the public.

In the event that a lay responder recalls, by chance, the exact location of an AED at the very moment and can access it, AEDs are automated and designed to be used by an untrained lay responder. These were designed for public use.

**1440**

Additional training can increase use and speed and timely application of the AED.

I'm going to show you how easy it is to apply one today. I have here with me Fred, my mannequin.

When you retrieve an AED, it's as simple as opening the device—and although all AEDs are not exactly the same, they all work on the same premise. It has only one button, an on/off button in green, that you would press to turn on. All automated external defibrillators coach you on exactly what to do. It requires you to follow the prompts. These are sample pads today. Once the defibrillator is attached, it automatically will detect whether or not there's a rhythm that's able to shock. You would just follow the prompts on whether or not to shock by pressing the red shock button. That's all there is to it.

With the passing of Bill 41 in 2010, AEDs became available to the public. However, AED installation and placement was inconsistent in public areas as there was no standardized or compulsory record of installation or inspection.

Currently, there is a vague and optional registry on the Ministry of Health website. I went online this morning to check. There are about 1,500 registered entries, and we know that there are approximately 20,000 AEDs in this province alone. The current registry also has a list of just a basic address.

Current challenges of existing AEDs in the public include time-of-day availability and an obvious lack of awareness. This means that AEDs are often inaccessible to rescuers—behind locked doors or in buildings that are closed—when they're needed the most. Having an inaccessible AED reduces its value—of obtaining and placing the AED in the first place.

By implementing a registry that may be accessed by the emergency medical dispatch, AEDs can be located and obtained where needed.

Current evidence shows that there's likely a useful range of an AED. This suggests that regulations on AED installation are actually needed to increase ease of location and timely application. Determining the location of AEDs by the public is challenging, and evidence has shown that

there's limited recognition and understanding of current existing signage. Evidence also suggests that a central decision-maker to regulate AED placement and signage is beneficial.

Mathematical models that can determine the optimal locations of AEDs have been shown to outperform existing AED placement in terms of accessibility for nearby cardiac arrest incidents.

I strongly support the passing of Bill 141, the Defibrillator Registration and Public Access Act, 2019. I'm encouraged that the bill addresses:

- mandatory maintenance and upkeep by the owner as per the manufacturer's instructions;
- timely and mandatory registration of the AED; and
- inspection of AEDs to ensure that they meet requirements of the legislation.

I have a summary of recommendations that I would like to be considered.

I would also consider mandating that AEDs are prominently displayed, with universally accepted signage. As I've mentioned prior in my story, one of the major issues, clearly, is public awareness as to what AEDs are and, more importantly, that there is no consistent signage between vendors or between organizations.

New AED installations should be placed in locations based on past cardiac arrest data and mathematical optimization strategies in public locations that are in accordance with the Heart and Stroke Foundation's Addressing Cardiac Arrest in Canada—Policy Statement, 2019. This data is available to us with colleagues of mine who do research in this field.

We would also like to ensure that the registry is available to the public. Ultimately, at the end of the day on that day, the public lay rescuers needed to be able to access these AEDs, and they were unable to do so. If the registry is not made available to the public, it's a disservice to us to have such a valuable piece of life-saving equipment in public locations. A suggestion is to perhaps update that the registry is available on a technologically accessible format, for example, such as an online application that is accessible by various cellular or web-based platforms. We know these already exist, are pre-existing. However, with different competing technologies and different applications, the registry is spotty at best.

I'd like to suggest that the ensured registration and registry information also include detailed location of the AED, which includes text-based descriptions, a photograph of the AED, potential map integration into an online map—

**The Chair (Ms. Natalia Kusendova):** You have one minute remaining.

**Ms. Tiffany Jefkins:** Thank you—and accessible hours—for example, also listing the time of day it's available, day of the week, and potential holidays that may be affected as well.

Finally, the last recommendation is to ensure the information that is recorded and stored by the AED—which the majority of AEDs do currently—may be collected and used by health information custodians or physicians for

the purpose of providing support to users of the AED and, as well, for the diagnosis and treatment of the individual.

**The Chair (Ms. Natalia Kusendova):** We now begin with Mr. Fraser. You have six minutes for your questions.

**Mr. John Fraser:** Thanks, Ms. Jefkins, for your presentation and your obvious passion for this, and for all your work. A great presentation.

**Ms. Tiffany Jefkins:** Thank you.

**Mr. John Fraser:** I want to go over a couple of things. We're trying to establish a registry here, but at the same time, we're kind of getting caught up in where they should be. Should there be fines or not? So I'll ask you a couple of questions around that, because I think we have to get our head around that.

I'm also going to ask you some questions about education, because I think that's one of the pieces that, when we're talking about regulations, there may be an ability—because I think there's a need around hesitancy for CPR and for AEDs.

Do you think that we should look at prescribing where AEDs are, as a government?

**Ms. Tiffany Jefkins:** Absolutely.

**Mr. John Fraser:** Yes? Okay.

**Ms. Tiffany Jefkins:** Absolutely. The evidence is there, particularly around geospatial locations, which basically means that in the past cardiac arrest history, and particularly, let's say, in the greater Toronto area, we know there are hot spots of where cardiac arrests are expected to happen, and it can potentially be predicted where they will happen.

**Mr. John Fraser:** One of the challenges around prescribing and using a geolocation is that you may not have other criteria—for instance, a match like a gymnasium or a hockey rink, or a place like a business with 250 people in it. That's one of the challenges when we take a look at it: How do you actually prescribe that in a way that meets other criteria as well?

One of the ways we may have to look at that is to say, "Here are the kinds of places they should be," and then you overlay your geomap to say as a municipality—I think there will be a lot of buy-in from municipalities on this. I think they want this. They just need some direction and some structure. That's kind of the sense I've had from what people have said to us in committee and outside of committee.

In terms of the "stick" part of it, do you feel that fines are an important piece? Are you concerned that it might be a disincentive?

**Ms. Tiffany Jefkins:** I'm not concerned that it will be a disincentive, actually. I think that ensuring there is a consequence to ensuring that there is mandatory upkeep and inspection of an AED will help.

In a way, it is a stick, in terms of, I can see how it can be seen as detrimental or perhaps disincentivizing to using and obtaining an AED. But if you actually look at it in the greater scheme of things, if you're approaching small businesses—unfortunately, I don't imagine these small businesses even—I don't imagine that the percentage of a cardiac arrest, or the chance that a cardiac arrest will

happen in the small business, outweighs the benefit of them actually obtaining one.

In fact, I think that if you do look at some of the data that is published, the cardiac arrests that do happen are in densely populated areas, in large communities, and these don't typically affect small businesses. And if it does, it should potentially perhaps be funded by an organization of small businesses, so they can have a collective say on this, to see where the evidence shows cardiac arrests may happen, and potentially vote within their own business organizations as to where they should be located.

1450

**Mr. John Fraser:** Obviously, I think you probably agree that first responders are the primary target for knowing where the defibrillators are—911 first responders. When you look at this bill—we have to be able to walk, right? We have to walk before we can run, so we have to establish a baseline and a structure. Making this available to everybody: That's a potential thing to do as well. But I think one of the concerns around that is—the technology is there, but how do you build that structure and base that you can build off of? What's the most critical piece to do first? How can I put it—the perfect is sometimes the enemy of the possible. So, I don't know; I just wanted to throw that out there for you, just as a consideration.

**Ms. Tiffany Jefkins:** And I understand. I think that we have lofty goals because we've seen the real impact that AEDs can make. Your statement on saying that AEDs are most valuable to, I think you said, professional responders or first responders—

**Mr. John Fraser:** Yes.

**Ms. Tiffany Jefkins:** —is probably not accurate if you just look at the lay responder models, that anybody can apply an AED and anybody can perform CPR.

**Mr. John Fraser:** Sorry, I should have been more particular about it: 911. In other words, when people call 911, they help—

**Ms. Tiffany Jefkins:** At dispatch.

**Mr. John Fraser:** —and they have access to the registry.

**The Chair (Ms. Natalia Kusendova):** One minute remaining.

**Mr. John Fraser:** The last piece I want to ask you about is—again, I think there's potential in this bill that will go beyond just a registry, that it's something that can be built upon. So in 40 seconds or less, education: Can you tell us why it's important for us to have some education with AEDs?

**Ms. Tiffany Jefkins:** We know that timeliness is the key factor, particularly for cardiac arrest survival. We know that people who have had prior training can apply and do apply an AED faster than those who have never been trained before. Having to open an AED for the very first time and listen—obviously, there are lots of different effects going on there. But the addition of training will see increased rates of survival, and increased rates of AED application as well.

**Mr. John Fraser:** Thank you.

**The Chair (Ms. Natalia Kusendova):** Now I turn it over to the government. We will start with Ms. Hogarth.

**Ms. Christine Hogarth:** Thank you very much for being here. It's great. I was going through my notes from when we were in Sudbury for our consultations as well, and one of our deputants brought forward a—what did we call this?

**Ms. Tiffany Jefkins:** A mannequin.

**Ms. Christine Hogarth:** A “mannequin” is a good word.

**Interjection:** Fred.

**Ms. Christine Hogarth:** A friend—Fred. And it was a different defibrillator. So it's interesting that the different models—I've now seen two of them just in a short period of time. It's good for people to see the different models, because you really need to know what we're looking for in a time of need. I don't even know how many—how many different models are out there? Do you know?

**Ms. Tiffany Jefkins:** I can only speculate.

*Interjection.*

**Ms. Tiffany Jefkins:** Nine different models.

**Ms. Christine Hogarth:** Nine, okay. I know the instructions seem to be fairly easy. You showed us, and another lady had shown us in the last session, and it's fascinating.

Back to MPP Fraser's comments about the education part of this: Education seems to be the most important thing of everything. Once they're registered, it's the what and how, the “What do I do? What do I do when I'm anxious, and can I calmly perform this act?”

So I'm just wondering, when it comes to education—we met with different groups that said that they also do some scenarios and they educate the public. What do you think about high schools or elementary schools? Do you think that is something that should be brought forward in those and at that age?

**Ms. Tiffany Jefkins:** Absolutely. There's good evidence to show that, actually, children of school age, so elementary school age, are able to and have enough strength and are able to understand. They're able to implement and both perform CPR and use an AED. There's lots of evidence supporting this. There is mandatory CPR and AED training in various countries around the world, done very successfully. Their rates of CPR and AED application, and therefore their rates of survival, are significantly higher than those in Canada as a result. For example, both the United Kingdom and Denmark have mandatory CPR and AED education required for their school-age children.

**Ms. Christine Hogarth:** What age or what grade would you suggest?

**Ms. Tiffany Jefkins:** I believe it starts, for the UK, in grades 5 and 6, around the age of 12—so between the ages of 10 to 12.

**Ms. Christine Hogarth:** Would you say it would just need to be a one-off learning, or should they do it every year after that?

**Ms. Tiffany Jefkins:** Any exposure is important. I think that's particularly notable, for children of that age,

that not only are you teaching and impacting those children; they are actually very good vectors of education. They go home and, on average—I believe a recent study showed that they impact around five people. They teach their parents, their grandparents, their friends and their coaches. So you're not just teaching a child but you're also normalizing that as a life skill at the end of the day.

To your question: Yes, multiple exposures are beneficial. Evidence shows that frequent exposure for a shorter time period is more effective than recertifying every three years.

**Ms. Christine Hogarth:** Okay. Great. I think my colleague here has a question.

**The Chair (Ms. Natalia Kusendova):** Ms. Martin.

**Mrs. Robin Martin:** Thank you so much for your presentation. It was very powerful, when you talked about the April 23 van attack. I hope that at least some of the people whom you were working with you managed to help. I'm sure just being there was a big help to them. It's too bad, actually, that we couldn't have had the other defibrillators that were close by available, because maybe more could have been done.

I was looking at your recommendations. I wondered if you could help me with the fifth one, because I don't really understand what you mean. Maybe it's not something I've thought of.

**Ms. Tiffany Jefkins:** Absolutely. Yes. I'm assuming you're referring to the health information custodian, specifically?

**Mrs. Robin Martin:** Yes. Thank you.

**Ms. Tiffany Jefkins:** Okay. The health and information custodian refers to certain people who work within emergency medical services. For example, they collect the use around AEDs. The AEDs are automated in terms of collecting information, which is on heart rhythm strips, the amount of shocks that were delivered and things like that. There's a current existing system in Peel that is the lay-responder support model, where they obtain this information and reach out as an initiative to help educate and help potentially alleviate any misunderstandings or anxiety or questions about their experience of having to provide CPR and AED. I'm sure one of my colleagues who will be presenting later will give you more detail as well, but that's where it's particularly valuable.

Obviously for the physicians, we know that collecting the information from an AED can be utilized very quickly, particularly in hospital as the patient is being treated, to have a better understanding as to what type of heart rhythm and what types of challenges the physicians may face in treating them as well.

**Mrs. Robin Martin:** Great. Is there anyone else who has a question? Go ahead.

**The Chair (Ms. Natalia Kusendova):** Mr. Harris.

**Mr. Mike Harris:** Is that information collected by an independent third party, or how does that system work?

**Ms. Tiffany Jefkins:** The system that I know of right now: The information custodian is an employee of the Peel regional paramedic system. They are an employee of the service. I do know that it has also been collected by most

EMS services or some fire services as well. That aggregate information has been used in research; that data has been available as well.

**The Chair (Ms. Natalia Kusendova):** Ms. Martin.

**Mrs. Robin Martin:** In recommendation number four, you also mention text-based descriptions in the registry. Maybe it's because I'm older, but I don't know what that would look like. Could you give an example?

**Ms. Tiffany Jefkins:** For example, when we say "text-based descriptions"—oftentimes, in the current state of the registry, the description is an address. If you tell someone that an AED is, for example, in the Eaton Centre, it's not very descriptive. If you tell someone that the AED is in the Eaton Centre beside Shoppers Drug Mart between GNC and across from Marché—

**Mrs. Robin Martin:** So the more detail you can offer, like "by the elevator"—

**Ms. Tiffany Jefkins:** Correct. The more detail provided by text is usually extremely valuable.

**Ms. Christine Hogarth:** That makes sense.

**Mr. Mike Harris:** Not text messaging.

**Ms. Tiffany Jefkins:** Not text messaging. But it can be conveyed by a text message as well.

**The Chair (Ms. Natalia Kusendova):** Thank you. We will now turn it over to the official opposition. Mr. Kernaghan.

**Mr. Terence Kernaghan:** Thank you very much for your presentation, Ms. Jefkins. I was just curious: Our last presenter talked about the regulatory overburden and discussed the potential of an opt-in model. What are your thoughts about this two-tier system that they suggested?

**Ms. Tiffany Jefkins:** I don't think it will be particularly effective because if you give the option to opt in for a publicly accessible defibrillator, it seems like it's a disservice to those who own and who would benefit from the AED.

**1500**

I think a two-tier system would not be effective, the main reason being that I could see that the businesses that have AEDs would not register, obviously, for various reasons, but more so that—I don't know how to say this without being rude—the two-tier system would segregate the AEDs from public to private use, and that was never what an AED was designed for. It was never created for private use. I think you can talk to any AED manufacturer and they would likely agree that if it does not serve the general public, if it doesn't serve the lay public—the chance of someone in that private institution ever suffering a cardiac arrest is very slim. I think it would be a disservice, ultimately.

**Mr. Terence Kernaghan:** Absolutely understood.

Your recommendations are very comprehensive and very thorough—talking about signage and photos and map integration for the possible location of AEDs. This is a bit of a technical question—and I just wondered if you have any familiarity with the device itself: Is it possible for them to be remotely monitored as well? We know that they need certain upgrades and certain maintenance. Is it

possible for that to be done in a remote fashion, to see whether they need new pads etc.?

**Ms. Tiffany Jefkins:** We foresee the technology moving in that direction, absolutely, particularly also with, for example, GPS, spatial locating—to have that information sent wirelessly, for example, to a base station or whatnot. As of right now, I don't believe the AEDs are equipped in that way, but I think we can all foresee that technology is probably going to be moving in that general direction.

**The Chair (Ms. Natalia Kusendova):** Madame Gélinas.

**M<sup>me</sup> France Gélinas:** For education, you would like the public school curriculum to add a section on first aid and use of an AED?

**Ms. Tiffany Jefkins:** Absolutely. In fact, I believe all current CPR education must include the use of an AED, whereas first aid education does not necessarily include CPR and AED education. So it's two separate—I guess you could call them classes of formalized education.

**M<sup>me</sup> France Gélinas:** But you would like to see CPR and AED use taught within our public school system to every student?

**Ms. Tiffany Jefkins:** Absolutely. CPR and AED education need to go hand in hand together. We know that they should not exist independent of each other. They're both beneficial in the same way. More importantly, like I mentioned earlier to MPP Martin, multiple exposures also help to normalize the idea that this is a life skill, just like learning to put on a Band-Aid, or putting pressure on a bleeding wound. If these life skills are normalized for the next generation, we'll save countless people in the future.

**M<sup>me</sup> France Gélinas:** You talk also in your recommendations about mapping. Do you feel that a strong body of evidence exists, through Heart and Stroke or others, as to what the mapping should be based on to determine where the AEDs should be located in our communities?

**Ms. Tiffany Jefkins:** Absolutely. It has already been published. This evidence is freely available. It can be found through my colleagues' work. I believe the recommendations were synthesized by Heart and Stroke through a recent policy statement. The evidence is there.

**M<sup>me</sup> France Gélinas:** Do you believe there is evidence that exists to show if a financial penalty will help or hinder the number of AEDs that become available?

**Ms. Tiffany Jefkins:** No, but I'm sure a cost-effective analysis can show you how effective it would be. I'm happy to help you move forward in that direction.

**M<sup>me</sup> France Gélinas:** How quickly can you meet our 6 o'clock deadline? That's the next question.

Have you ever seen a place where it is mandatory for, let's say, employers of more than 200 employees to have an AED? Does that exist anywhere, do you know?

**Ms. Tiffany Jefkins:** It doesn't exist anywhere to my knowledge, but I also see that as detrimental to the placement of AEDs in a way that they're not utilized in an effective fashion. To say that every building with over 200 employees requires an AED is a bit of a redundancy because, as we know, cardiac arrests—

**The Chair (Ms. Natalia Kusendova):** One minute remaining.

**Ms. Tiffany Jefkins:** —are not that common, potentially, in buildings. But perhaps if prior cardiac arrest data showed that this was a high-cardiac-arrest-potential area, then yes, I believe that building potentially should have an AED.

**M<sup>me</sup> France Gélinas:** Okay, but not based on the number of—

**Ms. Tiffany Jefkins:** Not based on a number of occupants, no.

**M<sup>me</sup> France Gélinas:** We basically look at, if it's a government building, if it's a municipal building, they have a mandatory AED. They got into the registry.

Where I'm from, we have a number of other business owners who have AEDs. You would prefer to make it mandatory for them to join the registry—if they have an AED, then they have to be on the registry, or leaving it open?

**Ms. Tiffany Jefkins:** Again, I believe that because AEDs were created to help the majority of people, mandatory registration should be the way to go for all publicly accessible defibrillators.

**The Chair (Ms. Natalia Kusendova):** Thank you very much. That concludes our time. Just as a reminder, the deadline for a written submission is today at 6 p.m.

**Ms. Tiffany Jefkins:** Thank you.

**Mrs. Robin Martin:** You forgot to thank Fred.

**Ms. Tiffany Jefkins:** Thank you, Fred.

## SAVESTATION

**The Chair (Ms. Natalia Kusendova):** Now I would like to invite representatives from SaveStation. We have Carly Jackson and Dennis Gannon. Welcome. Thank you so much for being here. You may now begin your submission; you have 10 minutes. You may begin by stating your name for the record.

**Mr. Dennis Gannon:** Thank you, Madam Chair. My name is Dennis Gannon, and with me is Carly Jackson. First of all, we would like to congratulate the government for introducing and considering such a bill. We believe that it is in the public interest for this, and we want to tell you that we're here to support registration and public access. We'll just take a few minutes and discuss several points for your bill, and for the future regulation consideration.

I live in a semi-rural community north of Barrie. Last year, I had a concern about where my public access defibrillator was located. I had seen a news item on television about an AED going outside, so I did my homework and I checked out the information. Then I went to my municipal council, the township of Springwater. In the spring of 2019, almost a year ago, I asked them to take the public access defibrillator that was housed in my community centre, which is five doors away from my home, and move it outside. To my surprise, they said no. But they said no for a good reason, because they said, "We think that this is

a great idea.” In August of 2019, the township of Springwater became the first municipality in Canada to become a SaveStation community. What they did was they moved 12 public access defibrillators from inside buildings that were closed 99% of the time, in some cases, such as my community centre, and put them into a location where the community could access them.

Springwater, as I said, is a semi-rural type of community. My little hamlet has approximately 1,000 people in it. Every one of the AEDs that have been placed are in locations where there are sports fields, public gatherings, community centres, rinks, and as well, in the downtown core. Springwater, as a municipality, has 17 public access defibrillators. Twelve of them are outdoors and five have been kept indoors, due to the proximity of other locations and due, as well, to an arena having one.

It wasn't that difficult to engage the public to do this. In fact, what we did was, once the township agreed to do it, they used funds from a golf tournament to pay for a majority of the AEDs, and we went forward. I had numerous questions about how we would do this, with the safety, the concern, temperature, monitoring, pads etc., and all that was answered.

**1510**

So we got to the next point, which was education. Carly will explain further on how we've done it, but I just wanted to say that we held public education events after the defibrillators were placed. At the very first public education event, we had approximately 25 people; the oldest was 77 and the youngest was seven. None of them had ever used an AED or even done CPR, and within 45 minutes of that education session, they were comfortable. In fact, that night when I went home—my grandchildren live with me in our multi-generational home—my granddaughters were doing CPR. It's very simple to do. It's not that difficult.

Placement of an AED in a public building, particularly a government public building, is of prime importance. There's no reason that they shouldn't be placed outside public buildings or at an entrance where the public can get them. They must be easily seen, and part of the problem is that they're not. Many are hidden behind cabinets, behind locked doors or built into a wall, and there is no reason for that.

I'm going to ask Carly to carry on and discuss how education and other requirements can be looked after.

**Ms. Carly Jackson:** Hi, everyone. Thank you for having us here today. As we said, we fully support what you are doing here.

We know that AEDs are of critical importance. Sudden cardiac arrest can happen to anyone, anywhere, at any time. It doesn't have to be at an arena. It doesn't have to be at a large public gathering. It can be in the home. Actually, 80% happen in the home, in a rural setting. So we want to make sure, no matter where it happens, that the people who are there, whether that's the mom, the dad or the local neighbour, know what to do—and that's calling 911, starting really good CPR and getting the nearest AED. To put that chain together, we obviously need to educate the public on what sudden cardiac arrest is, what

to look for and then what to do. We need to have 911, our emergency dispatchers, able to say, “Here is where your nearest AED is.” Just as important as it is to say, “You need to start CPR, and this is how to do it,” they need to know where the nearest one is, which is why a registry that they have access to is extremely important. And then we need to make sure that AEDs are everywhere.

As Dennis said, he had a few in his community, but they were all locked up. That's not going to help them. If we can, we want to make sure that they're fully accessible 24/7, year-round. That's what they did in his community.

The AEDs, actually, in that community are fully monitored, because there is technology to monitor them, to make sure they're actually working all the time, and you'll be alerted if they're not.

What they also have in his community is, when the AEDs are open, if the cabinet is open—all of the neighbours signed up to get an alert to say, “Emergency. Come help,” similar to the old Neighbourhood Watch program, so you can start to mobilize people to do that. In different communities we've worked with, we have it go to the local fire department. That's happening in Grand Valley, Ontario. It's going to the local fire department to alert them to come help. There are other departments where it's going to the police or the sheriff.

So the technology is there. But we need to make sure everyone knows about them. For the ones that are indoor, we wanted to make sure they look like the outdoor—we needed to make sure that signage was highly visible so that people know these are for them.

Overall, we have a couple of pieces. We have access: We need to make sure everyone has access to them and knows where they are. We have education: En masse, we need people to know that these are for them.

In his community, we hosted a variety of training sessions. There were also training videos set out for all the 11 major AEDs on the market to make sure that, no matter what AED was placed where, the people knew what to do.

Then we need to make sure that everyone is a part of this mission. So, yes, having them registered is a huge part of that. We shouldn't be excluding people. We should say that they all should be there.

But who is managing this registry? It's really important that we make sure this registry is managed by an independent party so that they have no gains on this, whether that's the government or whether that's someone else from an outside setting. We need to make sure that it's not the people who are selling these defibrillators who are having that information, but that it's someone else outside of that.

I think we should consider that the people who are selling these defibrillators, who have an MDALL licence, a medical device licence to sell these, need to be responsible for reporting to this registry to say, “These have been sold. Here is the contact information.” And then the register needs to be responsible for reaching back out to make sure the AED has been installed. Wherever it has been installed, maybe involve some things like a great picture, a location. I know they've done that in Springwater. They have a full page where the community can see



a map of where all of the AEDs are—the pictures of the indoor ones and the outdoor ones, the address, the location, and then the people who are signed up for that. It's a full picture that we really need to bring this in.

We're starting in the local schools there, teaching kids as young as six and seven years old how to do CPR, how to use an AED. This needs to be something that is very, very normal and that we all fully embrace.

I'll let you carry on a little bit there.

**Mr. Dennis Gannon:** Our goal is to ensure that the public has access to an AED, and that's what it is that you're asking. We believe that that access has to be, as much as possible, 24/7. If the ability is to put an AED outdoors in a park, in a community centre, in a rink—why not? It makes logical sense.

Recently, we were at ROMA. The delegates who were at ROMA who stopped by and visited us had no negative comments about doing this. There was not one municipal government leader who attended ROMA and said, "This is a bad idea."

They asked us about vandalism. I could clearly tell them that vandalism has not occurred in the pilot projects that were done, and in the one in my community. There's a whistle; there's a bell. They get scared; they close it. But if they actually needed it, people would know. So it wasn't difficult to do that.

We believe that keeping the momentum going, regulating them, having a proper registrar, is very important to do.

I've heard comments about the registration—whether it should be fined etc. We have provincial offences acts for those things, and there are graduating scales.

**The Chair (Ms. Natalia Kusendova):** There's less than one minute remaining.

**Mr. Dennis Gannon:** Thank you.

I'll just conclude by saying that we certainly appreciate the opportunity to speak to you today. We encourage you to move this forward and make certain that the regulation is one that is palatable to the public.

**The Chair (Ms. Natalia Kusendova):** We will begin with the government side, with Mr. Harris.

**Mr. Mike Harris:** Thank you both for being here today. It's great to listen to some of these presentations and gain a little more insight into what's happening across the province in regard to AEDs.

I had a couple of questions for you—or maybe a comment and then a question. We've talked a lot today about this education piece and it being very important. One of our colleagues, Nina Tangri, the MPP for Mississauga–Streetsville, I believe, introduced a motion in the Legislature last year saying that this should be a mandatory part of the curriculum for high school students, and it did pass unanimously, which was great to see. Hopefully, we'll see some good things to come with that, in short order.

I wanted to ask you a little bit—and forgive me for maybe my ignorance on this a little bit—indoor versus outdoor AEDs: Is there a different set-up for it? Are they stored differently? Can you maybe give me a little bit more insight into how that works, and maybe some of the

trepidations that municipalities might have with moving them outdoors?

**Ms. Carly Jackson:** If you already have an AED—there's a bunch of different models, as you've seen; there is one here. All of the AEDs will have a certain IP rating—how protected they are from dust and water and all of those things—as well as a temperature range that they're operating in. But generally, they operate between zero and 50 degrees Celsius, because they have a lithium battery inside.

To move them outdoors, or even indoors but beside a hockey rink, you need it in a heated cabinet. In our weather up here, we need a cabinet that has heating and ventilation to make sure that in the summer, it doesn't get too warm as well.

The big concern is that the AED has pads. As you saw her demonstrate there, those pads have a gel-based adhesive that helps them stick to the skin. You need to keep those in the operating temperature, or the gel will evaporate and they won't stick on that. So, an outdoor cabinet—and there are lots of different ones on the market—would just need to have heating and ventilation.

There are different versions, too, that also have an alarm when they open, or a visual alarm. Some of them light up at night. Some of them, similar to the ones in Springwater, have a camera, so if they're ever opened, pictures are taken. If the AED is ever removed, pictures are taken, alerts go off and that sort of thing.

But, really, keeping them within that optimal temperature zone is the main thing. Any AED that's in the wall inside can be moved outdoors in a proper cabinet.

**Mr. Mike Harris:** Do you happen to know, off the top of your head, what something like that costs, just out of curiosity?

**Ms. Carly Jackson:** There is a range, from your base end to ones with the cameras and the bells and whistles. You could be at a couple of hundred dollars.

**Mr. Mike Harris:** Just on average.

**Ms. Carly Jackson:** I would say that there's a lot around the \$300 to \$700 range, and then there are ones that are more in the thousands, just depending on the structure you want and the bells and whistles.

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**Mr. Mike Harris:** So for a full set-up, you'd be around \$3,000, with the AED plus the cabinetry, roughly?

**Ms. Carly Jackson:** You could be less or more, just depending on how technical you wanted the cabinet to be. For a basic heated cabinet—heating, ventilation—that lights up, you're at a couple of hundred bucks, and then you're around \$1,500 to \$2,000, depending on your brand of AED. So you would be about correct there.

**Mr. Mike Harris:** Okay. Thank you.

**The Chair (Ms. Natalia Kusendova):** Mr. Babikian.

**Mr. Aris Babikian:** What's the advantage or disadvantage of indoor versus outdoor?

**Ms. Carly Jackson:** Really, just public access. If a school is closed at 3 p.m.—most of our schools now are locked all the time—and someone goes down in the

parking lot, how are you supposed to get that AED? If it's outdoors, you want it to be fully accessible to the public.

They've actually said they don't recommend for North America to have any locked outdoor cabinets, because you want to make sure that people can get to them quickly and get this on the person. Every minute that goes by that you need an AED and you don't have one, you lose 10% of chance of survival. It usually takes about a minute and a half to recognize that someone went down, then call 911. We're already losing all this precious time. We need that AED there as soon as possible. All the ones approved by Health Canada are all going to be great, but you need it there as quickly as possible.

**Mr. Aris Babikian:** So is it safe to say that this decision—indoor versus outdoor—is just a local decision—the location, the city or the region where it is being placed? I mean, we cannot mandate it province-wide.

**Ms. Carly Jackson:** Correct. It really depends. We've seen lots of people in neighbourhoods, like private individuals, put it on the side of their homes to have them accessible 24/7. We've seen private businesses; we've seen municipalities. It really depends.

We would always say that wherever you can get the AED the fastest is the best. So if you can move it to somewhere where it's always accessible, that would obviously be the recommendation.

We've even seen utility companies, construction companies, have them in all of their mobile vehicles, to have them there quicker.

It could definitely be a recommendation to have AEDs as accessible as possible. If you can move them outdoors, we would recommend that. If they're going to be indoors, we need to make sure the signage is highly visible, so you know where it is, right where you walk in the building. It's not locked up. Everyone in the building knows exactly where it is.

But, really, the difference of indoors and outdoors is just the time to get it.

**The Chair (Ms. Natalia Kusendova):** Mrs. Martin.

**Mrs. Robin Martin:** Thank you for coming, and for your presentation. You had mentioned that it's really important that the registry operator be an independent and, I think you said, not a person selling the medical device. Can you just elaborate a bit on why that's important, for the committee?

**Ms. Carly Jackson:** Yes. We want to make sure that the people who are getting this information—they're going to get information on what the AED is, and AEDs require pads and batteries that get replaced. That's a consumable that someone could then make a profit off of. Eventually, people usually get a new AED after a certain lifespan, so that's something someone would make a profit off of.

So you would want to make sure that no one who is managing this registry, who has this important information, could possibly use it for harm. There are private companies—

**The Chair (Ms. Natalia Kusendova):** You have one minute remaining.

**Ms. Carly Jackson:** Thank you. You have private companies that sell AEDs. There are paramedic services that sell AEDs. There are online websites that sell AEDs. We would want to make sure that no matter who it was managing this critical information, they couldn't possibly use it for their own benefit—but also set it so that there would be really no reason that anyone wouldn't give that information, because if someone was thinking someone else could benefit from it, they might be really hesitant to give over that important information for the public.

**Mrs. Robin Martin:** Okay. Thank you.

**The Chair (Ms. Natalia Kusendova):** We will now turn it over to the official opposition, with Mr. Kernaghan.

**Mr. Terence Kernaghan:** I'd like to thank you very much for your presentation—it was very clear—and the sort of counterpoint between no signage and with signage, and also speaking to the potential for vandalism, as well as the remote monitoring.

I was going to ask whether there was video capability with these, but you've already answered that question.

Where do you see the ideal locations for these? Would you see them in spaces such as public parks, without any external access, or something along those lines?

**Mr. Dennis Gannon:** I think it's very important that they're in public locations. Municipalities and governments own lots of buildings, lots of parks—all those places where people gather. It's a gathering point; it's just one. In my particular case, they're in rural locations. In one location, there is no home for at least half a kilometre, but at the same time, those neighbours know that there's an AED there, and there's also a ball diamond there, and there's also a pavilion there, and there's also a rink there. Those are the types of sports that have those sudden impacts, particularly hockey and baseball—sudden exertion for males who are over 40 who haven't done things in a long time. It sometimes hurts them.

So, certainly, in public locations.

I've travelled the province quite extensively and was in a number of provincial parks this past summer. I looked for them, and I couldn't find them. Hopefully, the park wardens were carrying them in their vehicles at nighttime. But they weren't there. So a public location is primary, and particularly a government location.

I think the government has to take the lead on this if they want the public to buy in.

I worked in a government building for a number of years. My side of the building had an AED; the other side didn't, and they had no idea. If it wasn't for the fact that I told them that I had it there, they would have never known. That's an example of how it needs to be done.

**The Vice-Chair (Mr. Aris Babikian):** Madame Gélinas.

**M<sup>me</sup> France Gélinas:** It's nice to see you, and thank you for coming. I want to come back to education. I know that you guys are champions and have trained a lot of people. But do you see a need to add the knowledge of CPR and AEDs to the public education system's curriculum?

**Mr. Dennis Gannon:** If I can make mention—I came from the fire service. One of the things that is done every

year is that school-aged children learn how to do their fire escape program—their fire escape plans at home. It's not much different—it really isn't—to take a school-aged child and demonstrate how it works, how they can do it and how they can follow questions. We know that small children have dialled 911 and gotten assistance. As I said, my seven-year-old granddaughter was doing CPR that night. She was using the mannequins that you saw, hooked up to an AED. She was doing compressions sufficient to keep a heart going.

Education is definitely important. There are other ways of doing education too. What happens when a driver changes his classification? Maybe that's the opportunity to have them do some online AED and CPR courses. What about Smart Serve? What about our security guards? There are other ways of introducing education. It doesn't necessarily just have to be at the school age.

I was doing some research, and I found that Washington state apparently requires that you have a CPR and AED course before you can get your driver's licence. We've heard of some locations in Europe that are doing exactly the same thing now—that in order to get your driver's licence, you have to have this.

Forty-five minutes is basically all it is. We do WHMIS online; we can do CPR and AED online.

**M<sup>me</sup> France Gélinas:** Very good. You saw that in the bill, there are penalties. If you don't maintain, there are a number of penalties. Your community went at it without any stick, and just, “Do the right thing because it's the right thing to do.”

Do you see the penalties in the bill as something that will keep us from reaching a lot of AEDs becoming publicly available, or as something needed?

**Mr. Dennis Gannon:** Again, I'm going to rely on what the fire service has done. In the fire service, it used to be, “Put out the fires, lay the charges, and then educate.” We've now gone to, “Education, enforcement, and then put out the fires.” Education is primary.

A smoke alarm is an example. In a nursing home, there are a range of fines that can occur.

As an enforcement person, my first opportunity is going to be to educate. I believe that in most cases, a police officer will do the same thing: He'll attempt to educate first.

I don't see that there is a huge detriment in having fines. I looked at the bill. The range of fines, I think, is in accordance with most legislation, so I don't see it as a huge detriment.

**M<sup>me</sup> France Gélinas:** The example that you're using is things that are mandatory versus that a business would do this out of the goodness of their heart, not because it is mandated. They bought an AED out of the goodness of their heart. They make it available to the public out of the goodness of their heart. But yet, we will fine you if you make a mistake.

1530

**Mr. Dennis Gannon:** Again, if I may, it's education first. There's always a grace period. There's always a learning period—

**The Vice-Chair (Mr. Aris Babikian):** One minute.

**Mr. Dennis Gannon:** Thank you. There's always a learning period for everything. So it's going to be a case of mass education first. Then, set two years down the road, this is when the fines are going to occur (a) if it isn't registered and (b) if you're not maintaining it.

**M<sup>me</sup> France Gélinas:** And if—

**Ms. Carly Jackson:** Sorry, just a comment on that: One thing, too, is that if we provide, through the registrar, all the tools to help people do this, it might not become such an issue. If the registrar went out and said, “Hey, it's now registered. We're now actually going to remind you when your pads and batteries are due,” and it says, “Hey, reminder: Pads and batteries are due; go back to your local provider,” and if they don't know who that is, it gives you a list of all the ones that have a licence to sell these from Health Canada—if you can provide all those tools and make it really, really simple, it shouldn't be an issue.

If you can present it the right way to people—that we're doing this to help—and it's written that way, and you've given them that full, complete package, I don't feel it will be a deterrent. But if we leave this up to people to do it themselves, then that's the issue.

**The Vice-Chair (Mr. Aris Babikian):** Thank you. MPP Fraser, six minutes.

**Mr. John Fraser:** Thanks very much for your presentation. It was great to see you at ROMA as well. Thanks for all your work. It's actually pretty incredible, what you've done. Sometimes small communities can really react in a way that's quick, and things—pardon me—can catch fire quickly.

But I want to ask you a question about the education piece. The education you had in your community was active, right? It was active; it was person-to-person, people—

**Mr. Dennis Gannon:** That's correct.

**Mr. John Fraser:** —the most effective way of doing that. Online will get you volume, but not necessarily quality.

One of the things, when we're talking about education—there's an important part of educating all the public, so you don't get hesitancy and discomfort—and with CPR as well. We know, for instance, that women who are suffering a cardiac arrest have a lower chance of having somebody perform CPR or use an AED. That's kind of concerning. We can understand the reason, but it's not a good reason. So we have to do that piece that you're doing in the community.

One of the things that we don't also—in schools right now, it is part of the curriculum. It is mandatory, but it's not active learning, necessarily. As long as they get a piece of paper that tells them what to do, or they watch a video—any comments on that activation, on active learning in terms of education?

**Ms. Carly Jackson:** For two things, I'd comment. I'd comment firstly on how we can, en masse, educate people. We probably have all seen the commercials in terms of the opioid epidemic and what to do. Why is the government not putting out their mass education: “This is what sudden

cardiac arrest is. This is what has happened. This is what you need to do to respond”? If we created this mass education, that would be a way to target that, similar to what they just did with all the opioid commercials.

Second, hands-on training is always going to be the best. So if we can provide more ways to do that, I think that’s excellent—if we can start in maybe grade 3 and go up. There’s no reason why we couldn’t do that. The ACT Foundation has provided most of the schools here in Canada with the training to do that. Unfortunately, it is left up to the teachers to do that, and they’re supposed to train in the grade 9 class. But if we can provide them more resources to do that in every year, you could actually imagine this community of people that would grow up, always knowing what to do—and then sharing all the educational online components as well.

**Mr. John Fraser:** That’s great. Just from your comments—this will be my last question, except for maybe a comment—you’re in favour of prescribing where these should be, in some general sense?

**Mr. Dennis Gannon:** I certainly am. I believe that there has to be a direction of some form as to where they are. Public buildings—that’s the simplest place—public gathering places. Private property: That’s always something different. A workplace—depending on the workplace regulations. But definitely in public buildings, where the public is gathering.

**Mr. John Fraser:** Okay. I think one of the things, in terms of establishing a registry, is to have the structure that says, “They need to be here,” and, “You need to register these.” We’re talking about one that’s in the back seat of somebody’s car, or in their house. Are we going to give them the same degree of rigour? Those are some questions around when we look at incentivizing people.

I just want to thank you very much for your presentation, and for your commitment to doing this, and the great idea that you guys have that’s making a big difference in a lot of places.

**Mr. Dennis Gannon:** Thank you. We appreciate the opportunity, and we hope that you move forward with this.

**The Vice-Chair (Mr. Aris Babikian):** Thank you for your presentation. Just a reminder that the deadline for written submissions is tonight at 6 o’clock.

**Mr. Dennis Gannon:** Thank you.

**Ms. Carly Jackson:** Thank you.

#### PEEL REGIONAL PARAMEDIC SERVICES

**The Vice-Chair (Mr. Aris Babikian):** Our next presenter will be Peel Regional Paramedic Services.

**Mr. Paul Snobelen:** Hello.

**The Vice-Chair (Mr. Aris Babikian):** Hi. You have 10 minutes. Please state your name for the record.

**Mr. Paul Snobelen:** My name is Paul Snobelen. I’m with Peel Regional Paramedic Services. I’m the community safety program specialist, so the role there with Peel is twofold: How do we increase the propensity of action? How do we get more people doing more things before paramedics arrive, such as CPR, AED and first aid? And

then, after the paramedics leave, how do we support them after they acted to save someone’s life? That’s what my role is. It’s twofold: How do we increase action, and how do we support people after doing these things?

Some of the other things that I’m involved with in Peel is I look after the PAD program, which is the public access to defibrillation program, where we currently have 1,587 AEDs registered in our database that we maintain. Out of that 1,587, 1,033 are publicly accessible.

How we’ve managed to mitigate some of the objections that we hear is that when a person opts to register their AED with Peel Regional Paramedic Services, we give them the option of whether they want to list it as private or public.

We have the Chrysler plant in our region, which has about eight AEDs. Not all of those AEDs are accessible, because you need security passes and badges and clearance to get into sections. However, an AED that might be in the front lobby of that building would be publicly accessible. So they may say that the first AED is publicly accessible, and the other seven are not publicly accessible but registered.

We encourage the registration, through the members or the public, industry and businesses, by letting them know that when you tell us where it is, we can tell someone who calls 911 where to find it. Currently, the Ministry of Health’s dispatch system does have a prompt, after they identify “not breathing”, of, “Is there an AED available?” If they say, “No, I don’t know,” they move on.

Where we have established it with our local dispatch centre, we provide them with a list of those AEDs that are publicly accessible. They now have the ability to say, “There is an AED in the front lobby of that school. Please retrieve it or get someone to retrieve it.” Then, when they come back, they’ll tell them to push the power button and follow the instructions on the AED.

This is the service that we need to have happen in Ontario, and this bill supports building that registry to get there.

The sadder side of this is, by making this bill become law and actually having it implemented, it will directly impact and save lives, period. Just in the last three years in Peel alone, 597 cardiac arrests happened within 250 metres of an AED. At that time, we did not know it existed or where it was located, so we could not direct someone to get it.

We know that the survival rate with an AED, when used within the first four minutes, is about 75%. Does that mean that we could potentially have a few hundred extra people alive today? Yes, and it’s bills like this that are going to help support that.

One of the things right now that is a challenge for us as paramedic services is that we don’t have the authority to collect this information. We don’t have the authority to go in and ask someone to register their AED. We’re doing it out of the goodness of our hearts.

The other aspect to that, too, is that we will go to a business who will say, “Yes, we will register our AED. We want our employees to retrieve an AED if they call

911.” That’s why they got it. When you’re in a state of crisis, you’re not thinking, “Let me go get the AED.” That’s not on your mind. But when that call-taker says, “There’s an AED, and I need you to send someone,” they’ll do it. They’ll retrieve it. Our businesses, independent businesses, that we go to and ask people to do this willingly, say yes.

We have had situations where vendors have come back and told us to unregister an AED. We do have one example, where a vendor did ask us to unregister an AED. A cardiac arrest occurred in this facility, and we didn’t tell them to get an AED and it was not used.

1540

There is another side to this story that we really have to look at, and it’s the darker side. By not doing this, lives are not going to be saved. By doing this, lives will be saved.

When we talk about the first aid kits and the registration, like regulation 1101, which covers the first aid kits, mandating how many kits go with each number of individuals per workplace, this is enforced with fines. But any industry I’ve talked to, anyone I’ve been in consultation with, says the Ministry of Labour has never come in and instantly fined anyone. The Ministry of Labour has come in and said, “Here is an order. You need 15 days? Fix this problem.”

I have not found the provincial government to come out and be after someone. The provincial government, in all my experience, has been there to do the right thing to support them. If that means issuing an order to update your AED, then that’s usually what I see done. I have not seen anything in the first aid kit side, where this, I feel, kind of falls. When we look at AEDs as part of that first aid kit—I know the Ministry of Labour has looked at it as such, when I’ve talked to inspectors. They’ll ask the business or industry, “Do you inspect it? Do you check it?”

There are several other aspects. When we register these AEDs, as a paramedic service, the impact that it has after it has been used is significant. It improves survival up to 75%. But one of the biggest challenges that we have, as a paramedic service—and that I know some of the cardiologists also are challenged with—is getting the information off of that AED, to provide it and attach it as part of the patient care record.

We’ve had situations—four times that I can recall, where I’ve been directly involved—where a patient was about to be discharged because the hospital did not believe that they had received a shock. When the AED delivers a shock within that first minute and a half, your bloodwork is going to come back negative. It did its job; it corrected that rhythm from sudden cardiac arrest. It wasn’t a heart blockage, so there was no heart problem. It was an electrical dysrhythmia. So four patients in our region could have been discharged without receiving definitive care, because that information was not obtained.

We’re the only service in Peel that does this actively after an AED use, so there could be numerous cases where someone has been discharged and, not knowingly, needed that data from that device.

If you’re not aware, what happens is that when an AED is used, it actually records the ECG or what rhythm the

heart is in. It stores that information. It tells us how much energy was used to shock the person. It lets us actually see the original presenting rhythm. A lot of times, if paramedics show up and an AED did its job, you wouldn’t know that they had a cardiac arrest. So that’s the only piece of information that could indicate that someone needs to get an implanted defibrillator or possibly a pacemaker.

So as we look forward into this, and as we take this bill forward, these are the considerations from our side that we’d like to see, from a paramedic service.

I’m good for questions at this point.

**The Chair (Ms. Natalia Kusendova):** Thank you very much. We will now begin questioning with the official opposition.

**Mr. Terence Kernaghan:** Thank you very much for your presentation, Mr. Snobelen. Also, thank you for the work that you do as a paramedic. It comes back to the words that you said: Lives will be saved.

I think it’s also really important that this registry is available to the public. What do you think, from the presentation a few presentations ago, about businesses possibly opting in or opting out of this registry?

**Mr. Paul Snobelen:** I’m not a fan of this opt-in/opt-out, because if I’m going to opt out, that means it won’t work. That’s really what it means.

I do agree, when they say there’s a penalty attached, that is a deterrent. With the dollar value that is currently presented, that is kind of scary, because we also own almost 500 AEDs as a service. We don’t sell them, but we place them in public places. So there is a fear there. But we also do our due diligence in maintaining them.

I think, for a lot of these independent business owners, you’re going to have individuals who have the best of intentions who are worried: “It’s one day past my expiry date on that pad, and I’m going to be penalized.” I think that’s where the mindset goes. So naturally, in an opt-in/opt-out, I would opt out, because then I’m not worried about it.

I think the opt-in/opt-out is whether you list it as public or private. In Peel, when we ask you to register your AED, you list it as a publicly accessible one, which the broader public can have access to, or a private one, which is for my employees, my home, my industry, my business. I’d like to see that as an option versus a voluntary opt-in/opt-out, because then you could register and say, “If someone is in my facility and calls 911, I can direct them to the one that’s provided for my facility.”

**The Chair (Ms. Natalia Kusendova):** Madame Gélinas.

**M<sup>me</sup> France Gélinas:** If we talk about education—you started by saying you’re there to make sure that as many people as possible can help until you guys get there. Do you see a role for the public school system in that education?

**Mr. Paul Snobelen:** One hundred per cent. It starts there. Like my colleagues, I would like to see it made mandatory in the public education system.

I also think that when we demand for students—one of the suggestions I have in my head is, we require them to

do volunteer hours. We know that a standard first aid course is 20 hours. What if we said, “If you obtain a first aid certificate, that counts towards a reduction of your volunteer hours”? So you would only have to do 20. I think there are so many different ways we can go at it, but I do believe in the education system as a good point to start.

It’s not as scary as people think, and it’s not as in-depth. All we need to do is provide familiarity, because when you call 911, we’re going to walk you through what you need to do. But if you’ve already had the ability to try compressions, or at least learned what that is like, or have been familiar with an AED, when we’re talking you through this on the phone, we’re going to remind you of what you’ve done versus introducing something new to you. So we don’t have to go into a full-fledged course where we’re breaking down the curriculum and assessing hazards and scene checks. Let’s talk about those pieces that are needed to save a life, because that call-taker is also going to help you as well.

**M<sup>me</sup> France Gélinas:** Very good. Are there some bodies of evidence that show you how you do mapping—here is how you decide that this area of town needs one, and we would need another one there? Does that exist?

**Mr. Paul Snobelen:** It does, but it evolves as fast as we make them, especially in the region of Peel. Right now, we could say that around Square One mall, we only need 46. But in two years, when they add all those M City towers, that number could double.

It’s a constantly moving target as to how we’re building and where we’re growing. We have ideas to say, ideally, these are the spots, whether they be bank machines, Tim Hortons, to make them available. It’s that brand familiarity. I know that at Tim Hortons, they have them, so where is the nearest Tim Hortons? I know what a bank machine is, so there’s that familiarity piece.

Is there evidence? Yes. The University of Toronto has done some geospatial work and has actually produced some documentation to show positioning of AEDs across the province, I believe. They didn’t just stick to the GTA.

**M<sup>me</sup> France Gélinas:** So this information is available?

**Mr. Paul Snobelen:** Yes. Timothy Chan is the author, from the University of Toronto.

**M<sup>me</sup> France Gélinas:** Okay. We often hear that people are reluctant to use an AED on women, basically because the first order you get is to strip them naked, which means exposing their breasts, which means a lot of people don’t want to go there. Do you guys have tricks of the trade to how you deal with this? Are there AEDs that cover the breasts? I don’t know.

**Mr. Paul Snobelen:** We actually started a community responder program in Peel where we actually equip people with an AED and a mobile app. If they’re ever within the vicinity of someone having a cardiac arrest, we send a notification to their phone, saying, “Please go start CPR and AED.”

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With that same group that we’re doing it, we’re actually going to build an educational component on how you do CPR while respecting modesty. It’s something that we’re

actively working on as a public campaign to move forward, because you don’t need to remove the bra. You can cut the strap and place the pad. You can also, then, underneath the bra on the other side, place the pad underneath the wire or the fabric.

One of the things we have to consider in Peel is also ethnicities and demographics, and those factors that are at play. It’s not just about male-female; it’s also about respecting religion, cultures etc. We’re working on that in our region specifically, which definitely could be rolled out, but the hesitation is more the education.

**M<sup>me</sup> France Gélinas:** You mentioned that you had a large employer that had AEDs. I’m from northeastern Ontario. All of the big mining giants have them on all of their sites. The same with the mining suppliers etc.

I’m really reluctant to have those penalties because I’m afraid that they’re going to say no to putting it on the registry, but what you’re saying is that we could offer them to have some of those AEDs still on the registry but only for their employees, only for the group that they purchased them from. Is this how you guys work?

**The Chair (Ms. Natalia Kusendova):** I’m sorry, but your time is up. We will now turn it over to Mr. Fraser for questions.

**Mr. John Fraser:** You can answer the question.

**Mr. Paul Snobelen:** Thank you. With the registry being on there, the public-private, there are still penalties associated with all of them, and I think that part there would still apply, whether it’s public or private. The idea is, for the mine having that distinction in our 911 CAD system, they’re not going to tell someone to enter a mine-shaft to retrieve an AED if they’re in the parking lot.

Does there need to be a penalty for someone who doesn’t maintain or neglects to maintain that AED? I think so. I don’t think the legislation goes far enough. I think it should be mandatory to actually say that these specific sites, these locations, should—much like Manitoba has done in saying if you’re in an airport, if you’re in an arena, if you’re in a rec centre, if you’re in a public place, you should have an AED. I would like to see that one day. I think that would strengthen it.

The penalties—if we make it to the value of either buying a new AED or we make the penalty to the value of replacing those pads, so it comes into the punishment to actually get it up to date and make it work. That’s our punishment.

**M<sup>me</sup> France Gélinas:** Okay. Thank you. Sorry.

**Mr. John Fraser:** No, no. Thank you for answering the question.

I’m glad that you mentioned that. There was an earlier concern that we were going to send inspectors in with tickets to fine people. I spent 22 years in the grocery business, so I went through health inspections and fire inspections. When you get an order, which is like, “You’ve got a problem here, fix it”—you’ve got a week or 15 days. That’s generally how we do business in government. It’s not to overly penalize. What you want to do is make sure it’s working.

I’m glad that you brought that up and that you’ve talked about prescribing locations, which I think we can do in

some way inside this bill to say that they should be in these places, because I think if we don't do that, then we're going to have a challenge actually building a registry up. I don't know if you want to comment on that.

**Mr. Paul Snobelen:** Yes. The comment towards that is, most of these places that we would prescribe these AEDs to exist are already in existence. In Peel, every single school has at least one AED. Every public facility—municipal, regional, all of them—has at least one AED. I know Ottawa has them in all their public places. I know other municipalities are also getting to that point.

**Mr. John Fraser:** The interesting thing is, they do in Peel, but in Ottawa—I can't remember which school board it was—

**Mr. Paul Snobelen:** The public school board.

**Mr. John Fraser:** The public school board—but they had a young man who was in elementary school die.

**Mr. Paul Snobelen:** Yes.

**Mr. John Fraser:** Even though there was not one there, but there was one that was successful—the street is a bit of a double whammy.

I think in schools, places where there are activities, for large employers, we have to do that. It's just the only way to make the registry more robust and work, and give it a bit of meat. We don't have to overprescribe, but I think when you get to the point where you can build a structure or a network—and you can comment on this; I know I'm yammering on here—then if you want to overlay the geomatics of where you've got something missing and where something should go, and then you can realize—as a paramedic service, you've got 500 defibs?

**Mr. Paul Snobelen:** Yes, about that, if not more.

**Mr. John Fraser:** So the regional municipality or the municipality is going to go, “Okay, we're going to embark on this so we're going to install another 300, and we'll manage those because we need them there.” But they'll complement the ones that are privately owned or owned by MUSH sector organizations and stuff like that.

**Mr. Paul Snobelen:** Yes, and I find that a lot of businesses, when I go in there and ask them to register their AED, are willing to, hands down. I usually have no resistance. It's the vendors that give me the resistance, and that was talked about for the same reason of why you don't want to have the registry in the hands of a vendor versus a separate entity altogether.

**Mr. John Fraser:** Thank you very much.

**The Chair (Ms. Natalia Kusendova):** Ms. Hogarth.

**Ms. Christine Hogarth:** Thank you very much, Mr. Snobelen, for being here today. Thank you for your comments and thank you for your service.

**Mr. Paul Snobelen:** Thank you. I'm happy to be here.

**Ms. Christine Hogarth:** Our paramedics do a lot of great work in our communities and you should be commended for all the hard work you do, so I thank you for that.

You talked about the registry in Peel. My question is: What questions do you ask people to fill in the blanks for that registry? You mentioned public or private. Do you ask the age of the machine, or if it's outside or if it's inside, or perhaps the hours of operation?

The second part of the question is: Do you have any advice of what questions the government, if this legislation passed, should be asking as part of the registry?

**Mr. Paul Snobelen:** How long do I have to respond?

**Ms. Christine Hogarth:** I think it's six minutes.

**Mr. Paul Snobelen:** In all fairness, what we're asking for is the essentials. I want to know who's in charge, so if there's an issue identified—if a member of the public comes by and says, “Oh, there's something wrong”—who would I contact. I usually ask for a generic, so if it's a business or an organization, their info@ set place, versus an individual. If there's a turn of tenure, I'm not affected by that, so usually the info@ and then a name to go with it. I ask them for the serial number of the device, because if there was ever a major recall, we would have that information to know which ones to flag immediately, especially if there was a critical recall.

The age of the device is actually in most of the serial numbers—like, it will be A16, so 2016—so we understand how the serial number is written. But then we ask for—in our case, we'll do pads and expiry, for the battery and the pads that are the electrodes. We'll ask for the expiry, but it's not mandatory. We'll also ask, “Who's your vendor?” because if that AED is used or if we notice something is wrong, we'll contact the vendor to service it. As a paramedic service in Peel, we don't sell AEDs; we connect people to those who do. We're not in the business to compete with them. We're here to support them. So for us, it's: How do we make those connections?

After we ask the pads' expiry or who the vendor is—a one-liner of how to get to that AED. I usually say that if you were to tweet out where your AED is, in 140 characters or whatever the new limit is, what would that look—

**Mrs. Robin Martin:** Text description.

**Mr. Paul Snobelen:** Yes, the text description—what would that look like, if I was to tweet out where to find it? We need that in our registry, because that is what the call taker is going to read to the person. Use landmarks, like “the main office” or “the front lobby”; stay away from words like “vestibule,” because they might get lost in translation. How do we simplify in one line? That's the heart of what we're asking in the registry, and we ask additional questions for our own knowledge, to build it.

Availability is a big one, so we also look at seasonal. We have Credit Valley Conservation authority, so Albion Hills is in our area. We have provincial parks in our area as well. We look at seasonality: “Is this available October 1,” or, “from this time to this time,” to April 1, and then April 30 to October 30? So we look at when it is available, as well as time of day, and then we mark that as well.

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**The Chair (Ms. Natalia Kusendova):** I think Mr. Babikian had a question.

**Ms. Christine Hogarth:** I just had one follow-up. Is there anything that—as we all learn as things go on—you found missing or should be added to your requests?

**Mr. Paul Snobelen:** I would like to answer that question when I give it more thought. The quick answer is yes, we've learned lots in this process, but I also get presentation anxiety, so it's kind of—

**Ms. Christine Hogarth:** That's okay. You can always let us know. Thank you very much.

**Mr. Paul Snobelen:** You're welcome.

**The Chair (Ms. Natalia Kusendova):** Mr. Babikian.

**Mr. Aris Babikian:** Earlier presenters raised the issue of the safety and the security of the registry, and some of them mentioned the Heart and Stroke Foundation as one suggestion. Do you have any other suggestions as a third party to safe-keep the registry?

**Mr. Paul Snobelen:** I do and I don't. I know that there are other organizations and industries that would probably be willing to help that are separate or on the research side that would be willing to help fund, house and manage. I think if it went to a competitive tender and it explicitly said, "This is what we're looking for in a private entity," you would find someone willing to do this, whether it be a research agency—C-SCAN, CANet. There are a lot of cardiac-arrest research groups that would help support and maintain this—or even facilities like CanROC might be able to facilitate—that are all about advancing cardiac arrest without direct front-line sales or initiative. I believe they exist; I think we just need to put the question out there and you'll find your answer.

**The Chair (Ms. Natalia Kusendova):** Ms. Martin, with a minute and a half left.

**Mrs. Robin Martin:** Very quick question: You said the fine should be the value of the pads or the AED. I don't know how much the pads cost. Can you—

**Mr. Paul Snobelen:** To change the pads and the battery—I'll use the most expensive version—it's going to be about \$800 to do both in one shot. That's the most expensive version. To replace an AED, the most expensive one is \$2,500 for the commercial, public ones. They range—there are some that fire services use.

**Mrs. Robin Martin:** Okay. Thank you.

**The Chair (Ms. Natalia Kusendova):** Any more questions from the government?

With that, I'd like to thank you for your presentation today. As an MPP from Peel, I would also like to thank you and your colleagues for your service. I see you once in a while; I work in the hospital sometimes. Thank you so much for everything that you do for our residents in the Peel region.

Just as a reminder: If you'd like to add to your written submissions, the deadline is today at 6 p.m. Thank you very much.

**Mr. Paul Snobelen:** Thank you.

ST. MICHAEL'S HOSPITAL  
CARDIAC ARREST RESPONSE  
AND EDUCATION

**The Chair (Ms. Natalia Kusendova):** At this time, I'd like to call forward representatives from St. Michael's Hospital and Cardiac Arrest Response and Education: Katherine Allan and Gregg Lowe. Welcome. Thank you so much for being here. You may begin your presentation. You have 10 minutes. Please begin by stating your names on the record.

**Mr. Gregg Lowe:** Hi. I'm Gregg Lowe. I am a survivor of cardiac arrest. I'm originally from England—that's why my dodgy accent—but my father is from Oakville.

I'm a pretty fit guy; I've been exercising and training my whole life—running, and I've trained as a dancer and things like that. I moved over to Canada about five years ago. About four years ago, in 2016, I was running in the Scotiabank marathon. I finished the marathon and I had sudden cardiac arrest. Unfortunately, I don't remember finishing it. The last thing I remembered was thinking that I could have actually done it much faster.

The next day, I woke up in St. Mike's Hospital. Luckily for me, there were paramedics on the scene. In fact, a trainee paramedic saw me go down and she came over and started administering CPR. I had no pulse, no heart rate, I wasn't breathing, and she couldn't get my heart to restart. But then an ambulance arrived, and they had an AED with them, obviously, and I had two shocks and my heart restarted and they brought me back to life. I was out for a few minutes and then they took me to St. Mike's. I was in a coma for awhile, and eventually made a full recovery and I now have an implanted defibrillator inside me.

I have no history of heart disease. I've been tested for every known condition and they can't find anything wrong with me. It was just something that happened.

I am extremely grateful to the paramedics and to AEDs. Without them, I wouldn't be here today. In fact, in the same race, it happened to another guy. He was running the half-marathon. Unfortunately, he didn't survive. I don't know if an AED was used in his case, but he wasn't as lucky as me. I was incredibly lucky. I know that all the stars have to be aligned, and one of those stars is having a defibrillator close by and people knowing how to use them.

So I think that this bill is so important, and I'm really thankful to everyone involved because, as I said, I wouldn't be here to tell the tale. It's important to me to have a part in moving this forward and to try to help save other lives.

**Dr. Katherine Allan:** Hello. Thank you for allowing me to speak today. I am Dr. Katherine Allan, or Katie Allan. I work at St. Michael's Hospital. I'm a PhD researcher. My focus is sudden cardiac arrest, particularly in the young. I'm also chair of CARE, Cardiac Arrest Response and Education, which is a grassroots organization based here in Ontario. The only disclosures I have is that I receive salary support from an NCE-funded network called CANet to run a national sudden cardiac arrest registry.

CARE, as I mentioned, is a grassroots organization. Its members are made up of individuals like Gregg who have survived a cardiac arrest. We have many parents who have lost children to sudden cardiac arrest. We have scientists, like myself, and cardiologists who are experts in this field. We're also supported by five paramedic organizations, including Peel region. Together with Heart and Stroke, our mission is to save lives, primarily through raising awareness about sudden cardiac arrest, by teaching all of our children how to save a life and also by increasing accessibility to AEDs through initiatives like this.



Sudden cardiac arrest, as we all know and as Gregg mentioned, is when your heart stops suddenly. It goes into a dangerous heart rhythm. Unfortunately, right now, survival from cardiac arrest: 10% of people survive. In Ontario, we estimate that there are 7,000 to 8,000 people who experience sudden cardiac arrest each year, so it's not an insignificant problem. By the time paramedics often get to the scene, it's too late. That's why bystanders are so important to the first three links in the chain of survival: by calling 911, by performing CPR and by using an AED.

AEDs, as has been mentioned, are extremely important because if they're applied in the first few minutes, they can increase a person's chances of survival from over 50% to over 75%. The problem is that, unfortunately, they're not used that often. In the stats I've looked at, in between 1% to 2% of all cases they're used. The reasons are because people can't find them, they don't know where they are, and they're inaccessible; they're locked up.

Dr. Paul Dorian, who couldn't be here today, is a cardiologist at St. Michael's Hospital. He has taken care of over 300 survivors of cardiac arrest in his 35-year career. These survivors are here because a bystander used an AED to save them. He describes it as an extraordinary experience to be talking to a survivor and their family, knowing that they were the lucky ones when a bystander knew what to do and how to get an AED and use it. The tragedy is that for each and every survivor, there are many, many others who do not survive because bystanders and 911 dispatch did not know where the closest AED was.

The current state right now: AED registration, as we know, is voluntary. It has been mentioned that in Toronto, there's about 1,500 AEDs that are registered. We estimate that that's less than 10% of the total that have been sold in the past 20 years. There are a lot of AEDs out there; I have no idea where they are. Really, we have a chance with this legislation to save lives by enabling Ontarians to know where these AEDs are. We believe that a mandatory AED registry is a very good first step to improving the number of people who will use these AEDs to save lives. We believe very strongly that this registry information should be available to both the public as well as 911 dispatch. That language is not in the current bill as we speak, and we encourage the committee to consider putting that language into the actual legislation.

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I would like to acknowledge MPPs Robin Martin, John Fraser and France Gélinas for your support and initiative for this public health initiative. We're very grateful to you for putting it forth. My colleague Emma O'Neil, who helped to create this presentation, and my colleagues Dr. Paul Dorian, Dr. Mali Worme and Tiffany Jefkins, who are here today, as well as, most importantly, members of CARE like Gregg who inspire me with their energy and passion every day—we're grateful to work with you. We look forward to helping give suggestions and ideas for how to write this legislation, and I'm happy to answer any questions.

**The Chair (Ms. Natalia Kusendova):** We will begin with Mr. Fraser for six minutes.

**Mr. John Fraser:** Thank you very much for sharing your story. It's good to hear a good story, because the hard ones, the ones that don't work out, are pretty hard to hear, when there's something that's available that's 100 feet away or less and people aren't aware. There's no question that there's a need for a registry. It just makes sense.

As you've probably heard before—and I think you're supportive too, to a certain extent, prescribing where they need to be. Without being overly prescriptive, we can create a network or a framework that will allow municipalities like Peel, Ottawa and Springwater to fill in where it's needed.

I don't know if you want to add anything else. I think CARE has done a great job today and all the way through in helping to inform this legislation with all three members and the work that you've done. I don't know if you want to add anything else to that or if there's anything else that you've said that you had to skip because you were running out of time.

**Dr. Katherine Allan:** One of the things that your bill mentions and is not in this one is the idea of training. We mentioned, as one of our recommendations, an emergency action plan. All buildings that have an AED installed should have an emergency action plan. What that means is that they have a written plan. There are designated individuals who know what to do, who know where the AED is and who know how to use it.

There was a great example. There was a young girl at Humber College who collapsed. She had a cardiac arrest. They had an emergency action plan. They got the AED to her. They resuscitated her. It was within 10 minutes, and it was wonderful that they did, because it took the paramedics over 20 minutes to get to the patient's side because they couldn't find her. I think that if you're going to put one in your building, you really need to have a plan to go with it, so I think that that's an important consideration.

**Mr. John Fraser:** I bought one for my office about two years ago. It was one of the more expensive varieties, in English and French, both official languages. But there needs to be a plan. The people have to know how to use it, right? And it is really critical, because that's why we train people in first aid. That's why we train people, when we look at emergency management—if something happens in the building, what do you do?—so that it becomes a simple way of remembering what to do, because the most important thing, probably, is calm.

**Dr. Katherine Allan:** Yes.

**Mr. John Fraser:** That's the first thing, right? That's the first step.

So I appreciate that, because I think we have an opportunity inside the regulation-making portions of this bill to put some more meat on the bones in things like education and prescribing where they should be. There's an opportunity there, and then I think once we get that, like I said earlier, we have to make sure that we walk before we start running, and then make sure we have a solid base underneath us. But I appreciate your comments around education. I think it's a critical piece. Thanks for all your work.

**Dr. Katherine Allan:** Thank you.

**The Chair (Ms. Natalia Kusendova):** We will now turn it over to the government. Ms. Martin?

**Mrs. Robin Martin:** Thank you for your presentation, and thank you for all the work you've done—you and the presenter before you and a lot of people who are here—to bring this to our attention so that we can bring the legislation forward and hopefully make a difference for a lot of people. I really appreciate that.

I was interested in some of the statistics you were talking about. I think you said there were 8,000 people a year having—

**Dr. Katherine Allan:** It's 7,000 to 8,000; something around there, yes.

**Mrs. Robin Martin:** And that was in Ontario?

**Dr. Katherine Allan:** That's Ontario alone, yes.

**Mrs. Robin Martin:** So if we're able to get more access to defibrillators, we could have a significant impact, probably, on that number.

**Dr. Katherine Allan:** Yes.

**Mrs. Robin Martin:** Because you said that the survival rate is only about 10%.

**Dr. Katherine Allan:** Correct.

**Mrs. Robin Martin:** So Gregg was one of the lucky 10%, I guess.

**Mr. Gregg Lowe:** Very lucky; yes.

**Mrs. Robin Martin:** But the statistic that I think the former presenter gave was that with the defibrillators we may be able to get that up to 75%. With our 8,000 number, we're talking about quite a few people that we would be able to save.

We haven't really had anyone present about this, but I know that time is of the essence. Ten per cent of the—

**Dr. Katherine Allan:** Every minute that is lost is a 10% drop in survival.

**Mrs. Robin Martin:** So the odds of somebody being able to survive if it has been 10 minutes are pretty low.

**Dr. Katherine Allan:** Yes.

**Mrs. Robin Martin:** What happens if you get to somebody after five or six minutes? Are they still able to make a full recovery?

**Dr. Katherine Allan:** Yes. The treatment for cardiac arrest is a shock from a defibrillator, but CPR is extremely important because it buys you time. It keeps the heart and the brain alive, essentially. They've shown with animal experiments that, essentially, the heart goes into this dangerous rhythm, and over time, if nothing happens, it essentially dwindles down to nothing. Even if it's dwindling, if you then do really good-quality CPR, it will go back up. It will go back into a rhythm that's much more amenable to a shock if you apply CPR.

**Mrs. Robin Martin:** I've heard that from a couple of presenters. They say "shockable rhythm," but I'm not really sure I understand what that means, because when a person has a sudden cardiac arrest, doesn't it just stop altogether?

**Dr. Katherine Allan:** That's a good question. The heart can do two different things. When you go into a cardiac arrest, it's a problem with the electrical system of the heart. The electrical system drives the pump. One of

the main rhythms it goes into when it's a shockable one is that it flutters. It flutters really, really, really fast, but that's not enough to cause the heart to pump. That's why it needs the shock, which resets it, so that it can go back into its normal pumping.

But you're absolutely right. Usually what happens is that it starts off in that fluttering, and that's really exhausting for the heart. It runs out of energy and oxygen, and then it goes down to nothing. So you're right. If it's not doing anything in that rhythm, you need to do CPR and give some medications, and potentially it puts it back into a shockable rhythm whereby you can then use an AED. But you hope that they start off in the shockable rhythm, and then you can get them right away. If you wait, it goes down to nothing.

**Mrs. Robin Martin:** How long has CARE existed?

**Dr. Katherine Allan:** We're fairly new. We've only been in existence for probably two years. I've been doing research in this field for almost 15 years.

Essentially, how we came about was a husband and wife who had lost their son Alex to sudden cardiac arrest at age 17 in 2006—he was an elite hockey player. Dad was there watching him. It was right after Christmas. He had a cardiac arrest on the ice. They did everything right. They did CPR and they used an AED, and unfortunately they couldn't bring him back. He had a very rare heart condition that was unknown. They discovered this after the fact. So they made it their mission to raise awareness about sudden cardiac arrest. They actually approached one of the previous governments to create a bill that would have legislated awareness of sudden cardiac arrest, very similar to anaphylaxis. Unfortunately, it didn't get anywhere past second reading.

Then when you guys were elected, they approached us and said, "We want to try again." But we said, "Why don't we go bigger? Awareness is key, but you also need things like education, for example, and accessibility to AEDs." So that's where we are, and that has spawned our mission. We are a very dedicated group of individuals and have been bugging you guys a lot. And that's kind of where we are.

**Mrs. Robin Martin:** Well, it seems to be working. Thank you.

**The Chair (Ms. Natalia Kusendova):** Ms. Hogarth.

**Ms. Christine Hogarth:** I just have a quick comment. Gregg, I just thank you for being here and sharing your story.

And thanks for all the work you do.

One of our speakers, I think from the Ottawa area, told us—I think you mentioned how many were sold in Toronto. He had said that there were 27 AEDs sold in the last two years in Toronto alone, and only 2,000 are registered.

**Dr. Katherine Allan:** It was probably 20,000, and 2,000 are—

**Ms. Christine Hogarth:** So 20,000 out there. How many lives could that save if we just knew where they were? Time is of an essence to get down to business and get this done.

**Dr. Katherine Allan:** Exactly.

**Mr. Gregg Lowe:** You just never know when it's going to happen or to whom it's going to happen. It's one of those things that you think will never apply to you in your life or your family, until it does. So, yes. Thank you.

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**Ms. Christine Hogarth:** Thank you for being here, because you never know when, or how old—

**Dr. Katherine Allan:** Exactly.

**Ms. Christine Hogarth:** So thank you.

**The Chair (Ms. Natalia Kusendova):** Okay. We will now turn it to the official opposition, with Madame Gélinas.

**M<sup>me</sup> France Gélinas:** Nice to see you. Thank you for coming, and, Gregg, thank you for sharing this very powerful story with us. I'm really happy you're here to tell us this story.

**Mr. Gregg Lowe:** Thank you.

**M<sup>me</sup> France Gélinas:** I would like to start with education, and to see: Would you support having mandatory CPR and AED training as part of the public education curriculum?

**Dr. Katherine Allan:** Yes, absolutely. This was spawned, as I said, by these parents. CARE has actually been doing a lot of research and work in this area in Ontario, trying to figure out what's going on in the system. I've actually been reaching out to the Ministry of Education many times about this.

Currently, it is mandatory in grade 9, in the health and phys ed curriculum. However, we've anecdotally been hearing from training agencies and parents that it's not actually happening. So it may be in the curriculum, but it's not actually happening in reality. I'm doing a survey right now with schools in Ontario, and I can tell you that I asked the question, "Are you training your students in CPR and AED?" and 10% of them said yes. So the ministry keeps telling me that it's in the curriculum and it's there, but we have a huge problem with implementation.

I don't know what the answer to that is, but I just wanted to raise awareness that putting it out there in the curriculum is not enough. I also think that one time in a child's life is not enough. Really, ideally, pie in the sky, what I would love to see is that you introduce it at grade 5 and 6, you do it again in grade 9, and you have to do it once more before you graduate. The ones when they graduate—you could make it part of their volunteer hours. They could learn how to teach it and they could teach the younger kids.

This doesn't have to be a huge, costly thing. Lots of paramedic agencies will go in and train these students for free. There are very cost-effective, low-cost ways to do this. We just need the support of the government to make it happen.

**M<sup>me</sup> France Gélinas:** My second question has to do with mapping. Would you say that there is a body of evidence that exists out there to tell us where we should have AEDs, and does it work? Are the mapping instruments we have worthwhile, worth doing?

**Dr. Katherine Allan:** Yes, I would agree so. Paul Snobelen mentioned and some of my colleagues men-

tioned that there's an individual at the University of Toronto. He's in engineering. He does machine learning. That's basically where they use all the data of existing cardiac arrest locations, and they train the software to basically predict where the right place is to place them. He's done this for quite a number of years. The software and the mapping stuff are very robust. He'd be happy to help. He's also done it in Denmark as well. So absolutely, there's a body of evidence. I'm happy to send you some of the papers and connect you with him. That's not a problem.

**M<sup>me</sup> France Gélinas:** I know you spoke about this, but just to be clear: There are fiscal penalties in the bill, and there are others who think that we should use the carrot rather than the stick. People buy those AEDs because they want to do good. But you're of the—I'll let you. Which one do you—

**Dr. Katherine Allan:** I love the stick mentality. I think if you're going to go to all the trouble to create legislation, you need to give it teeth. I think that Paul Snobelen had a great idea of making it small enough, but if you pitch it to a business, would you rather pay a \$3,000 fine or suffer a \$1-million lawsuit because you didn't bother to have an AED or maintain it? I think it's pretty easy what I would choose, right?

**M<sup>me</sup> France Gélinas:** The way you put it, you're pretty convincing. Would you support having—we've talked about the Ministry of Labour saying that once your workforce is so many—I'll put it at 200—not only do they have to have the bigger first aid kit, but they would also have to have the AED and a knowledgeable person?

**Dr. Katherine Allan:** I completely agree with that. I think that's a great idea. I don't think you're ever going to have too many AEDs; I don't think we'll ever get to that point. I just think we always need them. I think it's a great idea to put them in businesses.

Just as an anecdotal example, I went to a conference in Kelowna. I was at a hotel. It had a sister hotel next to it. The sister hotel had an AED in their lobby; our hotel did not. So I go up to the lobby, to the desk, and I say, "Hey, where's your AED?" And they're like, "Oh, yeah, we have one, but we're not sure where it is. Let me go check in the back." So they go check in the back, and they can't find it. Then they say, "Come back in an hour." I come back. They pull out their health and safety guy on the premises. He was one of the chefs in the back. He comes out and he's like, "Yeah, we have an AED. It should be here." They couldn't find it.

After we had raised that issue, they then informed us that they were actually going to go ahead and buy one and install one. But what if I hadn't asked the question? What if something had happened? They had no idea where their AED was.

**M<sup>me</sup> France Gélinas:** So far, Paul was pretty clear that he has the conversations with the people who own the AEDs, and they all say, "Yes." The system we have in the bill is that it's mandatory; you go online and you do the work by yourself. Do you see a need to have people go and—

**Dr. Katherine Allan:** Inspect?

**M<sup>me</sup> France Gélinas:** Yes.

**Dr. Katherine Allan:** We've talked about this. The problem is: Do you have enough people to go around and do the inspections? Would a voluntary system where you have an online registration system, you put in, they put in their info, you can then send them monthly reminders: "Go check your AED. Oh, your pads and your batteries are coming up to expire"—I'm not sure what the answer is. I think maybe you have to find a balance. I've spoken with several paramedic agencies. They are happy to inspect the AEDs that are—

**The Chair (Ms. Natalia Kusendova):** One minute remaining.

**Dr. Katherine Allan:** Thank you—within their regions. So maybe it's a combination of these different—

**M<sup>me</sup> France Gélinas:** And the one thing that you wanted us to make the change in the bill was that you want an emergency action plan to go with every AED?

**Dr. Katherine Allan:** That would be great, yes. If you're going to put one in, you want to make sure that people know how to use it and what to do.

**M<sup>me</sup> France Gélinas:** Thank you.

**The Chair (Ms. Natalia Kusendova):** Thank you very much. As a reminder, the deadline for any written submissions is today at 6 p.m.

**Dr. Katherine Allan:** Thanks. I already submitted it. Hopefully you should have it, but thank you.

#### TRUVERUS SAP CANADA

**The Chair (Ms. Natalia Kusendova):** At this time, I'd like to call upon the representatives of TruVerus, Scott Murray and Chris Amor. Welcome, and thank you for being here. You have 10 minutes for your submission. You may begin by stating your name on the record.

**Mr. Scott Murray:** It's Scott Murray, from TruVerus.

**Mr. Chris Amor:** Chris Amor, from SAP Canada.

**The Chair (Ms. Natalia Kusendova):** You may begin.

**Mr. Chris Amor:** Thank you to the committee for hosting us today. We're here today to provide an industry perspective on how the act can be successfully rolled out and enable an intelligent heart health program for the province of Ontario.

In preparation for this discussion, we've of course reviewed transcripts from the previous meeting. We've listened with great interest to comments from other presenters, and of course we've looked at the current state of the registry in Ontario and in neighbouring provinces. No surprise: The registry is not meeting the goals of the government today. Otherwise, the act wouldn't have been brought forward. Some evidence of that is that registrations, as you know, are well below what we would expect with the number of devices available in the province. We understand that the act is meant to enforce compliance with the act. But it does so in a way that doesn't allow for the success of that program to be rolled out. In doing so, we've looked at what they've done in Manitoba. Yes,

everyone agrees that a more robust registry is an important part of this. Perhaps technologies like apps and so forth are part of it. But our concern as citizens as well as software suppliers is that the components to enable a successful rollout of the program aren't yet in place, which is why we'd like to provide some commentary as to how this could be successfully done, leveraging intelligent technologies. Scott?

**Mr. Scott Murray:** Yes. Again, my name is Scott Murray, from TruVerus. TruVerus is an authentication platform running on SAP HANA as a database. Really, what we're there to do is bring together mobile environments, authentication and validation of a product process and, in some cases, people.

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**Mr. Chris Amor:** SAP: If you don't know us, we're the world's third-largest software company by revenue. We have over 100,000 employees, including 3,300 in Toronto. Our mission is to help the world run better and improve people's lives through the application of intelligent technologies. We happen to be an Ontario government vendor of record, so we're presenting this point of view today with an eye toward: When the act is enabled and passed, how does this become an effective way of reaching out to the community stakeholders, from facility owners, to the public, to the government and its partners, to EMS and others? We feel that following the path that has been taken by other jurisdictions will not result in the compliance with the act and will not result in the saved lives that I think this committee has intended.

**Mr. Scott Murray:** We've put together a process flow of what we call a cardiac-safe province. Item number 1 is, really, creating a register: validating that the AEDs are valid and in good working order, and creating that tie-in to that registry. What we had envisioned here is using technology like RFID: taking RFID components, tagging them to the AEDs and then creating a community around that actual AED itself. That community can be interaction. AED is a two-way communicator. It can interact with the public. We could have mapping on cellphones and smart devices, and really start to take that community approach to becoming a cardiac-safe province.

That's what we had lined up.

**Mr. Chris Amor:** Allow me to describe the experience that we picture for what an intelligent heart health program could look like. Scott touched on it. At the core of it is an intelligent AED device. It's great that we're prepared to buy more of these and install them throughout the province.

As it stands today, when you go to buy an AED it is a static device, potentially one-way communication. With the technology that we've been working with, these are now two-way devices. They're capable of everything from location information services, providing a beacon effect to say, "Here is where I am and here's how to find me," to pushing content to citizens via their smart phone, to providing updates. When a device is moved, it automatically triggers something at the ministry or a partner's operations centre to say, "This has moved. Some action must be taken."

It also allows for the rich capabilities of providing video for training—again, appearing on someone’s phone as a voluntary piece of content. It allows to provide real-time statistics on where devices are located and which ones are working properly. If there is a defect, then it triggers the device and launches it back to the ministry databases.

It is a rich experience designed to leverage the best of intelligent technologies, such as smart devices, conversational artificial intelligence—people speak into their phone and say, “Siri, where is the nearest device?”, or, “Train me on how to administer the device.” We understand the apprehension around using these devices; this is the type of rich experience that the technology allows.

The reporting and the machine learning, in terms of where devices should be located, is something that our system is trained the logic to understand: What is the optimum allocation of devices around the province? Again, it’s the effect of all of these technologies working in conjunction that allows you to roll out a smart heart health program.

It ensures compliance by the building owners, who probably are not excited about the prospect of additional fines when they’re not being given additional enablement. How you make it easy for them to know that, once they deploy a device, they don’t have to worry about when it’s due for service: “The device is going to tell me. I don’t have to know where it’s located; the device will recommend where it should be.” And, yes, there may be an application involved, but the general public, by speaking to their phone, can interact with this technology.

So just a quick summary of what the experience could look like. Again, I won’t go through it. It’s in your hand-out. We see that there are benefits for facilities owners where all they have to do is retrofit their existing AED with an RFID chip that costs as little as one dollar or two dollars. That gets them registered into a smart registry program.

Of course, we would work with original equipment manufacturers so they come authenticated as genuine and functional devices from source. And, again, throughout the life of that device, it will remind facilities owners when they need to replace their batteries and when they need to replace the pads. It is an easy experience for them, and for their modest investment, they know they’re providing great safety and protection to the public.

As a citizen, if I walk into any building, I can speak into my phone and say, “Tell me the nearest device.” Or, if they’ve gone so far as to download the application—again, we would look to the government as partners to help with the public education behind the capabilities of the program—perhaps through an application, they’ll get push notices that say, as I’m entering a strange arena, “By the way, here’s how you find that smart device. Here’s how to remind it.”

As government and as partners, yes, now you’ve got a registry that people have more enthusiasm for participating in. We grow the number of devices up to its maximum allotment.

As EMS, we know that on my way to a building site, I can let someone know: “Speak into your phone or launch

the app, and it will tell you where the device is in this particular building,” because it’s real-time, intelligent, rich-content communications with a smart device, for the purpose of saving lives.

Of course, the only action that’s required of government as partners is to fund the next round of investigation into what the actual experiences should look like. These were our ideas, having studied the proceedings from this committee as well as other speakers. It’s drawn from our experience providing similar solutions across industry and public sector customers. We’re interested in working and driving to an outcome that allows for the successful launch of this program, not legislation that the public and other stakeholders view as burdensome or not set up to achieve program success.

In short—and I’ll pass it over for questions—hopefully, this provides an overview of what an intelligent heart health program could look like for the province. Again, we’re not proposing that anyone do anything apart from pass the bill and refer us to a working committee that’s prepared to provide additional recommendations back as to how such a program could be enabled.

We appreciate your time in listening to today’s presentation. I’d like to pass it back for questions.

**The Chair (Ms. Natalia Kusendova):** Thank you very much. We will begin with the government. Mr. Harris.

**Mr. Mike Harris:** Thank you, gentlemen, for being here today. I’ve got some questions regarding privacy implications around your proposal. When we talk about using NFC chipsets or the data that comes along with that, a lot of people don’t even realize that they have that activated on their phone. I’m constantly trying to get my wife to turn it off.

Would this information only be used for people who are opted into whatever program or application etc.? Or would you be geotagging data just for the sake of doing it? Obviously, your companies value data greatly. I’m very familiar with your company. I’d like some more information along the lines of where you’re going with that, please.

**Mr. Scott Murray:** The answer to your question is two-part: One of them is a community-based application, so you will have a community which has an opt-in. We looked at having features like smart-mapping. If I’m part of a community for AED, and I’m walking by and somebody is having a cardiac arrest, my phone, through the app, would be summoned to aid. That was one of the things we looked at.

As far as privacy is concerned, RFID is a two-way communicator. We want to be able to have that communication on at all times, so somebody can find the unit and either service it or use it, or just be able to track that technology.

It’s a two-pronged approach. You can have it shut off. If you’re asking for it, then that’s permission-based.

**Mr. Mike Harris:** I guess, maybe just to follow up a bit to that, you’re not looking at doing this as something that would be similar to, say, our Amber Alert system?

**Mr. Chris Amor:** Correct. Now that you’re drilling in, I understand the question. First of all, we’re not collecting

any personally identifiable information as part of this. The registry is tracking the devices, which do not have the same privacy concerns as would an individual providing their information.

The other part of the privacy conversation, we find, is around security as well. There have been some concerns around, well, if you've got an intelligent device, is it hackable? What happens if some malicious actor was to break into something, and then now can interfere with the operation of this and/or access a person's data?

The way that this technology works is, if anything happens to this device—either it's moved or tampered with, or attempted hacking—it immediately triggers an alert in the government's database or the community application that says action must be taken. So those two things together, privacy and security, we feel are—there are technological protections against that, but the start of it, to come back to it, is that there's no personally identifiable information collected as part of that.

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**Mr. Mike Harris:** So you would only be using data from people who are opted into your program?

**Mr. Scott Murray:** Absolutely.

**Mr. Mike Harris:** And you're not looking to do this similar to what the Amber Alert system is, where you would have things pushed out regardless of whether you were opted in or opted out?

**Mr. Chris Amor:** Correct. The other reason we'd like to work with a working committee is, we don't pretend to have all the answers. We'd like guidance as to what are the appropriate communications, what is opt-in and what is a push notification. Again, if the government sees it's appropriate, we have the ability to push these types of communications, but it's really meant to be a voluntary-use scenario.

**Mr. Mike Harris:** Okay. Thank you.

**The Chair (Ms. Natalia Kusendova):** Ms. Martin.

**Mrs. Robin Martin:** Thank you for your presentation. It's very interesting. I only understood some parts of it, because every time someone says something like "RFID," I kind of seize up. But I think I got that; that's the chip.

**Interjection:** Yes.

**Mrs. Robin Martin:** Okay. I appreciate that. In your proposed call to action, you had at number 2, "Fund the deployment of a limited-scale pilot program with stakeholders." Can you just elaborate a bit on what you're talking about?

**Mr. Chris Amor:** Absolutely, ma'am. Again, as said, we'd like to define what such a pilot could look like through a working group. It doesn't require any technology. It doesn't require any spending. It's simply: Let's talk through the problem. What we found in our other solutions we deploy is that it's effective to involve a similarly minded group of stakeholders, which would include the public, facilities owners, government, likely Heart and Stroke Foundation, EMS, to say, "What does this look like on a limited scale to prove the success of this?" If we're going to fail, we'd rather fail or make adjustments at a smaller scale.

Whether you view it as a proof of concept—do these technologies do what they intend to do—or more of a pilot which is actually running in the public domain, where there are some liabilities and there are some actions to be taken, that's what we think is the appropriate way to explore, "Is this the right way to go?" Again, we're going beyond what we've seen in other jurisdictions. This would be, as far as we understand, new ground as far as managing this type of registry.

**Mrs. Robin Martin:** I think Quebec has a—didn't we hear at one of the other hearings that Quebec has defibrillators on a registry, which are available on people's smart devices and they get notification? I think we heard that.

**M<sup>me</sup> France Gélinas:** That's what we heard.

**Mr. Chris Amor:** If I may?

**Mrs. Robin Martin:** Yes.

**Mr. Chris Amor:** We've looked at the Quebec application. It is essentially a static registry. It does track where these devices are around the province. It describes where it is, but again, from our understanding, that's all it does, meaning it's not really communicating that two-way information to say, for example, "I've moved. My batteries need recharging. I've gone offline." It's a registry and it's an app, but it's lacking a lot of the intelligent features that, frankly, you would look to do in rolling out a new application in 2020.

**Mrs. Robin Martin:** I'm not quite sure why you need the two-way communication. Can you—

**Mr. Scott Murray:** Basically, the two-way communication gives you real-time, interactive connectivity to the device. With the app like Quebec has, they take a map of the area and they pin where AEDs are. They can be moved. They're not validated. Where we're looking at the problem and the solution to the problem is taking an app, a very similar app with mapping capabilities, but having that two-way communication. So I can ask Siri, "Where is the closest AED?" and the directions will come up. As Chris had mentioned, maintenance records certifying the devices, all that stuff is done in the app environment in real time.

**Mr. Chris Amor:** If I may, ma'am: Think of the intelligent device as, essentially, a person standing there next to the AED, where, if the government decides to launch a new communication program, you can actually push that content to the device. Anyone who enters the building now has the latest communication on heart health best practices or behaviours, or there's a new training video or, as we've said, if the device is malfunctioning, it can then notify the building owner, the government, Heart and Stroke Foundation etc. It's a real-time, two-way communication channel that just provides a lot more capabilities than would an unintelligent device.

**The Chair (Ms. Natalia Kusendova):** Thank you. That concludes the time we have. Now I'd like to turn it over to Mr. Kernaghan.

**Mr. Terence Kernaghan:** Thank you very much for your presentation. I must say, I really appreciated the RFID interactivity, especially in the case of when an AED might be moved and not returned to its proper location. Do

the intelligent features include notifying the establishment or the business that the AED has been moved or that it requires service maintenance?

**Mr. Scott Murray:** Yes. That would be part of the pilot program, so to speak.

**Mr. Terence Kernaghan:** Oh. Excellent. I figured it did, but I just wanted to be clear on that.

Also, just to talk about the privacy implications of the heart health community engagement program: You've mentioned that it is an opt-in program and, as a result of opting into this program, data and personal data will be collected. Will this personal data be shared with the provincial government?

**Mr. Scott Murray:** Again, that would be part of the initial pilot, or discussion around what the laws, the rules and the regulations are around it. Then we can tailor the app to collect the data. So the community app feature of that is an opt-in.

Our discussions that we had around this when we were preparing the presentation is that people who are trained and proud of it would want to communicate that to like-minded people. Your name may be associated with your training certificate that you're trained or compliant or whatever in the program, but it doesn't necessarily have to be. It's all around how you want to schedule and create.

**Mr. Terence Kernaghan:** Okay. Thank you very much.

**The Chair (Ms. Natalia Kusendova):** Madame Gélinas.

**Mme France Gélinas:** Thank you for coming. Thank you for your presentation. Just so that I understand—I'm looking at that slide that you've given us. When you look at the interactive mapping, the idea would not be necessarily that you would create the map in the community as to where the AED should be located. The interactive mapping would be, once a decision has been made or a purchase has been made to put an AED in that arena, then the two-way communication or whatever you want to call it starts. Am I right?

**Mr. Scott Murray:** That's correct.

**Mme France Gélinas:** Okay. And you said that the RFID—I have no idea what those letters mean—cost between one dollar and two dollars. Forever?

**Mr. Scott Murray:** They're run on a battery. The battery life, depending on how much data and communication is done with the RFID tag—the price is reflective of two things: the battery and the amount of data that is transposed through the RFID. We did a smart pallet system for PepsiCo in Mexico, and they were \$1.85 in the smart pallets—that type of arena.

**Mr. Chris Amor:** And if I may add, the selection of the specific device is subject to the requirements that we discover. As Scott says, if it has a finite lifetime of a couple of years and less data, you'll have a more inexpensive chip. You could spend as much as \$10 or \$20, but these are still nominal costs.

The other feature is that these chips, end-of-life when they die, they actually let you know, "This thing is expired," and there may be a replacement required. But

our intent, of course, would be to minimize any maintenance beyond what the operator is providing for: batteries and pads of the device itself.

**Mme France Gélinas:** Given that I live in northern Ontario, where I don't have cell service at home and the WiFi—I always try to find a nice word to say—"sucks," but I cannot—

**Mr. Chris Amor:** It's a technical term.

**Mme France Gélinas:** —would those things still work in northern Ontario, where I'm from?

**Mr. Scott Murray:** Yes.

**Mme France Gélinas:** So they don't use Internet and they don't use cell? How do they—

**Mr. Scott Murray:** No. They're radio-frequency tags.

**Mme France Gélinas:** Oh. And they send their message to who?

**Mr. Scott Murray:** The app on the other side. It could be a smart phone—your iOS device, your Android—and the app that resides in SAP.

**Mme France Gélinas:** Okay. Very interesting. Do you, in part of what you do, offer training also?

**Mr. Chris Amor:** Again, part of the value of partnering with TruVerus as the originator of the technology, based on a foundation of SAP technology, is that we have the ability to both roll out a program at scale across potentially hundreds of thousands of devices, to partner—our intent is not to replicate the skills that exist in the community, at Heart and Stroke Foundation or other government partners to say, "This is now a new program, and here are the capabilities," but in terms of enabling, say, a facilities owner, "Here's what I need to do if my chip dies," yes, it's simply that he gets a notification that, "Here's where I go to get this replaced," and, yes, we just need to think through what's the most efficient way to do that.

**1650**

But, yes, this is designed to be managed at scale. That includes ongoing updates, it includes training and it includes support, should the government wish an enhancement to the analytics and, perhaps, the more intelligent machine learning to say, "We thought that every building of 10 people or 20 people or less or more needs a device. We've actually seen these other incidents, and we're going to change the legislation because we've got the real-time data of how the programs run."

**Mme France Gélinas:** Very interesting. Thank you.

**The Chair (Ms. Natalia Kusendova):** We will now turn it over to Mr. Fraser for six minutes.

**Mr. John Fraser:** Thanks very much for being here. It's good to see you again, Mr. Murray. I saw you a few weeks ago. I want to thank you for your presentation, and the possibilities, which is actually what this bill is about. It's trying to build some structure around what's possible, and this is our ability to get started.

So I guess you agree we need a registry, right?

**Mr. Chris Amor:** Yes.

**Mr. John Fraser:** We should probably prescribe where they are?

**Mr. Scott Murray:** Yes.

**Mr. John Fraser:** Okay. Education, do you think—

**Mr. Scott Murray:** Yes.

**Mr. John Fraser:** Okay. Three out of three; we're doing okay.

One of the things is that we're going to have to define a registrar. That registrar can either be the registrar for all the province of Ontario or the registrar of one of the 10 dispatch centres or two dispatch centres, or whatever, because essentially I think dispatch is where—911 is the natural centre to make sure that that information is there and to house a registrar.

Do you have any opinions about whether it should be one registrar for all of Ontario, or should we—right now, I think we have 10 dispatch centres. Depending on who you talk to, that could become smaller or stay the same; we don't know yet.

**Mr. Chris Amor:** Our overarching approach is that we like to minimize the amount of administration and government in maintaining of databases or servers and so forth. We always anticipated this would be a cloud-based system, which means information is available—there could be 10 different centres around the province, but you're not managing a bunch of technology in the background; you're simply administering the program. Again, that could be through partners such as the Heart and Stroke Foundation.

I think you've touched on it, sir: how to make sure that EMS in locations around the province have access to the same data. The cloud gives us the ability and the reach to provide that. Again, it's not about maintaining servers. As a technology provider, we will do that in the cloud. But in terms of having access to people, we've touched on it—the cloud, phones and then a few web interfaces to look at the reports and analytics: Are we achieving the goals we've set out to do this month? Do we need to make any course corrections?

Does the application provide recommendations on how to prescriptively improve the program over time? Absolutely, and it's of minimal impact to the government in terms of managing the IT itself. That's what the industry is for.

**Mr. John Fraser:** Great. Thanks for being here. I appreciate it.

**The Chair (Ms. Natalia Kusendova):** Thank you very much. Just as a reminder, the deadline to file any written submissions is today at 6 p.m.

**Mr. Chris Amor:** Thanks so much for having us.

**Mr. Scott Murray:** Thank you.

DR. MALI WORME

**The Chair (Ms. Natalia Kusendova):** I would now like to call on our next presenter: Mali Worme. Welcome. Thank you for being here. You have 10 minutes, and you may begin by stating your name on the record.

**Dr. Mali Worme:** Thank you very much. It's my honour to be here. My name is Mali Worme. I am a cardiology resident in my final year of training at the University of Toronto. This bill is very near both to my profession and to my heart, so thank you so much for having me.

I have no disclosures to make.

By way of introduction, we know that automated external defibrillators save lives. What they're used to treat is sudden cardiac arrest, as you've heard from the previous presenters today. A sudden cardiac arrest is when there's an abnormal electrical rhythm that leads to a stoppage of the heart, and the heart is essentially quivering instead of effectively pumping circulatory output to the rest of the body. We know that in Ontario, every year, we have about 7,000 such events. Unfortunately, the only successful treatment that we have in these cases is a life-saving electrical shock from a defibrillator.

We have been making headway in terms of the way we treat these patients from a hospital level for decades. But the reality is, the majority of what needs to be done to improve survival in this patient population happens even before they get to us in the cardiac service, on the cardiac ICU in the hospital.

When 911 is called and paramedics arrive on-scene, we know that survival rates are low. In Ontario, it's approximately 10%. In places that are considered the gold standard for public-access defibrillation programs globally, that number is closer to 20% to 25%. But by the time a 911 call is made and paramedics arrive, which in the GTA takes approximately eight minutes, it is often too late. For every one patient that arrives to the hospital, that we treat, about nine of them don't, and just never make it.

We know that a bystander using an AED within minutes can increase that victim's chance of survival to more than 50%, which, when it comes to studying interventions in medicine, is unlike any percentage or odds ratio that we see in studies. So this is a huge, huge difference.

But unfortunately, AEDs are seldom used. They're seldom used (a) because of lack of education into what they are and how to use them, and (b) because of fear in terms of implementing them, from a liability perspective, which the Chase McEachern Act, back in 2007, aims to assist with.

They're also seldom used because people don't know where they are, and also because 911 doesn't know where they are. When you call 911 and you have a patient who has arrested in front of you, as an interested bystander, if they can't direct you to where that nearest AED is, it's often just never employed.

Having a complete registry of all AEDs in Ontario would be a huge step to improving how often people use them, and how often patients arrive to make it to the cardiac ICU or the cardiology floor for us to take care of them.

This registry would be available to 911 dispatch operators, ideally—which I know is not currently written in the legislation as it stands, but I think this is a really important part—and they then would be able to instruct callers where the nearest AED is.

This is the current reality of out-of-hospital cardiac arrest in Ontario. Picture Mr. X walking down Yonge Street. All of a sudden, without warning, he falls to the ground. Maybe he clutched his chest before, or maybe not. He's not breathing. You have an interested bystander who



notices that he just collapsed. Maybe he does know what's going on; maybe he doesn't. He picks up the phone and calls 911. The EMS dispatcher confirms where he is, tells him the ambulance is on the way, counsels the bystander on what to do—asks if he is responding, and to start CPR if he is not—and tells him the paramedics will be on the way.

As mentioned before, paramedics will take approximately eight minutes to get there. But we know that with every minute that passes, the chance of survival goes down about 10%, which is why, from 100% down to 90%, approximately nine minutes have passed. Right? When the paramedics arrive, they attempt resuscitation and bring that patient to the hospital.

As was mentioned earlier, in the GTA, only about 2% of out-of-hospital cardiac arrests are attended to by an AED, which is dismal statistics. We know that we can do a lot better than this.

This is what I picture an out-of-hospital cardiac arrest in Ontario looking like under Bill 141. The same Mr. X is walking down Yonge Street. He clutches his chest and collapses. A bystander calls 911. But now, when he calls EMS dispatch, that dispatcher is able to not just confirm the location and activate paramedics, but is able to search a comprehensive AED registry. Hopefully, a second bystander, or that same person, can then run and fetch that defibrillator and utilize it to increase this patient's survival to much higher than 10%—in some studies, as high as 50%.

The goal that I see is to allow every person who collapses from a sudden cardiac arrest in Ontario to benefit from prompt AED use. Both CARE and myself see four key components for this legislation to be effective. Many of these have been discussed already today.

Number one is the mandatory registration of AEDs in Ontario, as we've discussed, both accessible to the public and to EMS dispatchers.

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Number two is mandatory installation of AEDs in high-traffic public places. The American Heart Association has data on what pertains to be a high-traffic public place and how often we can expect a cardiac arrest to happen in a public place based on the density of people in that area or traversing that area on any day.

Number three would be mandatory installation of AEDs in a location that allows for easy, rapid access, with appropriate signage.

Number four is mandatory inspection and maintenance requirements.

I know you have heard a lot of these different components. I'm going to talk a little bit about the importance of placement.

We know that proper signage and placement of AEDs is essential to optimizing their usage. There was a recent CBC investigation that looked at 50-something AEDs in the GTA. More than half of them either were not registered or were not accessible when requested in the event of an emergency: They were behind a security desk; the people who worked at the facility did not know where they were;

they were in the back office; or they were locked up. This really isn't good enough. The way I see it, Bill 141 will change this, maximizing accessibility to AEDs and, in so doing, increasing survival.

The next thing I'm going to touch on is the importance of maintenance. We know that AED pads require replacement approximately every two to three years, and batteries approximately every two to four years. Up-to-date AED parts are essential when an emergency happens. There was a story of a young girl just nine years old last year who was attended to by an AED after a sudden cardiac arrest in a pool. There was an AED there, it was appropriately signed, and people knew that that's what the girl needed; but unfortunately, the batteries were dead, and she passed away. The coroner's report showed that she died from a cardiac cause and an arrhythmic cause.

Maintenance will be mandatory with Bill 141. This will ensure that when a victim collapses and an AED is found, it will be functional and, therefore, increase that victim's chance of survival.

In conclusion, in an ideal world, every person who collapses from a sudden cardiac arrest in Ontario will receive prompt CPR, a 911 call and have an AED applied as quickly as possible. I'm confident that this will save many lives in the province.

**The Chair (Ms. Natalia Kusendova):** Thank you. We will begin with the official opposition. Mr. Kernaghan.

**Mr. Terence Kernaghan:** Thank you very much for your presentation, Dr. Worme. In your discussion, you talked about accessibility of AEDs to the public as well as to EMS in maximizing this accessibility. Earlier today, we heard someone talk about businesses that currently have AEDs and whether they could opt in or opt out of this public registry. What are your thoughts about that sort of two-tiered system?

**Dr. Mali Worme:** I think that's similar to asking someone if they would be okay with the public knowing that there was a fire extinguisher in the Eaton Centre. We know that a couple of years ago—I think it's 2016 data—there were 88 deaths from fires in Ontario. In that same year, there were more than 5,000 deaths from sudden cardiac arrest.

I'm very passionate about this topic, but we also have to think about it from a legal and from a governmental point of view. I do recognize that there are issues with privacy, and I do recognize that the individual who has that establishment is the proprietor of that AED. I would not be opposed to that individual having the option of saying, "No, I do not want my AED on the public registry," but I would be very surprised if many people actually opted for that option.

**Mr. Terence Kernaghan:** Absolutely. It almost speaks to a very anti-Canadian value: the thought that somebody could withdraw health services—privatization of health care—and say, "Sorry, I've got the cure, but you can't have it."

**Dr. Mali Worme:** Right? I agree.

**The Chair (Ms. Natalia Kusendova):** Madame Gélinas.

**M<sup>me</sup> France Gélinas:** You went through four: a lack of education, fear of liability, don't know where they are, and dispatchers don't know where they are. We'll start with number two, fear of liability. We're Canadian. Where does that come from?

**Dr. Mali Worme:** I've been doing research with Dr. Dorian on this topic for the last couple of years. Dr. Dorian, unfortunately, is not able to be here today, but this just comes from surveys of the general public. We know that the fear of legislation and liability is higher with our neighbours to the south than it is in Canada, but it is still a concern here in Canada.

I think a lot of the problem, too, is that people are afraid to hurt someone. A big part of the public education that we need to employ with AEDs is the fact that you are not going to hurt someone by applying it.

**M<sup>me</sup> France Gélinas:** So it comes back to number one, a lack of education. What is the top standard of education? How do you do this? Every year in school? Mandatory upon graduation? What would you suggest? Is there a body of evidence that supports that this is how you make education work?

**Dr. Mali Worme:** That's a great question. I'll speak to two areas that are considered gold standards in terms of public access defibrillation around the world. One is Denmark. In Denmark, every time you renew your driver's licence, you have to have CPR and AED training, which I think is fabulous. Every few years you go in, your licence is expired, and then you have to learn. As a result, in Denmark, the rates of AED and CPR knowledge are something like 75% or higher. We know that their rates of survival for sudden cardiac arrest are way higher than in Ontario.

It's the same thing in Seattle. In Seattle, more than two thirds of the population knows how to do CPR. That number is definitely lower in Ontario.

I think implementing it during your driver's licence renewal is a very creative and sensible way to do it. But I'm also a huge supporter of Dr. Allan and CARE's proposal, which is teaching people in school when they're young and making it a life skill.

**M<sup>me</sup> France Gélinas:** I agree. So you would like us to modify the bill to make sure that not only we create the registry, but that we make sure the registry is available to 911 dispatch?

**Dr. Mali Worme:** Correct.

**M<sup>me</sup> France Gélinas:** Okay. Otherwise, we're still missing a big part.

**Dr. Mali Worme:** Correct.

**M<sup>me</sup> France Gélinas:** Okay. When it comes to fiscal penalties, did you have a sense that we hit it on the right note? Some people think that we should lower them. What do you think?

**Dr. Mali Worme:** I think that's not my area of strength, but I need to come up with an appropriate response. I would say, to be honest, I do think it's quite high. I think that it could be lower and people would still be of mind that they would want to avoid that penalty. But I also—I'm not sure.

**M<sup>me</sup> France Gélinas:** Okay. That's okay. My last question is about mapping. We've talked a lot about when you go into a community, there are places where—people have referred to what the Heart and Stroke has put together. They've also referred to Dr.—his name escapes me right now. What do you think? What is the best method to identify where the AED should be located in a community?

**Dr. Mali Worme:** In terms of deciding where they need be installed, or where they need to be bought where they don't currently exist?

**M<sup>me</sup> France Gélinas:** Correct.

**Dr. Mali Worme:** I'm a huge fan of Timothy Chan's work, who was brought up already in this discussion. He's an engineer at the University of Toronto, and he did a really interesting computer-mapping AI paper. He actually mapped the density of out-of-hospital cardiac arrests around the GTA, and then he mapped where the current AEDs are. But that was with a registry that's very outdated. He is actually hoping to recreate that paper and that study, once we have a better understanding of where the current AEDs are.

What he did is, he was able to identify hot spots of where the highest density of AEDs happens in Ontario and then, as a result, make recommendations as to where AEDs should be placed. When he did this, in order to create the highest rates of survival, the top three locations he found that would be ideal for AED installation were Tim Hortons, as well as ATMs, because they're open 24/7 and there are so many of them, as well as another coffee shop—I don't remember which coffee shop it was. But his work really is very fascinating and very forward-thinking. I think that's what we have to do. We have to see where the density of heart attacks is highest and then where AEDs should be in comparison to that.

**M<sup>me</sup> France Gélinas:** Very good. Thank you.

**The Chair (Ms. Natalia Kusendova):** We will now turn it over to Mr. Fraser.

**Mr. John Fraser:** Thank you very much for your presentation—excellent. Around Bill 141, you just expressed a lot of clarity around your four points. I think it's really very helpful for us. I think we all know it, but you've expressed it with a lot of clarity. I think it's critical that we get it to 911 or dispatch; it has to be there. We have to somehow try to build some strength around that in the bill, along with the other things.

I want to ask you a question about Denmark. You have to have CPR and AED training. What is that training? Is it that you go online, you answer a bunch of questions? Is it that you go into an organization?

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**Dr. Mali Worme:** It's in-person training. From my understanding, it's actually at the same centre where you go to have your licence renewed. But it is in person and it is led by an expert. I don't know how long it lasts or if there's a test afterward, but I think the fact that you just have to renew your skills every few years, you get reintroduced to it—and it creates this culture within the community of education around heart health and around

how everyone can be a lifesaver. But the actual details around how many hours it is or how they're tested, I'm not sure of.

**Mr. John Fraser:** Yes. I would think it's probably limited—I'm glad that you said that it's limited in the sense that you've got a certain fixed period of time. What you're really hoping for is, people have the skills already, and when you're renewing your licence, you're renewing your skills. Maybe they had somebody like Fred—Fred's gone now—a dummy like Fred just to get people comfortable.

That's good, because I think there's an opportunity for us around creating, for government, some regulatory ability, regulatory room, to be able to look at some of these things. I'm glad that you've raised these things—and education as well. I really want to thank you for your presentation.

**Dr. Mali Worme:** Thank you.

**The Chair (Ms. Natalia Kusendova):** Okay. We will turn it over to the government with Mrs. Martin.

**Mrs. Robin Martin:** Thank you, Dr. Worme, for your presentation. It's very helpful. I have a number of questions. As you were talking, I was making note of all of them.

At one point, you told us about the story of that poor nine-year-old girl who didn't have the defibrillator, unfortunately, because the batteries were dead. We also had a very young man in here who had said his own experience was that he had no history of it, but all of the sudden, he had a sudden cardiac arrest. Can you tell us if you have any idea about what the numbers are, the percentage of young people who are affected? Because I think we tend to think about these things as something that happens to older people.

**Dr. Mali Worme:** We know that this is more common in older people. One of the stats that's given by the American Heart Association is that for people aged 35 and older in a public place where there are 1,000 people passing through per day—or say you have an office building, and that office building has 1,000 people in it per day, and that office building is open eight hours a day, five days a week, you can expect one sudden cardiac arrest in that office building every five years. So the numbers are not high. But we do know that cardiac arrest and cardiac disease is still a leading cause of death in Canada.

The number for younger people is less than that by a magnitude. It's not as high. I don't have a specific percentage in terms of children, but it is much lower.

**Mrs. Robin Martin:** I was just wondering, because we did have a presenter also in Sudbury who had lost a child to sudden cardiac arrest, and it struck me as something I would never have thought of.

**Dr. Mali Worme:** And often in children—the most common cause in adults is coronary disease, a sudden blockage of one of your coronary arteries; and that blood clot leads to a lack of oxygen to the heart, and as a result, the heart fibrillates and it quivers, and then you have no output to your brain and you drop down. In children, the most common cause is usually an inherited problem.

You're either born with an abnormal structure of your heart or you're born with an abnormal genetic mutation, so that the actual electrical channels in your heart aren't normal. So it's usually some form of congenital defect in kids as opposed to adults.

**Mrs. Robin Martin:** I've heard the term “arrhythmia.” Is that something that kids can be born with or does that come from having a malformed heart?

**Dr. Mali Worme:** The way I think about it, without getting into too much detail—the arrhythmia pertains to an abnormal electrical rhythm in the heart. So sudden cardiac arrest is when you have an abnormal, disorganized electrical rhythm, and therefore the structure of the heart is not effective in pumping blood. Someone can be born with an inherited arrhythmia, and their parents may or may not have that same arrhythmia. What that predisposes to is, maybe the structure of their heart is completely normal, but the electricity is not normal. So the way it conducts electricity is prone to, potentially, a lethal heart rhythm.

**Mrs. Robin Martin:** Thank you for the education on that.

You also said a statistic about how there were 88 people who died in fires. I didn't catch how many people had sudden cardiac arrest that year.

**Dr. Mali Worme:** Every year in Ontario, it's about 7,000. We know that the survival of those, when it's out of hospital, is about 10%. So the majority of those die.

**Mrs. Robin Martin:** But the year that 88 died from fire, how many died from sudden—

**Dr. Mali Worme:** It was over 5,000.

**Mrs. Robin Martin:** Over 5,000. Okay. I was wondering, because you said it and I didn't get it down.

If we have the EMS dispatch the way you'd like to see it with Bill 141, you said that what would change is we would have somebody also search the registry and direct the bystander to the nearest AED, which I think is what we want to happen, and that person could then also apply the AED, who may also be doing CPR. There could be two people involved.

How much time do you think it will take? I know it depends on how far the AED is. But assuming that they are signed and available with some closeness, proximity, do you think that we can get an AED to a person in five minutes, in eight minutes? I'm trying to see if these extra steps are going to happen in a timely enough way, do you think?

**Dr. Mali Worme:** Yes. That's a great question. There have been studies looking at implementation of public access defibrillation programs where these specific things have been studied. The real question is, can we get that AED there in less than eight minutes? We know if an AED is within 100 metres to 200 metres, you can get there and back, usually—if you're a relatively fit person—within three minutes. But, of course, it depends on the density of AEDs; it depends on whether we're in the Eaton Centre versus on a farm north of the city. But the hope would be that you can get there within eight minutes, and for a lot of these cases that would be feasible.

**Mrs. Robin Martin:** Okay. I have only one more question—

**The Chair (Ms. Natalia Kusendova):** Time is up, unfortunately.

Thank you so much for your presentation. Just as a reminder, the deadline for any written submissions is 6 p.m. today, which is in 45 minutes.

**Dr. Mali Worme:** Thank you so much for having me.

DR. MIA BERTIC

HEART AND STROKE FOUNDATION

**The Chair (Ms. Natalia Kusendova):** Now, for our last presenter of the day, I'd like to call Mia Bertic; and Liz Scanlon, from the Heart and Stroke Foundation. You have 10 minutes for your presentation, and you may begin now by stating your name on the record.

**Dr. Mia Bertic:** Sorry. I'm just trying to get this technology to work.

My name is Dr. Mia Bertic. I'm a critical care cardiology fellow at the University of Toronto and a cardiologist. I look after patients who have out-of-hospital cardiac arrest.

Did you want to start while I get this—

**Ms. Liz Scanlon:** Sure, sure. My name is Liz Scanlon. I am senior manager of public affairs at Heart and Stroke in Ontario.

I'll kick it off by actually just stating that I wanted to acknowledge that when we first scheduled these hearings on February 20, it would have been the 20th birthday of a young man by the name of Andrew Stoddart, who died of a cardiac arrest in 2015 in Kintore, Ontario. His mom, Cara, asked me to acknowledge his legacy and remind you of the work that they have done to get AEDs into as many communities in Ontario as possible since 2015. I wanted to just acknowledge that would have been a very special day for her. But I know that she's watching and listening and hoping that we can get this across the finish line.

I also wanted to acknowledge the work of MPPs Martin, Gélinas and Fraser in this work. From Heart and Stroke's perspective, it's been tremendous to see you come together and work to move this ahead. So we thank you for that.

It was about a year ago, actually, that we were here for our Heart at the Park event, where we first launched our advocacy around the creation of an AED registry integrated with 911. As part of that event, we brought, of course, our board members and our staff and our volunteers, but we brought two gentlemen who were both cardiac arrest survivors who told their stories to many of you when we met with you.

I wanted to highlight a particular moment that happened on that day during our reception, when I had a chance to introduce these two gentlemen to each other, Will and Stephen. They had both been saved by someone who was a bystander who could use CPR and the AED that was available. Neither of them had ever met anyone before

who'd been through what they'd been through and survived. For me, it was a big, eye-opening moment to recognize just how rare it is to come through a sudden cardiac arrest outside of hospital. So for them to connect and share their experiences was a really big eye-opener for me that the work that we're doing today is really important.

We have a written submission on the part of Heart and Stroke that we've provided, and I think that the recommendations that we've made are very much in line with others that you've seen. I just wanted to highlight two that I think are important from our perspective that will, I hope, streamline and ease the process of this registry for the venue owners that we think are very important and a key stakeholder in this.

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One of them is that we would like to ask you to consider a platform similar to the voluntary registries that exist in BC and Alberta that allow venue owners to register their AEDs online. They can then be ready to streamline that administration process and be able to take care of that process themselves, but it also allows for the venue owners to be reminded automatically when updates and maintenance is needed to the unit. I think that's an important feature.

The other thing that we wanted to ask you to consider is to somehow mandate, as part of the regulation, that venue owners are required to ensure that there is a basic awareness of AED use in their venues when they're dealing with employees, whoever is there on the site, so that there's someone there who's actually ready and prepared in the moment to provide the support that is necessary.

Those are the two recommendations that I wanted to highlight from our submission, but also to spend a minute just going over the basics. We need a mandatory registry. We need one that is integrated with 911 dispatch so that communications officers can direct people to the nearest AED, and we need it to mandate the upkeep and maintenance of those units as well, so they're always rescue-ready.

**Dr. Mia Bertic:** All right, I'll take it over. Thank you. I do not have any relevant disclosures.

You've heard multiple times today that defibrillators save lives. I just want to bring your attention to this graph, because it highlights the fact that the earlier chains of survival that Dr. Katie Allan talked to you guys about earlier is extremely important. That means that out of 100 patients that have a cardiac arrest—there's a big highlighted circle there—60% actually don't even make it to hospital. That's because we're not performing CPR or we're not defibrillating patients in time. That's a great proportion of patients who are not even making it to the hospital for us to see them.

Even if they do survive, unfortunately, the biggest problem with them is neurological recovery. Someone had asked a question earlier about what happens to these patients after three to five minutes. The fact is that their brain starts to die. So even though they may survive—those 10% that actually do survive—only 40% can return to their natural work environment and to normal life, which is not a big proportion of people. That's because

after three to five minutes the brain dies, and the average EMS arrival is about seven to eight minutes, so it's a long time.

From Ontario, there were these OPALS investigators who looked at the most important modifiable factor that will improve survival in out-of-hospital cardiac arrests. So how do we make that 60% grow? The way they found in their study was that CPR and AED use was the most profound thing that we can do.

How can the AED registry save lives? I know that this was reiterated before, but the fact that we can link AEDs to smart phone technology is extremely, extremely important. It actually brings this concept of a lay bystander to someone who is actually what I like to call a "try-stander." That's an individual who is willing to go and help. These are these smart phone applications—like one called Pulse-Point—where it can actually alert you to a cardiac arrest, and you're asked if you would want to be notified within 400 metres of a cardiac arrest. They've done a lot of different advertising campaigns, one particularly in BC, to promote the download of this application.

I want to bring your attention to this photo, because I turned on this application in Vancouver when I was there recently and then in Toronto. So I want to ask Toronto: Where are your AEDs? Because they're clearly not on this map. The biggest issue is that we have this costly device, an AED, that is completely underutilized and invisible to our population.

There are other ways we can use this AED registry. It's to determine why we're not using it, why we're failing to find the AEDs in our environment. The other big thing I want to bring up is the fact that we have no idea how valuable the information in an AED actually is. For a patient that I get to see and for a patient that comes from a cardiac arrest into the hospital, that piece of strip from the AED can actually help me solve the puzzle as to why they had a cardiac arrest.

I know you kept bringing up geographical mapping, but this is actually a geographic map in Ontario of different regions. There's Peel and Halton on that map. We can use this registry to maximize the effectiveness and deployment strategies of these AEDs.

I know someone is going to ask me whether or not people actually come to these alerts. There was a study: When there were 52 out-of-hospital cardiac arrests, an average of 11 people came to help, and in 21 of those 52 situations they arrived before EMS.

I think I'm running out of time.

**Mr. John Fraser:** Don't rush.

**Dr. Mia Bertic:** I just want to bring up the importance—that defibrillators really do save lives. That 60% is those patients who are truly a population that we're missing right now.

Questions?

**The Chair (Ms. Natalia Kusendova):** You still have two and a half minutes.

**Dr. Mia Bertic:** I do? Oh, my goodness. Okay. I could talk forever about cardiac arrest, but I'm losing my voice also.

**Mr. John Fraser:** Thank you—

**The Chair (Ms. Natalia Kusendova):** Mr. Fraser, you have six minutes.

**Mr. John Fraser:** Sorry, Chair. I should have waited for you.

Thanks very much for your presentation. It's pretty clear, with the end of presentations today—we had some in Sudbury as well—the things we need to do. We need a registry. They need to be maintained. People need to find where they are.

One of things I want to mention is education. If everybody has had a chance to come out and align those four things that are kind of critical—I know you mentioned education as well. I'm thinking it's just a wise thing for us to do, to provide ourselves some latitude in the legislation, or in the regulation-making ability, to make sure that people are trained and that we overcome AED hesitancy and CPR hesitancy.

I don't know if you have any thoughts about that. That's really my only question.

**Dr. Mia Bertic:** I do, actually. I looked at a recent study that showed that people who are actually bystander-trained were three times more likely to help during the time of a cardiac arrest. So I think having people trained will also help significantly.

There are statistics out there. We quote Denmark a lot because Denmark is sort of the benchmark. Our bystander rates right now in Ontario rest around 30%. In Denmark, they're 86%. It's incredible what they're able to do.

How they were able to do that, like Dr. Worme mentioned, was that they had mandatory CPR training not only in schools, but also when you get your driver's licence. They're pretty incredible things that they're doing, and I think there's no reason why we can't do that here as well.

**Ms. Liz Scanlon:** I would add one thing, which is that we did some very simple public polling in September at Heart and Stroke, just to understand what barriers people identified. Certainly, feeling that you were not sufficiently trained or not prepared to use an AED was the number one thing that came up in the public opinion polling we did. So that is a big barrier.

I think it's important that we recognize that these are not—you don't have to spend a weekend immersed in AED use, right? These are devices that are very simple; they're easy to use. We want people to have that barrier broken down. We want people to be trained, but we want people to understand that anyone can make use of these.

**Mr. John Fraser:** Okay. Because when you do think about it, applying a shock to anybody—people may be hesitant to do that. You're taking a device that you've maybe never touched before and you're placing it on a person you probably don't know—you can understand why people are hesitant. We have to find some way of making it more normal to do that.

**Dr. Mia Bertic:** I don't know if any of you has brought up the Chase McEachern Act, which exists in Ontario. It's a piece of legislation that protects people using the defibrillator. It's actually very unique in that I think it is only Ontario and Manitoba that have this liability

protection act. It's a valuable tool that we have here when people ask us about this.

**Mr. John Fraser:** The real challenge is when you create laws like the Chase McEachern Act and people don't know, right? People don't know that they aren't liable. My former boss passed a bill that limited liability on donations of food in 1994. People still think, even though there has been another bill passed, that they could be liable when they're donating food to a thing like a food bank. It's that socialization of, not just the act, but also what your rights and responsibilities are in those situations.

We like to think that everybody wants to help get people on a safe path when you run across somebody who is suffering, or suffering a heart attack, or suffering in any way. I think there's an opportunity for us in that.

I wanted to tell you that I appreciate very much you taking the time to come here late on a Tuesday afternoon to present to us. Thanks very much for your work.

**M<sup>me</sup> France Gélinas:** It's Monday.

**Mr. John Fraser:** Monday? That's how late it is.

**Dr. Mia Bertic:** It's Tuesday for some of us.

**Mr. John Fraser:** Is it Tuesday? What a day. No, I'm already ahead to clause-by-clause. There we go.

I would like to correct my record: It's Monday.

Thank you very much.

**The Chair (Ms. Natalia Kusendova):** Thank you. I will now turn it over to the government. We begin with Mr. Harris.

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**Mr. Mike Harris:** There has been a lot of talk about Denmark today. I was hoping you might be able to provide a little bit more information as to what they're doing. Denmark is a country of, I think, about six million people, so a little less than half the size of Ontario. It's probably geographically about the size of southwestern Ontario. And it's very heavily regulated by their federal government, which administers, I would say, most of their laws and regulations. How do you think a system that is in Denmark could potentially translate to something here?

**Dr. Mia Bertic:** I think the lowest-hanging fruit here is mandating CPR training and AED training in high schools. We know it exists, but it's not being enacted, like Dr. Katie Allan said, or enforced. I think that is actually the lowest-hanging fruit.

Another good strategy they employed was actually mandating CPR/AED training when you get your driver's licence. I think those are two easily implemented things that could improve survival. Those are the main two things they did, and that worked for them.

Some things that have worked in other places, like in BC and Seattle, is having these no-no-go protocols, where it's dispatch-prompted CPR and dispatch-prompted AED use. It's where paramedics, on the phone, ask simple questions: Are they breathing? Is there a pulse? If the answer is no to those two questions, you just immediately initiate CPR and attempt to look for an AED. It's very simple.

I think a lot of it is related to education, and I think that is the lowest-hanging fruit for enacting what Denmark has been able to do.

**Mr. Mike Harris:** Listen, I agree with you on the education piece within the school system because we already kind of have that framework there and it would be a lot easier to implement, but I do see some concerns with implementation with having to look at something like that when you're renewing, say, a driver's licence.

**Dr. Mia Bertic:** Right.

**Mr. Mike Harris:** Just from the wide geographical standpoint that we have here in the province, it would be up to DriveTest, theoretically, because that's where you go to do your driver's licence, to then have to offer that additional course. I wonder if you've given any thought to what that could look like moving forward.

**Dr. Mia Bertic:** Absolutely. So thinking about it, moving forward, there are two types of CPR we can give. We can do compression-only CPR, or compression and mouth-to-mouth. If we encourage compression-only CPR—a lot of studies have shown similar outcomes between mouth-to-mouth and compression-only—I think that's one way of preventing some of these barriers. I know it's not to education, but it is one of the barriers to performing CPR and even AED and educating people.

I think showing people instructional videos is very helpful. These apps like PulsePoint—when you go to their home page, it actually shows you exactly how to do CPR, and it's not very difficult.

Where it can be difficult in certain people are those who are older, who are frail, being able to get the depth you need to actually get good compressions. But I think showing people a video and then showing people a device when they're getting a driver's licence and how to apply two stickers—I don't think that's a huge initiative. I don't think everybody should undergo full basic life support training; I think that's a big ask—

**Mr. Mike Harris:** I guess that was more my question.

**Dr. Mia Bertic:** Yes. I think basic life support should be taught in schools, but I think having a five-minute instructional video on how to place pads and how to do proper chest compressions—I think anybody can pay attention to that.

**Mr. Mike Harris:** Sure.

**The Chair (Ms. Natalia Kusendova):** Ms. Martin.

**Mrs. Robin Martin:** Thank you for your presentations, both of you. One of the things I meant to ask before and I didn't, and maybe you can help me, is that the strip from the AED has important information, you said. How does that get—I know sometimes it doesn't, but ideally how does it get to the medical provider? Do the paramedics take it when they're there, or how can you get that information?

**Dr. Mia Bertic:** Currently, we have one paramedic who manually does this from our AEDs, but these are paramedic EMS AEDs. The ones that are used by the public: We have actually no way of getting the information.

I did my cardiology training in Vancouver, and there was an individual who was able to extract the information for us from the devices, so we were able to get even the public defibrillators to provide us with information. Right now, it's just Paul doing most of the hard work—

*Interjection.*

**Dr. Mia Bertic:** Yes, you do it with the public as well.

**Mrs. Robin Martin:** I suppose there's a way we could make that happen.

**Dr. Mia Bertic:** Much easier than him having to go in and physically get that information. That's why a lot of that artificial intelligence and the technology that was brought up earlier is extremely important, because the strip provides us with valuable information. A lot of the time we will do genetic testing on these patients. We'll do all of the cardiac workup and we still won't be able to explain to a 21-year-old why he had a cardiac arrest. And that's a frightening, frightening thing for that 21-year-old. But sometimes we can see things on the defibrillator, patterns that happen when they manage to get circulation back, or even during the time of the arrest, that would be extremely helpful to that puzzle.

**Mrs. Robin Martin:** And I would imagine you would want it as soon as you could get it.

**Dr. Mia Bertic:** Yes. We would try to get it as soon as possible.

**Mrs. Robin Martin:** The other point is, one of the hesitations people have is because they're afraid they are going to hurt the person. I think we can cover the Chase McEachern Act by putting something on the defibrillator, on the box, or something that says, "No liability due to Chase McEachern Act," so people have that in front of their face, so they don't have to worry about that. But people are concerned that they can hurt somebody. I know you look for, "Is there a pulse and is there any breathing?" If you apply the defibrillator in those circumstances, you are not going to hurt them because they don't have a pulse and they're not breathing, and if you don't apply the defibrillator they're not going to be breathing. Is that the idea?

**Dr. Mia Bertic:** Yes. So, when you put the defibrillator on, it's a very smart device. It will say "shock" or "don't shock." If it says "don't shock," it will actually tell you to continue CPR. So, if you shock them when it's telling you to continue CPR, there's still not a chance that you're going to hurt them because the rhythm that it's detecting doesn't get harmed by a shock—unless they've returned circulation, they've woken up and then you shock them, then that's bad. But otherwise, it's not that harmful. So applying and just following the two instructions that they give you on the machine is not harmful for anyone. The machine is extremely accurate in detecting those rhythms.

**Mrs. Robin Martin:** And fool-proof would prevent you from doing the other shock, because it would tell you not to shock—

**Dr. Mia Bertic:** Exactly. It says, "Do not advise shock."

**The Chair (Ms. Natalia Kusendova):** Thirty seconds.

**Mrs. Robin Martin:** Liz, you mentioned two places where you can register online. One was BC, and I didn't catch the second.

**Ms. Liz Scanlon:** Alberta.

**Mrs. Robin Martin:** Alberta, okay. Thank you.

**The Chair (Ms. Natalia Kusendova):** Thank you very much. We will now turn it over to the official opposition. Mr. Kernaghan.

**Mr. Terence Kernaghan:** Thank you, Chair. In Sudbury, we heard from people presenting, and they had a very good point when discussing the Chase McEachern Act. They said, "The person is dead; you can't hurt them."

**Dr. Mia Bertic:** Exactly.

**Mr. Terence Kernaghan:** That leads into the importance of a public awareness campaign about AEDs and their usage.

Denmark seems to be coming up a lot today. Is it a place—

**Dr. Mia Bertic:** It's a popular place.

**Mr. Terence Kernaghan:** What's that?

**Dr. Mia Bertic:** It's a popular place.

**Mr. Terence Kernaghan:** It is. With some of the happiest people on Earth. They also have high taxes, yet they have great services, so there you have it.

When we discuss the curriculum, any aspect of the curriculum here in Ontario is really not mandated. Teachers are not necessarily mandated to teach something. Are you familiar with the test EQAO?

**Dr. Mia Bertic:** No.

**Mr. Terence Kernaghan:** Okay. I was just wondering. It's a non-standardized test that is administered at grades 3, 6 and 9 to Ontario's students, and it costs a great deal of money, in the hundreds of millions of dollars. What do you think would be of greater value: Replacing that with defibrillator and CPR training, or continuing with this test?

**Dr. Mia Bertic:** I'm not sure what is actually in the test. If it's mathematics and grammar, then—

**Mr. Terence Kernaghan:** It's mathematics and literacy.

**Dr. Mia Bertic:** I think we should stick to the original plan. But I do think that an important part of including that testing would be a mandatory checkbox on your grade 12 report card that says, "I have completed CPR training," and that it's sort of a mandatory check mark for graduation. Denmark has that. They can't graduate without having that on their report card. But I'm not familiar with that other testing.

**Mr. Terence Kernaghan:** That's okay.

**La Présidente (M<sup>me</sup> Natalia Kusendova):** Madame Gélinas.

**M<sup>me</sup> France Gélinas:** I like this check mark before you graduate. Not only do you need so many hours of volunteer work, and you need English, but you also need to know CPR and how to administer an AED. Are there jurisdictions in Canada that do that and do that well, and how do they do this?

**Dr. Mia Bertic:** I'm not familiar with any jurisdiction here that currently does that. It's not mandated so it's not—

**M<sup>me</sup> France Gélinas:** It's not mandated. The only one that mandates it is Denmark?

**Dr. Mia Bertic:** And Washington. They have a program. Actually, when I looked at our neighbours to the south—not that they're always exemplary, not always great examples—they actually have mandatory CPR training in their schools, but it's also not enforced, so it's similar to Ontario. The enforcement rates vary from 1% to 70%. It's very, very variable.

**M<sup>me</sup> France Gélinas:** We need to do better. My second is about mapping. I come from northern Ontario. Do you know if what Dr. Timothy Chan did would also apply to northern Ontario?

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**Dr. Mia Bertic:** Absolutely. This particular map—what you're looking at here is: The red dots represent cardiac arrests, and the blue circles—it's hard to see on that image—are actually drone networks, so where they would actually place a drone to deliver an AED. We've talked a lot about static AEDs, so AEDs that are staying in a place they are not utilized. This map looks at AEDs being delivered by drones into different areas. That means that when people who are further away from EMS collapse and have a cardiac arrest, these drones can actually get there quicker than EMS. That's why they're existing. They can travel 50 to 60 miles per hour and drop off this defibrillator to a person, to help. We've noticed that, if you live on the 20th condo floor or above, your chance of survival decreases by 30%. These drones are also meant to travel up to these condos and deliver, if applicable, on balconies.

Actually, in Peel, they're piloting a drone project. I'm not sure if that has come off the ground, but this is the way they're trying to use this geographical mapping of cardiac arrest to deliver AEDs that are not static but actually can be deployed.

Another big factor: In Toronto, it's hard because of the air traffic control situation. But if you can imagine somebody having a cardiac arrest in their car on the Gardiner Expressway, there's a way that this drone could bypass all of the traffic and actually deliver the defibrillator through that traffic and into the highway.

There's an incredible amount of technology that I wanted to bring to your attention that's extremely interesting. We just have to be able to know where these arrests are happening and where we have our defibrillators, and then we can move into the 21st century with some of our things and some of our technologies.

**M<sup>me</sup> France Gélinas:** The one that is being piloted in Peel: Who drives those little drones?

**Dr. Mia Bertic:** I think it's the paramedics.

**M<sup>me</sup> France Gélinas:** The paramedics send it?

**Mr. Paul Snobelen:** Yes.

**Dr. Mia Bertic:** It's Paul.

**M<sup>me</sup> France Gélinas:** It's Paul? I knew we should clone him.

**Dr. Mia Bertic:** It's really interesting in that they actually are equipped with cameras as well, so they can assist the person with bystander CPR and assist with the chest compression quality, and if they're doing it correctly

and accurately. It's incredible, what's available out there. Actually, they have drone-delivery AEDs in Sweden, and it has been a really successful campaign for them.

**M<sup>me</sup> France Gélinas:** Oh, wow. I've never heard of this. In an area I represent, where there are bigger distances and lower density of people, this could be very useful. But at the end of the day, it's still the arena, the Tim Hortons, the places where people gather, where the chances of a sudden cardiac arrest are still the highest.

Have you looked at the fiscal penalty that we have put in the bill? Some people think that we have gone too high—the-carrot-and-stick kind of thing—and we could have a penalty to ensure rigour but maybe not to the point of what we've got in the bill. Did you have a comment on that?

**Dr. Mia Bertic:** I'm very in line with Dr. Katie Allan, who spoke to you earlier. I'm of the same opinion. I think if you have a resource like this, you should enforce it and use it properly. I think that the penalties are fair.

**M<sup>me</sup> France Gélinas:** They are fair at the amount that we have them?

**Dr. Mia Bertic:** Yes.

**M<sup>me</sup> France Gélinas:** Okay. And then public and private: We've been told that, for the government buildings, municipal buildings, etc., it's a given that they will go into the registry. For the private, do you have any fear that if we mandate them and they know that there are penalties, some of them will just say, "No, thank you"?

**Dr. Mia Bertic:** I think if you own a defibrillator in your private home, you should be able to opt out. You don't want strangers coming to your door asking for your defibrillator, and I think that's a completely reasonable thing. For venues like Tim Hortons or other small businesses, I think that they should be required to report their AED and have it available for use.

**M<sup>me</sup> France Gélinas:** We've talked about making it that if you have—and I'll draw the number—200 employees, then we should make it mandatory that they also have an AED available and, second, that you have a person trained who knows how to use an AED. Have you given that any thought?

**Dr. Mia Bertic:** Yes. I think that per 50 employees there should be one person who is trained to use an AED and who has an AED action plan.

I don't know if you have anything to add to that—

**The Chair (Ms. Natalia Kusendova):** I'm so sorry, but the time is up. Thank you very much.

**Dr. Mia Bertic:** Thanks.

**Ms. Liz Scanlon:** Thanks.

**The Chair (Ms. Natalia Kusendova):** Just as a reminder, the deadline to submit anything in writing is today, in about 17 minutes, at 6 p.m. Thank you so much for being here.

Members, today has certainly been fascinating. For myself, as a health care provider, I've actually learned a lot, so I'm sure that you found it very informative.

I think the Basic Life Support course is something that each and every one of us should take. I am renewing mine tonight, ironically. I was looking at my schedule and there



it is: “BLS renewal.” I encourage each and every one of you to look into that. It’s offered by the Canadian Red Cross or by the Heart and Stroke Foundation. I think we should put our money where our mouth is and get this done.

This concludes our public hearings on Bill 141. As a reminder to members, the deadline to file amendments to the bill with the Clerk of the Committee is tonight at 7 p.m.

If there are no questions or comments—Ms. Hogarth.

**Ms. Christine Hogarth:** I just had a question: Is there a defibrillator in this building, and do we all know where it is?

**The Chair (Ms. Natalia Kusendova):** Yes, there is one. It’s right beside the legislative chamber. When you leave, it’s on the left side. It’s labelled. We should check if the expiry date is good, and we should check that it is on the registry.

**Ms. Christine Hogarth:** And we should all know.

**The Chair (Ms. Natalia Kusendova):** Absolutely. Are there any further comments or questions?

This committee stands adjourned until 4 p.m. tomorrow, February 25, when we will meet for the clause-by-clause consideration of Bill 141.

*The committee adjourned at 1746.*





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