

**IN THE MATTER OF THE THOMAS R. BRAIDWOOD, Q.C.,  
COMMISSIONS OF INQUIRY UNDER THE *PUBLIC INQUIRY ACT*,  
SBC 2007, c. 9**

Federal Courthouse  
Rooms 715 and 701  
701 West Georgia Street  
Vancouver, B.C.

June 25, 2008

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PROCEEDINGS AT  
FORUM (DAY 15)

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**COPY**

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Commissioner:	T.R. Braidwood, Q.C.
Commission Counsel:	A. Vertlieb, Q.C.
Court Recorder:	P. Kealy, C.V.R., C.M.
Transcriber:	P. Kealy

1  
William P. Bozeman, MD (Manufacturer presenter)  
Questions by Mr. Vertlieb

1 Vancouver, B.C.  
2 June 25, 2008  
3

4 THE COMMISSIONER: Counsel, are we able to proceed?  
5 MR. VERTLIEB: I understand, Mr. Commissioner, that we  
6 have Dr. Bozeman on the line.  
7

8 DR. WILLIAM P. BOZEMAN, a  
9 Manufacturer presenter (via  
10 telephone conference).  
11

12 Dr. Bozeman, are you hearing us well?

13 A I can hear you well.

14 MR. VERTLIEB: Okay, sir.

15 THE COMMISSIONER: Good morning, Dr. Bozeman.

16 A Good morning. How is everyone?

17 THE COMMISSIONER: Just fine. Thank you very much for  
18 taking the time to do this presentation for us.

19 A My pleasure.

20 MR. VERTLIEB: Now, Dr. Bozeman, what we've been doing  
21 in these forums is just briefly going through your  
22 background and then inviting you to make your  
23 presentation. I'm sure you've spoken with people  
24 about the timing of all of this, so I won't  
25 belabour that.  
26

27 QUESTIONS BY MR. VERTLIEB:  
28

29 Q We understand from your résumé that you have a  
30 medical degree, graduating in 1992, from the  
31 University of South Carolina; is that correct?

32 A That's correct.

33 Q And then you did some residency for emergency  
34 medicine at Johns Hopkins from nineteen --

35 A That's also correct.

36 Q -- 1992 to 1995; is that correct?

37 A That's also correct.

38 Q And you have really now been involved full time, I  
39 gather, as an emergency room physician?

40 A I have, although I also underwent some specialty  
41 training in trauma and critical care, and that's  
42 called a fellowship at the end of a residency.

43 Q And where are you licensed to practise medicine?

44 A I'm currently licensed to practice medicine in  
45 North Carolina only, and that's where I practise  
46 full time.

47 Q And so right now we're speaking to you in North

2

William P. Bozeman, MD (Manufacturer presenter)  
Questions by Mr. Vertlieb  
Presentation

1 Carolina?

2 A That's correct.

3 Q Well, Dr. Bozeman, we've seen written material  
4 from you and the Commissioner has all of this, and  
5 he will be free to read it all at his pleasure. I  
6 think it would be fair now just to invite you to  
7 make your presentation. Tell us, sir,  
8 approximately how long you think you would need  
9 for your presentation.

10 A Well, I see that we are starting a bit late and  
11 I'll be happy to try to make it fairly fast if you  
12 like.

13 THE COMMISSIONER: All right. Thank you very much,  
14 doctor.

15 A I do have a question. I had sent along some  
16 slides. Are you all able to see the slide set?

17 THE COMMISSIONER: Yes, it says "Safety and  
18 Epidemiology of Conducted Electrical Weapons."

19 A Excellent. If I could ask the favour of someone  
20 pressing the button from time to time when I  
21 indicate, then we can all go through the slides  
22 together and I think it may be helpful in  
23 understanding the things I'm about to cover.

24 THE COMMISSIONER: Yes, that's all underway.

25 A Excellent.

26

27 PRESENTATION BY DR. BOZEMAN:

28

29 A Well, thank you for having me, and I do appreciate  
30 it and I'm happy to contribute what I can. If you  
31 go to the second slide, I would like to disclose  
32 that I do have funding for my research through the  
33 United States Department of Justice/the National  
34 Institute of Justice. I have not had any funding  
35 through TASER International and I have no  
36 financial interest in them or any of the other  
37 manufacturers of these weapons.

38 At slide number 3, I will not belabour any of  
39 the points because I know that the Commissioner  
40 and all of the people there in the room are very  
41 familiar with these electrical weapons that are  
42 very commonly used. They do have some apparent  
43 benefits. They may decrease overall injuries.  
44 But like all weapons, they do have the potential  
45 to cause injuries. Those injuries can be direct,  
46 through the sharp probes, through muscle  
47 contraction injuries, or possibly occasionally

1 through ignition of flammable vapours. They also  
2 can cause indirect injuries by causing falls,  
3 which are very common.

4 Most of the controversy, though, has been  
5 over the potential for cardiac effects and their  
6 role, if any, in sudden unexpected deaths.

7 If you'll move along to slide 4, I know that  
8 you've heard from a number of the researchers, all  
9 of whom have made significant contributions. The  
10 animal studies that are done are extremely  
11 important, and the studies in healthy human  
12 volunteers are also extremely important. They've  
13 allowed us to define the physiology of these  
14 weapons.

15 But it's also very important to  
16 understand - and we realized this several years  
17 ago - that the results of all this work may not  
18 apply to the population of interest. That  
19 population, of course, is the group of criminal  
20 suspects or individuals who come into contact with  
21 police agencies and officers and have the  
22 potential to have these weapons used against them.  
23 There are certain medical and psychiatric  
24 conditions that we just can't replicate in healthy  
25 human volunteers or in animal studies. There are  
26 exertion and metabolic states that we don't fully  
27 understand and we certainly can't reproduce fully,  
28 although we can model them. We have seen some of  
29 those that are very valuable.

30 Also the medications that are prescribed and  
31 the drugs - both legal like alcohol, and illicit  
32 drugs - are all things that we really can't  
33 reproduce in the laboratory setting. And all of  
34 these things may put this population at increased  
35 risk.

36 So if you go on to slide number 5, that's the  
37 real question, is what is the risk of these  
38 weapons in our population, in the group of people  
39 who may come into contact with police officers and  
40 have these weapons used against them?

41 Now, from a research standpoint, we express  
42 that risk in terms of percentage. And to do that,  
43 we have to understand the epidemiology and perform  
44 studies that give us a denominator to tell us the  
45 number of injuries or deaths and the proportion of  
46 that in the times that they're used. The only way  
47 to do this is through injury epidemiology studies

1 in real world conditions. We realized this in, I  
2 believe, 2001-2002. We realized that it would  
3 have to be a large study and an independent study.  
4 So that's what we designed and proposed to the  
5 National Institute of Justice.

6 On slide 6, you'll see the formal title of  
7 the study, which is a little bit long, and because  
8 of that we typically just call it the "Less Lethal  
9 Weapons Study."

10 Moving on to slide 7, that study is a  
11 prospective, multicentre trial in the real world.  
12 We recruited six agencies from across the United  
13 States, and those agencies varied in their size,  
14 location, their population and their policies for  
15 using the weapons. We did this intentionally  
16 because we wanted a good representative sample  
17 that would apply to populations across the  
18 continent. We wanted good external validity, in  
19 other words, to use the research term.

20 Now, each of these agencies had to have  
21 certain characteristics. They used the weapons,  
22 of course. They had to provide a medical  
23 screening examination to every subject after the  
24 weapons were used. Now, that medical screening  
25 could be provided by a nurse, for example a jail  
26 intake nurse, it could be provided by a paramedic  
27 at the scene, or it could be provided by an  
28 emergency physician or other physician at an  
29 emergency department.

30 Each of the participating agencies also had  
31 to have a tactical physician. Now, that's a  
32 physician, as I am, that volunteers with a police  
33 agency to provide medical support for their SWAT  
34 team or tactical team. And that's a very  
35 important part of it because that physician brings  
36 the qualifications of a physician but also has  
37 access to these internal confidential police  
38 department documents.

39 If you move on to slide 8, the study captured  
40 each of the electrical weapon uses through a  
41 mandatory use of force review process, and in each  
42 agency that had to be a very mature process. They  
43 had to be absolutely confident that they would  
44 capture all of the uses.

45 And the agency utilized the federal privacy  
46 statutes in the United States, the provision that  
47 allows them to collect medical records if it's

1 done as part of their use of force investigation.

2 Now, with all of those things in place, a  
3 physician, that tactical physician, was able to  
4 review each of the cases where a conducted  
5 electrical weapon was used. That physician had  
6 access to both the police records and the medical  
7 records. And that was our site physician, who  
8 reviewed all those details, recorded them on a  
9 de-identified case report form, and sent them here  
10 to us at Wake Forest. I could not tell you the  
11 name of any of the subjects at any of our sites  
12 because I don't have those identifying factors.  
13 I only have the deployment details and the injury  
14 classifications.

15 Now, on the next slide, number 9, you'll see  
16 the injury classification scheme that we used.  
17 It's intuitive; it's very straightforward. But  
18 it's also very important - and a limitation of a  
19 few of the previous studies - that injuries were  
20 classified in a binary fashion. They were either  
21 present or absent. And that's a start. But as a  
22 physician and someone who may be involved in  
23 making policy, I'm sure that we're all interested  
24 much more in the dangerous injuries. And a little  
25 scrape or abrasion or something that needs a  
26 stitch is very, very different from a life-  
27 threatening injury or from a death that's actually  
28 related to the weapons.

29 So you'll see there on the table that mild  
30 injuries, such as abrasions and contusions and  
31 minor lacerations, all had in common: they were  
32 treated as an outpatient, you did not have to be  
33 admitted to the hospital, and there was mild or no  
34 long-term disability associated or expected with  
35 the injury.

36 The moderate injuries needed admission to the  
37 hospital and/or they had some potential for long-  
38 term disability. Those would be things like a  
39 long bone fracture of an arm or a leg, a hemo-  
40 pneumothorax, a collapsed lung. You might have to  
41 have a chest tube and be admitted to the hospital.

42 Severe injuries, of course, required  
43 in-patient treatment and had severe long-term  
44 disability or a threat to life, such as a severe  
45 head injury, loss of limb or eye, or a heart  
46 rhythm problem.

47 Moving on to slide 10, I'll skip all the rest

1 of the details and tell you what we found. Over  
2 a two-year period, there were 962 uses of a  
3 conducted electrical weapon among these six  
4 agencies. The demographics are fairly familiar to  
5 you, I'm sure, because they're just what the other  
6 studies have found. They tend to be largely male,  
7 94 percent. The mean age was 32 years, and you'll  
8 see on the graph there the age histogram. The  
9 large majority were in their 20s and 30s. The  
10 average height was five feet, nine inches; the  
11 average weight was 184 pounds. And two-thirds of  
12 them had alcohol or drugs involved.

13 Moving on to number 11, we were able for the  
14 first time to document real world use patterns of  
15 these weapons, and we saw that in two-thirds of  
16 the cases, they were used in the probe mode, where  
17 you fire the two projectiles out of the end of the  
18 weapon. In just over a quarter of the cases, they  
19 were used in the drive stun mode, where you reach  
20 out and touch them like a stun gun, without firing  
21 the probes. And in the remaining few percent,  
22 they were used in both, and that was typically  
23 when the probes were fired but not effective and  
24 then used in drive stun.

25 On average, the number of discharges or  
26 cycles that were used in the probe mode was 1.6  
27 cycles, and the drive stun was 1.8 cycles.

28 Slide 12. The body impact areas where the  
29 actual electrical charge was delivered to the body  
30 was most commonly at the trunk, 76 percent, with  
31 the back followed by the chest followed by the  
32 abdomen and pelvis. The lower extremities were  
33 next followed by the upper extremities, and  
34 overall 22 percent of the charges were delivered  
35 to the extremities. And then from the clavicles  
36 up was termed the neck, head and face, and that  
37 was just under 2 percent. And just six cases had  
38 a probe or drive stun in the genital area  
39 somewhere. We termed those the sensitive areas,  
40 and that was 2.5 percent overall.

41 On slide 13, the next one, here's our main  
42 results page, and this is the very important  
43 finding that we see in this first study of real  
44 world uses. And that is that 99.7 percent of  
45 these real world criminal suspects had either no  
46 injuries identified or mild injuries only. And  
47 you'll see at the right there the confidence

1 interval that I believe you're familiar with. We  
2 know with 95 percent confidence the actual number  
3 in a population like this would be between 99.1  
4 percent and 99.9 percent.

5 Now, the details of the mild injuries, the  
6 large majority at the bottom right box were  
7 puncture wounds, and that's typically where the  
8 probes struck the skin and were then pulled out,  
9 and they were able to identify a skin puncture.  
10 Of course the probes can also strike just the  
11 clothing and still deliver a shock.

12 The next most common was a contusion,  
13 followed by lacerations and a few other things  
14 like there was a chipped tooth and I believe there  
15 was a nosebleed.

16 The main group that we were looking for in  
17 our study was the group with significant injuries,  
18 and that was a composite of moderate and/or severe  
19 injuries. We saw that in three cases, just 0.3  
20 percent, and you'll see the confidence interval  
21 there as well.

22 If you move on to the next slide, number 14,  
23 here are the details of those three significant  
24 injuries. They occurred in three different  
25 subjects. One was a severe head injury. An  
26 epidural hematoma is a collection of blood outside  
27 the brain but inside the skull. That person  
28 received that in a fall and had to have a  
29 neurosurgical operation. He was of course  
30 admitted to the hospital, and he ultimately had a  
31 good outcome. But he did require admission and an  
32 operation.

33 The second head injury was an intracranial  
34 contusion or intraparenchymal contusion. That's a  
35 bruise on the brain. That was also suffered in a  
36 fall which was caused by the conducted electrical  
37 weapon. That was moderate in severity by our  
38 classification, by the physician's judgment. That  
39 person was admitted to the hospital, observed, did  
40 not need to have any surgeries or any other  
41 medical intervention, and was discharged with no  
42 deficits later.

43 The third case is the mystery case. That was  
44 a case of rhabdomyolysis. That's a medical  
45 condition of muscle breakdown. Now, we see that  
46 in heat injury patients. We see that in patients  
47 who are crushed. We see that in overexertion

1 injuries such as marathon runners. And that's  
2 where the muscles themselves actually are injured  
3 and then break down and release the contents of  
4 the muscles into the bloodstream. A typical  
5 complication of that is kidney failure. There was  
6 one case of rhabdomyolysis. It's certainly not  
7 clear to us that it was caused by the conducted  
8 electric weapon. There were several other factors  
9 that are all risk factors for rhabdo, including a  
10 very hot summer day, including prolonged struggle  
11 and exertion and a flight from the police  
12 officers, and including cocaine on board. In that  
13 case it was moderate. He needed to be admitted to  
14 the hospital. He had supportive care only. He  
15 did not need dialysis, and he was discharged  
16 later. So those were the three significant  
17 injuries.

18 In slide number 15, there were two deaths in  
19 custody, and we were very careful to look at these  
20 and consider whether they might be related to the  
21 weapon. Both of these were violent, combative  
22 males in their 30s. One of them had a history of  
23 mental illness; the other had a history of known  
24 drug use. In both of the cases, the Tasers were  
25 used and were ineffective, and the subjects  
26 continued to struggle purposefully several minutes  
27 afterwards. They were both taken into custody  
28 using physical force: wrestling, strikes,  
29 takedowns, et cetera. A baton was used in one and  
30 pepper spray was used in the other. Both of them  
31 were handcuffed. They collapsed several minutes  
32 later, about five minutes in one case and about 20  
33 minutes in the other.

34 Autopsies of course were performed. In one  
35 case, the autopsy showed a dilated cardiomyopathy,  
36 which is a heart condition, and cocaine in  
37 addition, and that was felt to be the cause of  
38 death. In the other case there was no specific  
39 cause of death found. However, the medical  
40 examiner felt, and the physician site investigator  
41 agreed, that because of the time course, the  
42 conducted electrical weapon was unlikely to be the  
43 cause of death.

44 On slide number 16, we focus on that a little  
45 bit more because of course that is incredibly  
46 important to the Commission and also to me as a  
47 researcher. The fact that we didn't see any

1 immediate in-custody deaths - and I know you've  
2 been briefed on the typical pattern of an  
3 electrical death would be immediate - shows that  
4 we saw an observed proportion of zero percent.  
5 Zero cases of an immediate death would suggest it  
6 was due to the electricity out of 962 cases.  
7 That's important. Now, it does not prove that it  
8 can't happen, but it informs us about the  
9 likelihood of it happening. And you can calculate  
10 that same 95 percent confidence interval, that the  
11 upper limit of the confidence interval is 0.3  
12 percent. You'll see a beautifully titled article  
13 from *JAMA* that mentions "If nothing goes wrong, is  
14 everything really all right?" And the answer is  
15 no, of course not. But information like this  
16 allows us to make risk assessments in the real  
17 world.

18 The next slide, number 17, this is our  
19 summary. This is the first large, independent  
20 study to show the risks of these weapons in real  
21 world use. One of the major objections or  
22 concerns about these weapons is that they are too  
23 risky. They pose too much of a threat. The  
24 bottom line in this study is that 99.7 percent of  
25 real world suspects who receive a shock from these  
26 weapons have either mild injuries or no injuries.  
27 And depending on whether you count the case of  
28 rhabdomyolysis - we do as a possibility - we can  
29 say that we saw an observed rate of 0.3 percent  
30 that suffered significant injuries. The ones that  
31 are clearly related to the weapon are caused by  
32 falls.

33 On slide number 18, a couple of points of  
34 discussion. First of all, the obvious conclusion  
35 is we were actually surprised that the rate was as  
36 low as we saw. The safety profile of these  
37 weapons appears to be remarkably good, and of  
38 course it's safer than being shot with a bullet.  
39 But it also appears to be safer, as we saw in a  
40 British study a couple of years ago, than the  
41 alternative options that might be used in those  
42 less than deadly force situations, things such as  
43 impact weapons, hand-to-hand combat techniques,  
44 things like pepper spray and the use of police  
45 dogs.

46 One of the things I like to emphasize,  
47 though, is that as a physician and as an emergency

1 physician, I am the one who may see these people  
2 in the emergency department. You can't decide  
3 that it's always safe, always. Any weapon can  
4 cause injuries. And these significant injuries,  
5 although they appear to be rare, they can occur.  
6 And any law enforcement agency that's using this  
7 weapon needs to acknowledge this, be prepared for  
8 it, and provide appropriate medical screening and  
9 care when a significant injury does occur.

10 Also another important point, and one that  
11 I'm sure the Commission is aware of, the weapon  
12 itself may be a marker. There may be an  
13 underlying condition that's a medical condition or  
14 a psychiatric condition that leads to the  
15 behaviour that results in the police interaction,  
16 and with or without the conducted electrical  
17 weapon being used, that behaviour may need medical  
18 screening and medical care, and that can be  
19 lifesaving screening and care.

20 On to number 19, and we're almost done. The  
21 current status of our study, because we're often  
22 asked, we released our initial results in  
23 September and presented in October. They're  
24 published in the September *Annals of Emergency*  
25 *Medicine*. The manuscript has been completed and  
26 is now in submission to a peer-reviewed medical  
27 journal. This is the largest dataset to date, and  
28 we feel that it's a valuable thing. The NIJ has  
29 provided us with continued funding and we are now  
30 treating this as an ongoing incident monitoring  
31 and injury surveillance database.

32 And on to number 20. With that I'll  
33 conclude, and I'll be happy to entertain any  
34 questions.

35 MR. VERTLIEB: Dr. Bozeman, it's Art Vertlieb, counsel.  
36 Unfortunately, because of the timing, we have  
37 three more people lined up to present in the next  
38 hour and ten minutes, plus we have more presenters  
39 lined up as well. So given the time constraints,  
40 I'm not going to ask you any questions. We have  
41 your material, and I very much appreciate what  
42 you've done this morning.

43 THE COMMISSIONER: Doctor, this is the Commissioner  
44 speaking. I must say that your presentation has  
45 been very concise, very clear, and very  
46 informative, and I thank you very much.

47 A Thank you, Mr. Braidwood, and I'm happy to

11  
Christian M. Sloane, MD (Manufacturer presenter)  
Questions by Mr. Vertlieb

1 contribute whatever I can.

2

3

(PRESENTER EXCUSED)

4

5

THE COMMISSIONER: All right, then. We'll have a short adjournment.

6

7

8

(PROCEEDINGS ADJOURNED)

9

(PROCEEDINGS RECONVENED)

10

THE COMMISSIONER: Yes, counsel.

11

MR. VERTLIEB: We have Dr. Sloane, Mr. Commissioner, who's on the phone.

12

13

14

DR. CHRISTIAN M. SLOANE, a  
Manufacturer presenter (via  
telephone conference).

15

16

17

18

19

Dr. Sloane, this is Art Vertlieb, counsel to the Commissioner. We have this written material that's up for slides and we just received it now, so you'll have to just take us through it.

20

21

22

23

Briefly, I'd like just to introduce you to the Commissioner and then have you make your presentation.

24

25

26

QUESTIONS BY MR. VERTLIEB:

27

28

Q You are a physician. You graduated from the University of California at Berkeley; is that correct?

29

30

31

A As an undergraduate, correct.

32

Q And then your medical degree was UC San Diego?

33

A Correct.

34

Q You are an emergency room physician?

35

A Yes.

36

Q And practising in California?

37

A Correct.

38

Q Now, how is it that you come to be involved in the work around the study of Taser?

39

40

A It stems from interest that I developed during my chief residency. I did a grand rounds presentation on less lethal technology and less lethal weapons that were in use in San Diego County, and that dovetailed nicely into a research interest once I became full-time faculty.

41

42

43

44

45

46

Research at UCSD has been done in the realm of

47

Christian M. Sloane, MD (Manufacturer presenter)  
Questions by Mr. Vertlieb  
Presentation

1 less lethal and sudden death by Dr. Vilke and Dr.  
2 Chan, who have been my colleagues on most of the  
3 studies that we've done. They did a lot of stuff  
4 on restraint, restraint physiology, and this was  
5 sort of a natural segue for us to start looking  
6 into next because of interest that had been  
7 generated surrounding -- (indiscernible) and  
8 everybody, as you all know, occasionally when  
9 these devices are used, subjects will experience  
10 sudden in-custody death, and so we're looking to  
11 see if any of these devices have anything to do  
12 with that.

13 Q Now, one of the questions we ask of every  
14 presenter is their relationship to the subject.  
15 Do you have any direct or indirect benefit from  
16 the manufacturer?

17 A From TASER International, no. We get no funding  
18 from TASER International. The only funding we've  
19 ever received for any of the studies that we have  
20 done, at least the ones that I have participated  
21 in, have been from the National Institute of  
22 Justice.

23 Q So you have no indirect benefit from TASER?

24 A I have no benefit whatsoever.

25 MR. VERTLIEB: All right, Dr. Sloane, please tell the  
26 Commissioner what it is you'd like him to hear.

27 A Okay. So you have the presentation there?

28 MR. VERTLIEB: Yes.

29

30 PRESENTATION BY DR. SLOANE:

31

32 A What we'll do is go to the next slide. It talks  
33 basically about one of the first studies that we  
34 did looking at the Taser. One of the things that  
35 San Diego had been doing was subjecting their  
36 officers that had volunteered to a deployment of  
37 the Taser so that they could see what it feels  
38 like and understand its effects. So what we did  
39 was just go ahead and monitor their cardiac  
40 tracing during the deployment of the Taser. For  
41 this study, the one that was primarily authored by  
42 Saul Levine, then the rest by myself, Dr. Chan,  
43 and Dr. Vilke, we basically hooked up a three-lead  
44 cardiac monitor to the police officers before they  
45 got tased. They received the deployment. We  
46 monitored the tracing before, during and after and  
47 looked for any changes in cardiac rhythm or

1 morphology or the intervals there.

2 If you go to the next slide, this is a sample  
3 tracing. What you see on the left-hand side of  
4 the screen is the cardiac rhythm immediately prior  
5 to the Taser. Then you see those squiggly lines  
6 which are the device recording the Taser current,  
7 and then immediately afterwards you see the  
8 cardiac rhythm afterwards.

9 Now, the technology at the time, we were not  
10 able to see the cardiac rhythm during the Taser  
11 deployment because of the interference. But what  
12 we could surmise based on the data we were able to  
13 obtain is that the cardiac rhythm directly before  
14 sort of marches out directly afterwards, and you  
15 can infer that there has been no disruption of the  
16 cardiac activity as a result of that Taser  
17 deployment there.

18 And our conclusions from that was that, you  
19 know, after a brief shock from the Taser, that we  
20 found no changes. There were a couple that had QT  
21 changes, which is one of the cardiac intervals  
22 that we measure, but we do not know of what  
23 significance that was and led us to do our next  
24 study.

25 THE COMMISSIONER: Doctor, I take it when you say no  
26 changes, you mean that after the Taser was no  
27 longer deployed, there were no detectable changes?

28 A Correct. That's what I mean. No dysrhythmias.  
29 One of the things people had surmised was that as  
30 a result of receiving a Taser deployment, perhaps  
31 that is sending the subjects into ventricular  
32 fibrillation or ventricular tachycardia, which  
33 would then lead to death. And that is something  
34 that we would be able to be pick up because  
35 ventricular fibrillation wouldn't spontaneously  
36 correct itself if it was present, and we had no  
37 evidence of that being shown. Does that answer  
38 your question on that one?

39 THE COMMISSIONER: Yes, thank you.

40 A Okay. So the next study that we did was looking  
41 at a full 12-lead EKG, if you go to the next  
42 slide, and for this one this allows us to more  
43 accurately measure the intervals. And so what we  
44 did is hooked up 32 officers, did EKGs before  
45 Taser. They actually had the Taser deployment  
46 done and then we laid them back down and did  
47 another 12-lead. Due to technical limitations, we

1 weren't able to continue to have them hooked up to  
2 a 12-lead EKG. It just wasn't -- we tried to do  
3 it and the leads kept popping off and there was  
4 just no way for us to get that done, and so we did  
5 the 12-lead pre and post. The average age of the  
6 officers, again, was 33; pretty average BMI.

7 Next slide. That lists some of the  
8 rhythms -- rather, the intervals there. And what  
9 we noticed that there was a slight increase in  
10 heart rate that was statistically significant; a  
11 decrease in PR interval, which you would expect  
12 with an increase in the heart rate. That the QRS  
13 durations and the QT intervals, things that we  
14 measured, and the QTc, which is corrected for  
15 rate, all those were unchanged.

16 Next slide. Conclusions based on that study,  
17 that there were no cardiac dysrhythmias, interval  
18 or morphology changes in those police officers who  
19 received a 12-lead EKG pre and post. That was the  
20 conclusion of that study, and that has been  
21 published.

22 The next study that we did, one of the other  
23 things we wanted to make sure was that there was  
24 no cardiac damage as a result of a Taser  
25 deployment, meaning death of cardiac cells. We  
26 looked at Troponin I. Troponin -- I don't know  
27 how familiar you are, but it's one of the things  
28 that is very specific to cardiac muscle, and any  
29 time that there is death of cardiac muscle, that  
30 substance is released into the bloodstream. And  
31 studies have shown that that happens anywhere  
32 between four and six hours after the death of that  
33 blood cell.

34 So what we did is we took 66 of the police  
35 officers again. They received their deployment.  
36 And the average duration was between 1.2 and 5  
37 seconds. The mean shock duration was 4.36  
38 seconds, so pretty much close to the full  
39 5 seconds. And then we came back six hours later,  
40 drew their blood, and looked for any evidence of  
41 that enzyme that might be an indicator of cardiac  
42 damage in the blood, and all of our component  
43 values were less than 0.2, which in a clinical  
44 scenario is a negative blood test.

45 And so based on that study we had no signs of  
46 myocardial necrosis, cell death, or infarction  
47 after receiving a Taser deployment. And that

1 study has also been published.

2 The next sort of bigger study that we did, if  
3 you go to the next slide, is one that was funded  
4 by the NIJ in association with San Diego State  
5 with a physiologist there, Fred Kolkhorst, and  
6 looking at the physiological effects of the CED on  
7 human subjects.

8 And so if you go to the next slide, I'll  
9 briefly describe that one for you. Five-second  
10 full shock there, part of their field training.  
11 Now, the reason we've always been dealing with the  
12 five is that that's the limit of our  
13 Investigational Review Board for the Safety of  
14 Human Subjects. So they've limited us to five.  
15 And what we did for that is we monitored them  
16 before, during and after. And for the monitoring,  
17 we did cardiac and respiratory monitoring and then  
18 we did blood draws.

19 Next slide. We had 32 completed subjects.  
20 Ten others that we had enrolled screened out based  
21 on our exclusion criteria of blood pressure,  
22 medical problems, medical conditions. We were  
23 able to enrol five women in the study. And you  
24 can see their age demographic and their weight.

25 Next slide. The study showed basically that  
26 there were no EKG changes from baseline to 60  
27 minutes. So again, we did an EKG before and then  
28 we did one 60 minutes after. We had a slight  
29 linear decrease in systolic blood pressure, and  
30 the MAP, which is the main arterial pressure, had  
31 a slight decrease after deployment. No changes in  
32 heart rate or diastolic blood pressure.

33 Next slide. The next slide shows the  
34 ventilatory parameters. The top one, VE, is the  
35 minute ventilation, and if you look at the  
36 baseline, 16 litres a minute. Five minutes after,  
37 there was an increase in the minute ventilation  
38 and then it gradually returned back to normal.  
39 Tidal volume, which is the size of your breath,  
40 went up and then returned back to normal. And the  
41 respiratory rate, as you can also expect, went up  
42 and went back down to normal.

43 Next slide. Oxygenation, which is the amount  
44 of oxygen that's in the bloodstream, remained  
45 consistent, and the end-tidal CO<sub>2</sub>, which is  
46 basically the measure of how much a person is  
47 ventilating, basically stayed the same.

1 If you look at the next slide, the pCO<sub>2</sub> again just  
2 shows you the baseline, 35.8; T+1, 35.9, and  
3 basically stayed around the same. And pO<sub>2</sub> also  
4 had no changes

5 Next slide. We looked at pHs. One of the  
6 theories that people have is that perhaps the  
7 Taser itself is causing people to become acidotic  
8 or more acidotic, which could subsequently lead to  
9 problems. Baseline pH, 7.45. One minute after  
10 the discharge, 7.42, and then a return to normal.  
11 There was a slight change. However, in the  
12 clinical setting these are basically clinically  
13 insignificant changes.

14 The next slide is looking at some of the  
15 blood parameters. The bicarbonate and the lactate  
16 did change in a statistically significant number,  
17 but again, the numbers that we're talking about  
18 are very small and in the clinical setting are  
19 insignificant. Baseline, 23.9 bicarbonate, minus  
20 1.2 lactate, up 1.4. But those numbers are very  
21 small. The remainder of things, calcium, sodium  
22 and potassium, stayed the same.

23 So the conclusions of that study were that  
24 there is basically no clinically significant  
25 changes in either the ventilatory parameters of  
26 blood tests that would show signs of physiologic  
27 stress after a five-second deployment of the  
28 Taser.

29 That study is a little bit big, and if you  
30 have any questions I can answer those at this  
31 point about that one.

32 THE COMMISSIONER: No, that's fine, doctor.

33 A Okay. Am I giving you guys what you guys were  
34 looking for, you know, as far as the information  
35 you were hoping that you would get?

36 THE COMMISSIONER: It's very clear and understandable.

37 A Okay. So just to the Phase II study, to complete  
38 the NIJ grant, next slide. What we did then is we  
39 took this to the next level, which is, say, okay,  
40 we've tested the Taser on these folks in the  
41 resting state, and now let's go ahead and exercise  
42 them to what would be considered very vigorous  
43 exercise, to 85 percent of their predicted max  
44 heart rate on an odometer, bicycle odometer, and  
45 then immediately after that give them a five-  
46 second deployment, and then do basically the same  
47 measurements that we did before and looking to see

1 if there are any changes. One of the things that  
2 people often ask, are these fit individuals, are  
3 these people who are diseased? And one of the  
4 limitations of our studies is that we're not doing  
5 this on people who are in an agitated delirium  
6 type state, either high on methamphetamines,  
7 cocaine, those kind of things. Nobody is going to  
8 be able to do that study. It's not going to be  
9 something that's going to be allowed. So these  
10 are all healthy officers. Now, they're not fit.  
11 I don't know what officers are like in Canada, but  
12 in the United States you have guys that are fit;  
13 you also have some that have an obesity problem.  
14 And we did not screen for that. We just took  
15 whoever could do it. So they're generally healthy  
16 but not necessarily fit. And they all had to get  
17 the Taser as part of their training.

18 Next slide. ECGs, blood pressure, pulse ox  
19 and end-tidal CO2. That's a position in which the  
20 final phases of the study had to be performed due  
21 to some perceived medical complications that are  
22 unrelated to what we'd been studying but I'll talk  
23 about at the very end. So the subjects are laid  
24 down on the ground and supported so that they  
25 couldn't fall.

26 Next slide. The capillary draws to measure  
27 their pH and acid/base as well as lactates and  
28 then the venous blood draws for the other  
29 electrolytes.

30 The next two slides I'm not going to go into  
31 in great deal, but that basically shows you what  
32 parameters were measured and when, so that you  
33 guys sort of know when we were measuring things.  
34 It's also available in the published studies, if  
35 you get those. Those are the two slides. And so  
36 basically what we did is we have the subjects do  
37 the study where they exercise to 85 percent  
38 maximum predicted heart rate. They got the Taser.  
39 We did our study, collected all the stuff. And  
40 then at a point later in time, one week, two weeks  
41 later, they would come back to the lab and then do  
42 a resting -- basically same thing. Rather --  
43 sorry. Where they would exercise but they  
44 wouldn't get the Taser. And so basically we would  
45 be able to tease the effects of the Taser, because  
46 we have doing the exercise and getting the Taser,  
47 and then we have them doing the exercise and not

1 getting the Taser. So each subject served as his  
2 own control and then we compared those two values.

3 Basically, due to the short time of the  
4 request for this information, I didn't have time  
5 to put slides together that showed the final data.  
6 But the preliminary data when we had 18 subjects  
7 basically showed no changes in any of the  
8 parameters that we measured. And in fact, the  
9 final data that we have, that we are putting in  
10 manuscript form right now, basically shows no  
11 significant changes in any of the things that we  
12 measured.

13 THE COMMISSIONER: This time change was a week?

14 A Yeah. Anywhere between one and two weeks  
15 typically. It was basically at the convenience of  
16 the officer. You know, it's really tough to get  
17 those guys to give us -- because the whole study  
18 would take about one hour to actually do the  
19 study, but you also have to get a lot of stuff  
20 beforehand and then afterwards. So the whole  
21 thing, we would allow them two hours and so it  
22 would be tough to get them to come in for two  
23 hours.

24 THE COMMISSIONER: All right. So you used each  
25 individual as their own control?

26 A Correct.

27 THE COMMISSIONER: Okay.

28 A All right. So that was that one. And that one  
29 has been submitted to the NIJ and currently we're  
30 preparing it for submission for publication in one  
31 of our journals.

32 Two other sort of things at the end. You may  
33 have already heard about these from other  
34 investigators. We thought these were interesting  
35 and we're in the process of publishing the Taser  
36 dart penetration, although that has been published  
37 by other folks as well. We had a 15-year-old male  
38 who got Tasered for one cycle hit in the right  
39 side of his head, and that next slide shows the  
40 CT scan where it actually did penetrate through  
41 the skull. We thought that that would probably be  
42 a pretty low probability event but we were  
43 surprised when we found this. So that's something  
44 that we're going to give a heads-up to practising  
45 physicians to be aware that this can happen.

46 The second slide there is actually the bone  
47 window that shows the dart penetrating through the

Christian M. Sloane, MD (Manufacturer presenter)  
Presentation  
Questions by Mr. Vertlieb (cont'd)

1 table of the skull. And the next slide shows no  
2 neurologic sequelae. He did okay.

3 And then the next one, which was the one that  
4 we found more interesting and led to actually  
5 changes in the way that we're doing these  
6 deployments in San Diego, is what we consider an  
7 associated vertebral compression fracture. One of  
8 our deputies who had volunteered to be a subject  
9 but had also volunteered to take a ride, a  
10 previously healthy guy, got a five-second  
11 discharge while he was standing up. That's the  
12 position that they used to use. He did not fall.  
13 He just sort of was assisted to the ground and  
14 complained immediately of some back pain, had a  
15 vasovagal episode. His neuro exam remained  
16 intact. He didn't have any spinal cord injury,  
17 but due to the prolonged back pain he was sent to  
18 the ED, and the next X-ray shows you a compression  
19 fracture of the spine, which we believe was likely  
20 caused by the Taser deployment. The next slide  
21 shows an MRI which shows an acute injury. He  
22 actually did okay.

23 The next slide shows now the position that  
24 you've seen before that we're doing all these now  
25 because of the risk of vertebral compression  
26 fracture. This has been published. And one of  
27 the comments that the radiologist made when they  
28 were looking at the films is that this guy  
29 probably had some degree of osteoporosis that was  
30 unrecognized that may have led to that. We have  
31 seen three of those within the last year and a  
32 half in San Diego.

33 I think that sort of wraps up the studies  
34 that we've done. I threw in this last little bit  
35 if you guys are interested, but if you're not --  
36 it may not be what you guys are even focusing on.

37 THE COMMISSIONER: Counsel, do you have any comments?

38  
39 QUESTIONS BY MR. VERTLIEB, continuing:  
40

41 Q Dr. Sloane, the pictures that you've given in this  
42 presentation where these police officers were  
43 Tasered, were all the probes in the back?

44 A Initially, the initial approach to the deployment  
45 by the sheriff's office was to actually -- yes,  
46 shoot them with the actual probes, the actual  
47 cartridges, in the back, standing about eight feet

1 away. Secondary to some of the potential issues  
2 with the compression fractures and the back  
3 injuries, they subsequently switched over to a  
4 mode with putting them on the front using  
5 alligator clips with the subjects laying on the  
6 ground.

7 Q And were the probes over the heart?  
8 A They were -- they were not directly over the  
9 heart, no.

10 Q Now, you mentioned that the probes or the  
11 deployment was limited to five seconds. Did I  
12 understand that correctly?  
13 A Yes.

14 Q And you said something about that, that was the  
15 requirement, that you couldn't do longer.  
16 A Correct.

17 Q Did I understand that?  
18 A One of the things that -- any time we do a study,  
19 I'm sure you guys are familiar, we have to get it  
20 approved by our Human Subjects Safety committee.  
21 They review everything to make sure that it's safe  
22 and that we're not going to cause any harm to  
23 patients or subjects. And one of the requirements  
24 by our Human Subjects Safety Committee were  
25 twofold. One, that we could not study anyone who  
26 is not going to already take the Taser deployment  
27 as part of their training. So we couldn't enrol  
28 somebody purely for the purpose of studying them.  
29 And then second, it had to be limited to a single  
30 shock duration. And that was just one of the  
31 requirements put forth by our Human Subjects  
32 Protection Program.

33 Q So this Human Subjects Protection Program, is that  
34 doctors?  
35 A It's anybody in the university who does research.  
36 So we have practising medical physicians, we have  
37 PhD researchers, epidemiologists, psychologists.  
38 It's a pretty broad mix.

39 Q Why was it limited to just the one five-second  
40 burst?  
41 A I think the folks on the Human Subjects committee  
42 had some concerns about the safety of the devices.  
43 We met with them and tried to answer all of their  
44 questions, but in spite of answering questions and  
45 talking with them, they still felt that we should  
46 limit it to one. Not based on any science. And  
47 as you know, I think you've probably already seen

- 1 Dr. Ho's work out of Minnesota. They're able to  
2 do much longer deployments and it's purely, I  
3 think, a feature of having a different committee  
4 approving their study.
- 5 Q Now, you mentioned that the people that you  
6 Tasered were healthy -- not necessarily fit, but  
7 healthy.
- 8 A Right.
- 9 Q And I think I heard you say ten people were  
10 screened out?
- 11 A Yeah.
- 12 Q And were any of those people screened out because  
13 of any pre-existing heart health issues?
- 14 A One of the requirements that we had them do was  
15 fill out a questionnaire, and if they had any  
16 significant cardiac history or blood pressure  
17 history or back injury history, we screened them  
18 out. I believe most of the folks that we screened  
19 out were for blood pressure that was outside of  
20 our parameters. So whether it was higher than 166  
21 systolic or 100 diastolic, if they were in that  
22 range we did not include them.
- 23 Q Why were you as a doctor wanting to screen out  
24 people who might have a heart condition?
- 25 A We -- okay, two things. One of them is that the  
26 Human Subjects Committee, again, put that  
27 requirement on us. And then secondly, given that  
28 the device is still being studied, I think we just  
29 wanted to go with people who we knew did not have  
30 a heart condition in case there was determined  
31 later down the road to be some sort of a cause or  
32 effect on the heart.
- 33 Q Now, you mentioned about the young fellow who had  
34 the probe go through his skull, and I think you  
35 said you were surprised by that?
- 36 A Yeah.
- 37 Q Were you surprised by that because you know how  
38 the skull is the thickest bone in the body; it's  
39 to protect the brain, and you didn't think that  
40 this probe would have the power to penetrate?
- 41 A Yeah, that, I think, was what -- yes, exactly.  
42 That was the sort of part that surprised us, that  
43 it would have the power to actually penetrate  
44 through the inner and outer tables of the skull,  
45 which, as you know, is a pretty strong bone.
- 46 THE COMMISSIONER: Doctor, this is the Commissioner  
47 speaking. Have you any idea of the distance from

1 the skull to the gun?

2 A No, we don't. We don't. As you can imagine, the  
3 pre-hospital reports were variable. You know, the  
4 officers are training to not shoot it any closer  
5 than seven feet or so, so they can get maximum  
6 probe spread, and so you would expect it to be  
7 anywhere between eight and 20 feet. But we don't  
8 have an accurate number.

9 THE COMMISSIONER: All right. Thank you.

10 MR. VERTLIEB: Dr. Sloane, time does not permit any  
11 more discussion, so I want to thank you very much.

12 THE COMMISSIONER: Doctor, this is the Commissioner  
13 speaking. I thank you very much for your time and  
14 I must say your presentation was very clear and  
15 quite easy to follow.

16 A Good. I hope I was able to give you guys a little  
17 bit more knowledge and help you answer whatever  
18 questions you guys are hoping to answer.

19 THE COMMISSIONER: Thank you very much.

20 A You're welcome. Take care now.

21

22 (WITNESS EXCUSED)

23

24 MR. VERTLIEB: I think that's it for work in this room.

25

26 (PROCEEDINGS ADJOURNED)

27 (PROCEEDINGS RECONVENED)

28

29 THE COMMISSIONER: Yes, counsel.

30 MR. VERTLIEB: Thank you. Mr. Commissioner, we have  
31 Dr. Swerdlow here.

32

33 CHARLES SWERDLOW, MD, a  
34 Manufacturer presenter

35

36 MR. VERTLIEB: Dr. Swerdlow, you are a physician and  
37 your area of interest is in cardiology?

38 A Cardiac electrophysiology.

39 MR. VERTLIEB: We've heard from electrophysiologists  
40 prior to your attendance so the Commissioner knows  
41 what you do. In the interests of time, we  
42 understand your presentation will take about 20  
43 minutes and so we'd invite you to make your  
44 presentation now, please.

45 THE COMMISSIONER: Yes. Thank you, doctor.

46

47

## 1 PRESENTATION BY DR. SWERDLOW:

2 A Thank you, Mr. Commissioner. Just briefly about  
3 my background. I received my undergraduate degree  
4 in physics at Stanford. I took my medical  
5 training at the Health Sciences and Technology  
6 program at Harvard Medical School and the  
7 Massachusetts Institute of Technology. I was an  
8 intern and resident in medicine in the University  
9 of California Los Angeles system and then took my  
10 cardiology training at Stanford.

11 I was on the faculty at Stanford as Director  
12 of the Electrophysiology Laboratory and Assistant  
13 Professor of Medicine, and then for the last 18  
14 years I've been in the UCLA system at Cedars Sinai  
15 in Los Angeles in cardiac electrophysiology. My  
16 present position is clinical professor of  
17 medicine. I'm board certified in the usual sub-  
18 specialties - medicine, cardiology,  
19 electrophysiology - and by the Heart Rhythm  
20 Society, and I'm a Fellow of the American Heart  
21 Association, the American College of Cardiology  
22 and Heart Rhythm Society.

23 My interest in cardiac vulnerability to  
24 electrical stimulation really goes back to two  
25 main areas in which I've done research in the last  
26 15 years, and they both relate to use of  
27 implantable cardioverter defibrillators, which you  
28 know as ICDs, basically to develop a method for  
29 measuring the shock strength that will  
30 defibrillate the heart. You know -- I think  
31 you've heard from other electrophysiologists that  
32 we routinely have to initiate fibrillation in the  
33 electrophysiology laboratory to test the  
34 effectiveness of implantable defibrillators, and  
35 over many years we've developed a method that  
36 allows us to test the shock strength without  
37 having to actually initiate fibrillation.

38 Now, part of that required us to map in great  
39 detail the so-called human vulnerable zone to  
40 electrical stimuli, which I know you've heard  
41 about. So mapping of the human vulnerable zone is  
42 one of the areas I've done a lot of work in.

43 The second area that I've done some work in  
44 that may be of interest to the Commission is that  
45 a number of years ago when the safety standards in  
46 the United States were changed for weak electrical  
47 currents that can leak out of hospital medical

1 equipment from the 10 microampere level to the  
2 more liberal European 50 microampere level, the  
3 American Heart Association was quite concerned  
4 about the safety implications, and I did the key  
5 studies at that point to look at the potential  
6 effects of that showing that in fact at the 50  
7 microampere level you could get some risk of  
8 lethal cardiac electrical stimulation. And this  
9 has some relevance to the considerations relative  
10 to Tasers because most electrophysiologists, when  
11 we test defibrillating devices, only put single  
12 pulses into the heart on the T-wave, and  
13 alternating current, although it is different from  
14 Taser type current, it's a continuous current  
15 delivered over a longer period of time.

16 So having said that, let me just move on to  
17 my presentation. First, as a disclosure, I'm a  
18 member of TASER's Scientific Advisory Board and  
19 TASER International assisted in collating some of  
20 these data. I know Mr. Vertlieb asked the other  
21 presenters. I don't own any stock in TASER. And  
22 other than being paid for being a member of the  
23 Scientific Advisory Board, I don't have any other  
24 interest in TASER.

25 The outline of this background slide is well  
26 known to this committee. Sudden deaths temporally  
27 proximate to the use of Tasers receive wide  
28 attention, and under certain conditions it's well  
29 known that cardiac electrical stimulation can  
30 cause sudden death.

31 The mechanism of sudden death by cardiac  
32 electrical stimulation is immediate initiation of  
33 rapid heart rhythm disturbances, primarily  
34 ventricular fibrillation, which I'm going to refer  
35 to as VF. Research on sudden death after use of  
36 Taser CEDs has naturally focused on electrically  
37 induced fibrillation.

38 So to emphasize this point, electrical  
39 stimulation of the heart can cause cardiac arrest  
40 by initiating ventricular fibrillation. On the  
41 other hand, if at the time of cardiac arrest the  
42 rhythm seems to be normal, that's not a result of  
43 cardiac electrical stimulation. We call this  
44 rhythm at cardiac arrest pulseless electrical  
45 activity or PEA, meaning that there's electrical  
46 activity but no pulse.

47 Another alternative rhythm that occurs during

1 cardiac arrest is either extreme slow heart rate,  
2 so-called bradycardia, where there's a long  
3 interval between heartbeats, or asystole, where  
4 there are no heartbeats. And again, this is not a  
5 consequence of direct cardiac electrical  
6 stimulation. And there are a series of known  
7 causes of cardiac arrest that present as asystole  
8 or pulseless electrical activity, including  
9 respiratory arrest, primary neurologic events,  
10 toxic effects, metabolic effects, and certain  
11 cardiac deaths that are not related to ventricular  
12 arrhythmias.

13 So our hypothesis was that if a electrically-  
14 induced fibrillation is the cause of sudden death  
15 proximate to use of Taser CEDs, then we'd expect  
16 that the initial post-arrest rhythm should be VF  
17 and that subjects will collapse rapidly after CED  
18 discharge, typically within a minute. On the  
19 other hand, if either collapse is delayed or the  
20 initial post-arrest rhythm is not VF, then the  
21 mechanism of death isn't electrically-induced VF.

22 So our objective was to characterize the  
23 initial cardiac rhythms in sudden deaths proximate  
24 to the use of Tasers to determine if these are  
25 caused by known, direct cardiac effects of  
26 electrical stimulation. This study was approved  
27 by the Institutional Review Board of Cedars Sinai  
28 Medical Center. We did an Internet search of  
29 deaths linked to Tasers. And then we requested  
30 records, including police reports, emergency  
31 medical services, which I'll abbreviate as EMS  
32 reports, any type of ECG tracings, and autopsy  
33 reports.

34 We used the following criteria to include  
35 subjects. First, the Taser CED had to discharge  
36 and the discharge had to reach the subject. The  
37 records needed to confirm that the decedent  
38 collapsed within 15 minutes of the last Taser  
39 discharge. Death was not caused by unrelated  
40 trauma. And the EMS records needed to indicate a  
41 rhythm diagnosis within five minutes of collapse  
42 and prior to treatment with drugs or  
43 defibrillation, so that we could get an estimate  
44 of the initial rhythm at the time of collapse.

45 Let me take you through the sequence of how  
46 we arrived at the 29 subjects whose records I  
47 studied. Overall we identified 411 deaths linked

1 in an Internet search to the word "Taser." After  
2 writing, we received a total of 272 sets of  
3 records. We excluded those subjects in whom  
4 Tasers were present on the scene but not actually  
5 deployed. We then excluded subjects who collapsed  
6 more than 15 minutes later. And if now we look at  
7 this group here, we can see that about 60 percent  
8 of the subjects who die proximate to the use of  
9 Tasers die within 15 minutes, but about 40 percent  
10 die in periods of time exceeding 15 minutes and we  
11 put our cut-off up to one day.

12 There were four subjects who were excluded.  
13 Three died from trauma: two from gunshot wounds,  
14 and in one of them the Taser wires shorted so no  
15 electricity was delivered to the subject.

16 And then, of these 118 subjects who collapsed  
17 within 15 minutes and didn't meet an exclusion,  
18 there were 49 of them in whom we were able to get  
19 a record from EMS records of the initial cardiac  
20 arrest rhythm within five minutes of collapse.

21 Now, these 49 subjects have a demographic  
22 distribution that's similar to the subjects you've  
23 heard about from the other investigators today.  
24 The mean age was 36 years. All but two of them  
25 were males. Stimulant drugs were used in 76  
26 percent. I should note that significant heart  
27 disease by the definition we use, coronary disease  
28 greater than 70 percent or significant  
29 cardiomyopathy, was present in only 10 percent of  
30 these subjects.

31 Now, I know this is different, for example,  
32 from the report published by Dr. Strobe at the  
33 University of Washington, and it may be that we  
34 may be using different definitions for heart  
35 disease. But I would say fairly that all the  
36 patients described as having heart disease in this  
37 study had clinically significant heart disease.

38 Our source data, of course, included EMS  
39 reports on all subjects. We had ECG rhythm  
40 strips, though, in only six of them. And in an  
41 additional 10 subjects we had the classification  
42 of the rhythm by an automatic defibrillator. Now,  
43 nine of these were automatic external  
44 defibrillators and one of these was actually an  
45 implantable defibrillator. The subject had been  
46 treated with an implantable defibrillator for his  
47 known heart disease.

1           Here is the summary slide of our results.  
2           The initial rhythm was ventricular fibrillation in  
3           only three of the subjects, 6 percent. It was not  
4           fibrillation in 94 percent of the subjects. In  
5           fact, it was asystole or bradycardia in 27  
6           subjects. It was pulseless electrical activity in  
7           10. And then in nine subjects our only data was  
8           that an AED had analyzed the rhythm and had  
9           advised no shock, indicating the AED algorithm did  
10          not identify ventricular fibrillation or  
11          tachycardia.

12          Here are some illustrations of the source  
13          data we used. This slide shows EMS reports from  
14          two subjects who died of asystole. You can see  
15          the top panel is a hand-written column and you can  
16          see that when the subject was assessed at 0911  
17          that no recording was made of the ECG, but by  
18          0912, a minute later when the paramedics had the  
19          ECG hooked up, the rhythm is indicated in  
20          handwriting as asystole throughout the tracing,  
21          and then we would classify this, of course, as  
22          asystole.

23          This is a paramedic report which presumably  
24          was typed up after the time and transcribed, and  
25          you can see that the rhythm is listed as asystole  
26          until an external pacemaker was applied.

27          Here are actual electrocardiographic rhythm  
28          strip recordings from two of the subjects where we  
29          had data. The first shows that this is the  
30          initial rhythm at the time an automatic external  
31          defibrillator is connected. You can see that  
32          because it says "patient connected" at this point,  
33          and it says "initial rhythm." And for this period  
34          of time you can see a very few number of cardiac  
35          electrical events indicating this patient has  
36          profound bradycardia and the rhythm is  
37          appropriately classified as "not shockable."

38          Similarly, in this case of ventricular  
39          fibrillation, these are the two segments analyzed  
40          by the automatic defibrillator to determine if a  
41          shock should be delivered, and this subject had  
42          ventricular fibrillation and a shock was  
43          delivered.

44          Now, these were two other EMS reports that I  
45          found of interest. The first one demonstrates a  
46          transition from a perfusing sinus rhythm to  
47          pulseless electrical activity after the EMS crew

1 arrives. We can see at 1950 the rhythm is  
2 recorded as sinus and the blood pressure is 99/48,  
3 which is a little bit low but it's certainly not a  
4 dangerous level, and the pulse is 76, in the  
5 normal range. Five minutes later and a few  
6 minutes after that, you can see that the pulse is  
7 still recordable on the ECG as irregular, or at  
8 least the ECG shows a rhythm that's irregular, but  
9 no blood pressure is recorded. This then would be  
10 pulseless electrical activity, meaning that there  
11 is electrical activity present on the ECG but no  
12 pulse or blood pressure can be measured.

13 This recording is a paramedic strip from a  
14 resuscitation which you can clearly see that the  
15 presenting rhythm was asystole, but after the  
16 patient was treated, in this case warmed by normal  
17 saline, the rhythm becomes fibrillation. So it's  
18 important in the course of resuscitation when  
19 fibrillation is recorded, to determine if it's the  
20 initial presenting rhythm or if it's a secondary  
21 rhythm as a result of part of the resuscitation.

22 Now, one of the subjects in our report was  
23 presented as a case report at the Heart Rhythm  
24 Society meeting in 2006 by Dr. Sadhu, and here is  
25 the initial part of his presentation. A 50-year-  
26 old agitated, combative man was immobilized with a  
27 stun gun, the electric barbs penetrating his skin  
28 on anterior chest within one foot apart. He  
29 collapsed and went into cardiac arrest, and the  
30 paramedics found the rhythm to be ventricular  
31 fibrillation.

32 Here are copies of the police report and  
33 paramedic report from this specific resuscitation.  
34 The police report notes that after a Taser pulse  
35 was delivered to the subject, he was handcuffed  
36 and then placed on an ambulance chair. He was  
37 then placed in the elevator with his eyes open,  
38 alert and breathing. And once they reached the  
39 ground floor of the building, a paramedic realized  
40 that the subject was no longer responsive.

41 Now, this is a copy of a section of the  
42 paramedic report, and the handwriting here looks a  
43 little like mine. But it says -- I think we can  
44 make out at the top that we have a violent psych  
45 patient. And then as I've summarized in red down  
46 below, you can see where it says a Taser is  
47 discharged and pulse and respiration, plus sign

1           indicating present after the Taser discharge. So  
2           that reconstructing this event from the police  
3           timeline, which in this case was accurate, and the  
4           EMS timeline shows that there was an eight-minute  
5           delay from the time of the last Taser discharge to  
6           ventricular fibrillation.

7           So it's important when we analyze these cases  
8           to not only look at the rhythm but also to look at  
9           the time delay between the last Taser discharge  
10          and the time the subject collapses. If we look at  
11          the distribution of collapse times in our 49  
12          subjects, 14 subjects, including two of them with  
13          fibrillation, collapsed within the first minute.  
14          An additional 14 collapsed in one to five minutes,  
15          and then 21 collapsed between six and 15 minutes.

16          Now, I'd briefly like to review the  
17          characteristics of the three subjects who had  
18          ventricular fibrillation. All of them were of  
19          course male. Two of them had serious heart  
20          disease. Two of them had been using stimulant  
21          drugs. And I know that at this Commission there's  
22          been discussion of the duration and number of  
23          Taser discharges as a potential risk factor, so  
24          I'd like to point out that one of these subjects  
25          who died received a one-second drive stun  
26          discharge to the right calf. The second subject  
27          received three separate five-second barb  
28          discharges to the left chest. And the subject who  
29          collapsed eight minutes later received a 57-second  
30          discharge to the chest and then, shortly later,  
31          one five-second discharge. So certainly there is  
32          no single pattern of distributions of durations  
33          that are associated with ventricular fibrillation  
34          as the presenting rhythm.

35          I'd like to summarize and then conclude that  
36          in 40 percent of subjects who collapse more than  
37          15 minutes after discharge, electrically-induced  
38          VF can't explain the cardiac arrest because of the  
39          time delay. In the 60 percent of subjects who  
40          collapse within 15 minutes, VF is the presenting  
41          rhythm in only 6 percent. Pulseless electrical  
42          activity or asystole is the presenting rhythm in  
43          94 percent, and of course, neither of these two  
44          rhythms can be explained by electrical stimulation  
45          of the heart.

46          So the principal conclusion is that these  
47          findings exclude electrically-induced VF as the

1 primary mechanism of death in these subjects.

2 Now, I'd like to briefly mention what I think  
3 are two important implications here. First is  
4 that in my mind, research in this area should  
5 focus on causes of sudden death other than  
6 electrically-induced VF because that doesn't seem  
7 to be the problem.

8 And secondly, as a corollary to that -  
9 because I know there's been some discussion at  
10 this Commission about that - providing automatic  
11 external defibrillators during deployment of  
12 Tasers is unlikely to reduce sudden death  
13 significantly since the subjects aren't dying of  
14 fibrillation.

15 That's my presentation. Thank you.

16 THE COMMISSIONER: Doctor, what do you mean by primary  
17 on the chart just before this one? "Conclusion:  
18 These findings exclude electrically-induced VF as  
19 the primary mechanism of death."

20 A Oh. You know, I'm a doctor rather than a lawyer.  
21 I think that sentence would read fine without the  
22 word "primary."

23 THE COMMISSIONER: All right.

24 A In other words, these subjects don't have  
25 electrically-induced fibrillation.

26 THE COMMISSIONER: All right. Doctor, there's been  
27 material presented indicating that in deaths  
28 caused in custody, that force and the high  
29 adrenaline and the consequences of the capture can  
30 be significant and, as a multiple set of  
31 causations, one can say that's what caused the  
32 death. Have you any comment on that?

33 A By capture you mean capture of the suspect, not  
34 electrical capture of the heart?

35 THE COMMISSIONER: That's right. That's right.

36 A Well --

37 THE COMMISSIONER: In other words, you can't say  
38 sometimes that if he was not Tasered, he would not  
39 have died. But on the other hand, it is an  
40 element of force which, combined with the other  
41 circumstances that exist, is one of the many  
42 contributing factors.

43 A Yeah. I could make a comment about that, and  
44 that's the following. As an electrophysiologist -  
45 and I know you've heard from some other  
46 electrophysiologists - we know that epinephrine,  
47 adrenaline and other stress hormones sometimes can

1 have a big impact on our ability to induce  
2 ventricular fibrillation in the laboratory, and  
3 that some subjects are much more at risk for  
4 ventricular fibrillation when they have a lot of  
5 adrenaline going on.

6 The disconnect between that observation and  
7 the data I've presented is as follows, and it's  
8 somewhat paradoxical. If this adrenaline were  
9 contributing to the subject's dying suddenly,  
10 you'd expect they'd be dying from fibrillation  
11 because, as electrophysiologists and other  
12 cardiologist experts, we know that adrenaline  
13 makes you more vulnerable to fibrillation as a  
14 serious arrhythmia and cause of death.

15 The paradox here is that these subjects at  
16 least don't seem to be dying of that cause. So my  
17 comment would be, that's relevant to sudden death  
18 in which the mechanism of death is ventricular  
19 fibrillation. What I don't understand very well,  
20 and I don't think is understood very well by  
21 anyone, is how, with all the stress going on in  
22 these confrontations with law enforcement, how all  
23 of a sudden people's hearts just stop despite all  
24 the adrenaline that's going on there.

25 And so I think the contribution I would make  
26 is to say that we need to better understand why  
27 people's hearts are stopping, not why their hearts  
28 are racing into fibrillation as a result of  
29 adrenaline. And since their hearts aren't racing  
30 into fibrillation as a result of adrenaline, while  
31 that is a potential concern in, say, the three  
32 subjects we had who died of fibrillation, or at  
33 least the two who collapsed immediately, it  
34 doesn't explain what's happening to the vast  
35 majority of these subjects. And that would be the  
36 comment I would have.

37 THE COMMISSIONER: All right. Thank you. Counsel,  
38 have you any comments?

39 MR. VERTLIEB: No. Thank you very much, Mr.  
40 Commissioner.

41 THE COMMISSIONER: Doctor, thank you very much for  
42 taking the time to come here. I very much  
43 appreciate your presentation. It was most clear,  
44 and thank you.

45  
46 (WITNESS EXCUSED)  
47

Dorin Panescu, PhD (Manufacturer presenter)  
Questions by Mr. Vertlieb  
Presentation

1 MR. VERTLIEB: Next, Mr. Commissioner, is Dr. Dorin  
2 Panescu, who's here and has provided this morning  
3 a copy of his presentation.

4  
5 DORIN PANESCU, PhD, a  
6 Manufacturer presenter

7  
8 Mr. Commissioner, Dr. Panescu is an electrical  
9 engineer, and we've heard from others.

10  
11 QUESTIONS BY MR. VERTLIEB:

12  
13 Q Dr. Panescu, you have a PhD from the University of  
14 Wisconsin in August of 1993?

15 A Correct.

16 Q And you are at the same university, then, that Dr.  
17 Webster is at?

18 A In fact he was my PhD adviser.

19 MR. VERTLIEB: The Commissioner heard from Dr. Webster  
20 very early on so he would be familiar with the  
21 type of work that your university is doing in this  
22 field. So I don't want to take any more time with  
23 your background. You've brought to the  
24 Commissioner a copy of your presentation today,  
25 and I trust, Mr. Commissioner, you have a copy?

26 THE COMMISSIONER: Yes, I do.

27 MR. VERTLIEB: Would you just make your presentation,  
28 then.

29  
30 PRESENTATION BY DR. PANESCU:

31  
32 A Sure. Thanks for having me here. My background  
33 is, as mentioned, mostly in engineering. My  
34 thesis topic was on pacemakers and defibrillators.  
35 My years of experience in the medical field relate  
36 particularly to the design of devices that  
37 stimulate the heart, map the heart, provide radio  
38 frequency currents to ablate the heart or in  
39 intracardiac imaging. I have personally developed  
40 or contributed to the development of over ten  
41 devices that have been approved by the FDA or the  
42 CE and then they have been released to US or  
43 international markets for clinical use. I have a  
44 number of patents in the medical field and a  
45 number of publications.

46 The first topic I'd like to provide some  
47 background about is how does the electrical output

1 of Taser devices compare to the electrical output  
2 of devices that are approved by the FDA for  
3 clinical use.

4 This chart is a little bit long but I do have  
5 another chart that provides an executive summary.  
6 But the way I constructed this particular --

7 By the way, I apologize. Just in the  
8 interest of disclosure, I do want to say that I  
9 have been acting as a paid consultant to TASER so  
10 some of the work that I have been doing they have  
11 paid me for. And I do own stock in TASER, but  
12 that stock has been purchased by me. It has not  
13 been offered by the company and I do not own any  
14 stock options in the company as offered by TASER.

15 So this chart compares certain  
16 characteristics of the electrical output of Taser  
17 devices as they compare to external  
18 defibrillators. The external defibrillators are  
19 those devices that have electrodes on the chest  
20 used to resuscitate the patient or external  
21 pacemakers to pace the heart to sustain the life  
22 of the patient. RFG means radio frequency cardiac  
23 ablation generators, and ICD, implantable  
24 cardioverter defibrillators. The specifications  
25 in this chart were taken from the websites of the  
26 manufacturers mentioned at the bottom of the  
27 chart.

28 I'd like to draw your attention to the  
29 highlighted cells. The first one compares the  
30 peak output voltage of these devices, and as you  
31 can see, the peak output voltage of one of the  
32 Taser models, the M26, is in the same range as the  
33 peak output voltage of external defibrillators.  
34 The output voltage of an X26 is comparable to the  
35 output voltage of radio frequency cardiac ablation  
36 generators or implantable defibrillators. The  
37 peak output current for the external  
38 defibrillators exceeds by about two times the  
39 maximum peak output current of Taser models such  
40 as the M26.

41 More interestingly, the energy delivered into  
42 a typical load is several orders of magnitude  
43 higher than the energy delivered by Taser devices,  
44 particularly if one assesses the amount of energy  
45 delivered by radio frequency cardiac ablation  
46 generators. That's many, many orders of magnitude  
47 higher than what the Taser does. One important

1 aspect here is the radio frequency cardiac  
2 ablation generator connects to a catheter that  
3 carries an electrode at its tip, and that  
4 electrode is in direct contact with the heart  
5 tissue. So all this amount of energy is delivered  
6 right into the heart, directly into the heart for  
7 therapeutic purposes, and these devices are  
8 approved by the FDA --

9 THE COMMISSIONER: Are you speaking of amps here?

10 A Excuse me?

11 THE COMMISSIONER: Are you speaking of amps?

12 A No, this is joules.

13 THE COMMISSIONER: Joules?

14 A Yes, joules per pulse. The reason why this energy  
15 is so high is a) the output, as you can see, or  
16 the power that is delivered by these radio  
17 frequency generators can be quite high, up to 150  
18 watts. Again, that's about 10 to perhaps 100  
19 times more than what the Taser devices deliver.  
20 But also the duration here in the last cell at the  
21 bottom. These generators can deliver that energy  
22 to up to two minutes, and this is all to treat in  
23 fact conditions such as ventricular tachycardia,  
24 such as atrial fibrillation and so on.

25 So one can ask the question, how come does  
26 the FDA approve these devices, and these devices  
27 are all tested prior to even being used in  
28 clinical trials. And certain standards, such as  
29 the 6601 standard stipulates how much current can  
30 be applied to the heart. Now, the FDA in  
31 approving these devices, they are knowledgeable  
32 that the likelihood of these devices inducing  
33 ventricular fibrillation while being used to treat  
34 cardiac conditions is not zero. Rather, the FDA  
35 accepts a level of risk in treating these patients  
36 with these devices of about one in 500 or 0.002.  
37 And these numbers are, again, stipulated in the  
38 IEC 6601-1 standard, and that's the standard which  
39 is used to test these devices.

40 However, there are no clear electrical safety  
41 medical standards that particularly speak to the  
42 waveform that is provided by Taser devices. One  
43 standard that discusses the electrical thresholds  
44 of ventricular fibrillation is the IEC 497-2. It  
45 is not a direct application to Taser but at least  
46 it tells us that in order to have a 50 percent  
47 probability of fibrillation, one would need to

1           deploy about 5,000 microcoulombs directly into the  
2           heart.

3           Now, the Taser devices, they don't deliver  
4           that much charge. They deliver about 100  
5           microcoulombs directly to the load. Not all of  
6           this charge reaches the heart, as I have in the  
7           following slides. But there is a difference there  
8           of about 50 times between the 50 percent  
9           probability threshold of this particular standard  
10          than the maximum charging in one single pulse that  
11          is delivered by a Taser device.

12          This 50 times factor doesn't mean that the  
13          probability of inducing VF with Taser is 50  
14          percent divided by 50, which would be 1 percent.  
15          Rather, someone assessing probabilities would have  
16          to assume some kind of a distribution of VF  
17          thresholds, and for biological systems, standard  
18          normal distribution is one particular distribution  
19          that can be used. If we use that in conjunction  
20          with the standard deviation of VF thresholds of  
21          about 25 percent as presented by Dr. Ideker at  
22          Duke University and his group, one arrives to an  
23          estimated theoretical probability of ventricular  
24          fibrillation induction of less than one in  
25          2 million with the charge that is delivered by the  
26          Taser pulse.

27          The next part of my presentation relates to  
28          numerical models that estimate current and field  
29          distributions inside the body and their effects on  
30          the tissue.

31          Now, regarding this modelling, and of course  
32          that's what Dr. Webster has also presented, they  
33          are an approximation. This isn't like a very  
34          precise measurement of currents in the heart. But  
35          they are accepted techniques, and I can tell you  
36          from my personal experience that working in the  
37          early days of radio frequency cardiac ablation  
38          with the Food and Drug Administration in the US  
39          and that this goes back about ten years, they have  
40          asked us for finite element modelling of radio  
41          frequency currents into the heart just to give  
42          them background about potential risks. So that  
43          effect, finite element modelling, it is an  
44          accepted technique that can point out early on  
45          potential risks. It doesn't mean that's the only  
46          thing or the ultimate answer, but it does have the  
47          ability to point out certain risks.

1           I've been using two models in my research,  
2 one that has a finite resolution that looks at  
3 distribution of currents just below the skin into  
4 fat and skeletal muscle layers, and a second model  
5 that is a whole body model and can assess  
6 distribution of currents inside the heart.

7           I'm not going to walk through all these  
8 details, but in case anyone is interested, these  
9 are the details of the model in terms of  
10 dimensions and number of elements. The boundary  
11 conditions or the voltage applied to the model  
12 equals that of the X26 device. These are the  
13 material properties used in the finite element  
14 model. I would just draw attention to the fact  
15 that the skeletal muscle should be considered as  
16 an anisotropic layer. That means it has  
17 anisotropy. The electrical current is much more  
18 likely to travel around the chest than into the  
19 chest, and that difference is about a five-to-one  
20 difference.

21           This is just an example of how current would  
22 be spread into the skin, into the fat and the  
23 skeletal muscle layer. One takeaway here is that  
24 current density drops very fast as we move away  
25 from electrodes.

26           This is a brief description of my second  
27 model, which is the whole body model. I used  
28 these particular layers of tissue: muscle, heart,  
29 bone, lungs, skin/fat and abdomen. Same X26  
30 boundary conditions and various placements of the  
31 electrodes. And these are the material  
32 properties. This is an image of the model with  
33 the heart, lungs, spine and so on.

34           So what items have I looked for in my results  
35 assessment? I wanted to understand the effects of  
36 skeletal muscle anisotropy given that this is how  
37 we are built, that our skeletal muscle diverts  
38 away electricity rather than conducting it into  
39 the body. I wanted to understand the effects of  
40 fat. I wanted to understand the distance between  
41 the skin and the heart as it pertains to  
42 ventricular fibrillation thresholds and what  
43 theoretical ventricular fibrillation safety  
44 margins Taser devices might have. Also how likely  
45 is it that the Taser device can in fact capture  
46 the heart? By capturing the heart, that means  
47 that it can pace the heart rather than induce

1           ventricular fibrillation.

2           This is a slide that kind of gives a high  
3           level picture of what anisotropy means. Again,  
4           the red oval here, the red ellipse, would be my  
5           representation of the chest with the lungs and the  
6           heart in the middle. Anisotropy means that the  
7           current flowing around the chest, that J - J  
8           stands for current density - longitudinal is much  
9           larger than the current density that travels in a  
10          transversal direction.

11          This table summarizes the results, and the  
12          net is, if we look at the ratio between  
13          longitudinal and transversal current densities,  
14          that ratio is about 8, which means that roughly 88  
15          percent of the current travels around the body  
16          rather than into the body. If we look at the  
17          transversal current density as it can get close to  
18          the heart, if we were to remove the fat and the  
19          anisotropy of the skeletal muscle, which would be  
20          an artificial situation, that current density  
21          would increase threefold, from about 15 millions  
22          per square centimetre to over 45 millions per  
23          square centimetre. So obviously that would  
24          significantly reduce the margin of safety one  
25          would estimate in terms of ventricular  
26          fibrillation likelihood.

27          Analyzing what happens if we modify the  
28          distance between Taser electrodes - and this is to  
29          some extent consistent with work presented by  
30          other investigators - in this slide the dotted  
31          line shows the current density threshold required  
32          to induce ventricular fibrillation, which is  
33          computed at about 91 millions per square  
34          centimetre. And this is for an X26 Taser  
35          waveform. And you can see that regardless of --  
36          this particular dark red line, regardless of how  
37          electrodes are placed, they are well behaved and  
38          well below that threshold.

39          So what happens if we have a fully penetrate  
40          the Taser dart about 9 millimetres into the  
41          tissue? Again you can see that current density  
42          decays very rapidly with distance from the  
43          electrode. Very minimal current density would be  
44          left reaching to deeper layers of tissue such as  
45          the heart. However, not insignificant. It is  
46          just a very high level of attenuation.

47          So a few conclusions here. I estimate that

1 we need about 14.7 millimetres between the skin  
2 and the heart in order to reach that 91 millions  
3 per square centimetre that would potentially  
4 induce ventricular fibrillation. Dr. Webster in  
5 his model, he found distances that were a little  
6 bit bigger than mine, particularly when he removed  
7 the fat and replaced the anisotropy of the  
8 skeletal muscle with his conductive gel.

9 One other thing to remember here is that the  
10 suspects which are typically encountered by law  
11 enforcement officers, they have a certain  
12 distribution of the BMI, and there have been  
13 several reports in the literature by Dr. Stratton  
14 or Dr. Tchou from Cleveland Clinic indicating that  
15 in these typical suspects, the minimum skin-to-  
16 heart distance is about 35 millimetres. That  
17 would be twofold higher, two times higher than the  
18 14.7 millimetres skin-to-heart distance threshold  
19 that would be required to induce ventricular  
20 fibrillation, and that just adds to the margin of  
21 safety.

22 And speaking about margin of safety, with the  
23 whole body model, while placing electrodes at  
24 various locations, as one would expect the worst  
25 case configuration would be when the electrodes  
26 are placed right over the sternum, right over the  
27 heart. However, every now and then that very  
28 unfavourable situation, the margin of safety with  
29 respect to VF threshold comes to about 33 times.  
30 Also that's with the X26 waveform. For the M26  
31 waveform, given that that pulse is a lot shorter,  
32 the margin of safety is much higher. It's  
33 approaching somewhere like 80 to 90 times.

34 Also what's interesting to note that on this  
35 particular finite element model, the placement  
36 over the heart had a 1.7 times margin with respect  
37 to the threshold that would capture the heart,  
38 pace the heart. Of course other vectors offer  
39 more safety, but even in this case the electric  
40 field was less than was known to pace the heart.

41 Here is an example of the front chest field  
42 distribution. As you can see again, voltage drops  
43 fast with distance from electrodes. This is a  
44 cross-section through this volume where the heart  
45 is located and with the electrodes located on the  
46 chest. You can see the current density drops very  
47 rapidly as we approach the volume where the heart

1           resides.

2           And these are some conclusions. In the  
3 interest of time I'll try and go through them as  
4 quick as I can. Again, skeletal muscle offers  
5 additional protection and so does fat. In terms  
6 of efficacy of Taser devices, I computed here the  
7 current density and the electric field strength  
8 required to stimulate the motor neurons which need  
9 to be captured in order to incapacitate the  
10 suspect, and in that regard, the Tasers do pretty  
11 well. The Taser seems to have a pretty large  
12 margin as it comes to irreversible  
13 electroporation, which means irreversible damage  
14 to the cell membrane. A field of 1,600 volts per  
15 centimetre would be required for that. We are at  
16 30 volts even if we look in the skeletal muscle,  
17 which should be 200 to 300 volts per centimetre.  
18 Even there, there would be a good margin.

19           I have already described these items. A few  
20 comments regarding previous work. Again, with Dr.  
21 Webster, once he put that fat and skeletal muscle  
22 anisotropy back into his models, his numbers  
23 dropped significantly in terms of skin-to-fat --  
24 skin-to-heart distances

25           One particular item of interest in reviewing  
26 his chart that I think he has presented to you  
27 before, if we look at the distribution of skin-  
28 heart distances in the 150 volunteers that I think  
29 he has scanned using echo-cardiography, and if we  
30 draw this line of his revised model where he found  
31 that the required skin-heart distance threshold  
32 for VF would be 14.8 millimetres. And if we take  
33 the BMI range that has been measured by Stratton  
34 or Ho in their assessment of ICD suspects, we find  
35 that none, zero, of Dr. Webster's volunteers fell  
36 into that range. So if we were to use the same  
37 exact mathematical formula that Dr. Webster used  
38 to compute his final probability estimate here for  
39 VF induction, which was 0.0000061, that would in  
40 fact drop down to zero just because there are no  
41 volunteers that had that particular skin-to-heart  
42 distance if we are limiting the assessment to the  
43 BMI range for ICD suspects.

44           Also there was this particular probe  
45 placement into the chest that Dr. Webster  
46 considered, and I think that's tremendously  
47 unlikely that the Taser, when shot during a law

1 enforcement confrontation, would land at this  
2 exact placement. Obviously if the probe were  
3 shifted a little bit to the right here, it would  
4 hit the rib, and the rib does not conduct  
5 electricity. If the probe would go slightly to  
6 the left, the distance to the heart would increase  
7 tremendously.

8 A couple of other things regarding swine  
9 models. One would have to remember that  
10 isoflourane, which is the anaesthetic most widely  
11 used, does increase significantly the chances of  
12 VF rhythm. One item, that research I conducted  
13 back many years ago when we were supposed to  
14 receive the approval on a cardiac mapping device,  
15 told us that swine that have isoflourane as  
16 anaesthetic were very susceptible to mechanical  
17 irritation so they entered VF. We just deployed  
18 the catheter and their heart was not connected to  
19 any electrical device, and a significant number of  
20 these swine, they developed VF and died on the  
21 spot. So that was, in our understanding, together  
22 with Dr. Greenspon from Thomas Jefferson  
23 University, an indication of mechanical irritation  
24 rather than electrical stimulation.

25 The Purkinje fibre in swine is very different  
26 than humans. It makes them more susceptible to  
27 VF.

28 Some of the papers that have been discussed  
29 here by previous investigators, I'm not saying  
30 that these shortcomings influence in any way their  
31 conclusions, but when I read them, particularly  
32 the one by Dr. Cao, was that Taser rhythm that was  
33 recorded by the implantable pacemaker, it just  
34 raised some questions regarding their methodology.  
35 To some extent, working for St. Jude Medical,  
36 which is a designer of pacemakers, and this is  
37 what I've been doing in the last few years of my  
38 day job, I do know that this particular pacemaker  
39 was reported to enter something called noise  
40 reversion just because of the environmental noise.  
41 In noise reversion these pacemakers are supposed  
42 to pace the patient so to keep the patient alive  
43 or whatever medical condition is. It's called an  
44 asynchronous pacing rate. That pacing rate was  
45 not addressed by the article. Now, maybe it  
46 didn't have any effect on their findings. But  
47 just as an independent reviewer and reader of that

1 article, I could not tell for sure whether what  
2 was presented as captured rhythm came from the VVI  
3 or VOO pacing mode, which is the asynchronous mode  
4 during noise reversion, or was it indeed capturing  
5 by the Taser? It was just no way for me to  
6 independently assess that aspect. It may be true  
7 what they concluded, but it raised a question for  
8 me in terms of their methodology.

9 My last item here is, as presented by many  
10 other speakers today and in previous days, are we  
11 addressing the right rhythm here? As presenting  
12 so many papers, and I also have my several  
13 references here that I have reviewed, most of  
14 these suspects, they die by causes that are very  
15 different than ventricular fibrillation. Most of  
16 them are reported to die because of asystole or  
17 pulseless electrical activity, and it is well  
18 known that electricity cannot directly induce  
19 asystole or pulseless electrical activity. And in  
20 these particular three papers that I have  
21 referenced here, there have been statistics  
22 showing that hog-ties, plastic tie-wraps, OC  
23 spray, handcuffs, physical restraint, batons --  
24 they have all induced this kind of sudden in-  
25 custody death. So would a reasonable person  
26 suspect tie-wraps of inducing ventricular  
27 fibrillation?

28 And this is taken from Dr. Stratton's  
29 article, just the summary chart, which shows just  
30 one ventricular tachycardia case. Not VF. Zero  
31 VF cases out of 18 in-custody death cases. Zero  
32 VF, one VT out of 18. The others are just other  
33 types of rhythms. Tasers indeed were linked to  
34 one, two, three, four situations. Pepper spray or  
35 other means have been the majority of mechanisms  
36 used to subdue the suspects.

37 Thank you very much.

38 MR. VERTLIEB: Thank you, Dr. Panescu. I have nothing  
39 to add.

40 THE COMMISSIONER: Doctor, thank you very much for  
41 taking the trouble to come. Your presentation is  
42 very much appreciated.

43 A Thank you.

44 THE COMMISSIONER: Thank you so much.

45  
46 (WITNESS EXCUSED)  
47

Dirk Ryneveld (Interested groups and individuals  
presenter)  
Questions by Mr. Vertlieb

1 MR. VERTLIEB: Mr. Commissioner, our next presenter is  
2 Mr. Ryneveld, who's here. But we could take a  
3 short break. We've extended the time out of  
4 courtesy to these other presenters.

5 THE COMMISSIONER: Yes. Thank you. A few minute  
6 break.

7

8 (PROCEEDINGS ADJOURNED)

9 (PROCEEDINGS RECONVENED)

10

11 MR. VERTLIEB: Mr. Commissioner, it's a pleasure to  
12 have Mr. Ryneveld with us, Dirk Ryneveld, who is  
13 the Police Complaint Commissioner for British  
14 Columbia.

15

16 DIRK RYNEVELD, Interested  
17 groups and individuals  
18 presenter.

19

20 QUESTIONS BY MR. VERTLIEB:

21

22 Q Mr. Ryneveld, I'd like to go through your  
23 background briefly and then invite you to make  
24 your comments to the Commissioner.

25 You graduated law school in 1971 and were  
26 called to the Bar of British Columbia in 1972.

27 A That's correct.

28 Q And for two years you were in private practice in  
29 the Kootenays.

30 A Correct.

31 Q In 1974, you were appointed Deputy Regional Crown  
32 counsel for the East Kootenays.

33 A Correct.

34 Q And that made you the responsible Crown counsel to  
35 deal with all criminal prosecutions in the  
36 Kootenays and the administration of criminal  
37 prosecution.

38 A That's correct.

39 Q In 1985, you became Deputy Regional Crown for  
40 Victoria.

41 A Yes.

42 Q You served there for many years in that same  
43 position, in effect the principal person  
44 responsible for criminal prosecutions in the  
45 Victoria region.

46 A Well, under of course the regional and the deputy  
47 minister.

Dirk Ryneveld (Interested groups and individuals  
presenter)  
Questions by Mr. Vertlieb  
Presentation

1 Q You were appointed Queen's Counsel in 1990.

2 A Yes.

3 Q Now, in 1999 you took a leave of absence to become  
4 the senior prosecuting trial attorney with the  
5 International Criminal Tribunal in the Hague.

6 A That is also correct.

7 Q You were lead counsel in a number of very  
8 significant cases in that work. You, I  
9 understand, were lead counsel in the Kosovo  
10 component of the case against Milosevic.

11 A That's correct.

12 Q Now, that was a leave of absence that took you to  
13 the Hague for how many years?

14 A For four years, sir.

15 Q And at that time you would have been dealing with  
16 serious criminal international cases.

17 A Yes, you can say that. Genocide, mass murder of  
18 villages, sexual slavery, rape, on a scale that I  
19 could not previously fathom.

20 Q We can all appreciate the personal sacrifice that  
21 that would entail for you to do that work on  
22 behalf of all of us. You came back to our  
23 province in 2003 and were sworn in as the Police  
24 Complaint Commissioner in the position you now  
25 hold.

26 A That is correct, sir.

27 Q You have involvement with your colleagues who do  
28 this work. You've served as president of the  
29 Canadian Association of Civilian Oversight of Law  
30 Enforcement.

31 A Yes, sir.

32 MR. VERTLIEB: So it's in that context and with that  
33 background that you're here to present to  
34 Commissioner Braidwood, and we invite you to make  
35 your presentation. Thank you so much.

36

37 PRESENTATION BY MR. RYNEVELD:

38

39 A Thank you, sir. And thank you, Mr. Commissioner,  
40 for affording me the opportunity of sharing some  
41 of my observations with you today.

42 THE COMMISSIONER: Well, I'm looking forward to it.

43 A Sir, at the outset, I want to make it absolutely  
44 clear that I do not hold myself out to be an  
45 expert in the field of Tasers. You've heard from  
46 very many experts.

47 My role here, of course, is as the Police

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presenter)  
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1 Complaint Commissioner for this province, and I  
2 hold that office under part 9 of the *Police Act*.  
3 And it may assist you to know that my jurisdiction  
4 is with respect to all municipal police  
5 departments in this province, and as such I am an  
6 independent officer of the Legislature. I report  
7 to the Speaker of the Legislature and do not  
8 report to any minister of the Crown, neither the  
9 Attorney General nor the Solicitor General. I'm  
10 completely independent of those two offices.

11 And as you are likely aware, my counterpart,  
12 Mr. Kennedy, Paul Kennedy, has federal  
13 jurisdiction respecting complaints against the  
14 RCMP, both here in British Columbia and elsewhere  
15 in Canada.

16 Now, in my submission today, sir, I propose  
17 to essentially focus on two areas. The first one  
18 is about which you have had considerable evidence  
19 from various experts; that is the propriety of the  
20 use of the Taser from a safety and efficacy point  
21 of view.

22 The second aspect of my submission, however,  
23 may be somewhat more novel but nevertheless, in my  
24 view, significant to your deliberations. It  
25 involves the regulatory framework presently in  
26 existence in British Columbia, and elsewhere in  
27 Canada, I suspect, authorizing the use of the  
28 Taser. My submission is that it may well turn out  
29 that the Taser has been mischaracterized as a  
30 prohibited weapon whereas it may actually be  
31 defined in law as a prohibited firearm. The  
32 consequence of that mischaracterization may  
33 prohibit the use of the Taser in circumstances in  
34 which it is now being used. I am not saying that  
35 that's a certainty. I have just come across  
36 information which causes me great concern about  
37 the absence of paperwork or the lack of clarity in  
38 the paperwork, and that some departments may be  
39 inadvertently operating under a mistaken  
40 impression as to their authorization for use.  
41 I'll get to that in point two, if I may.

42 Now, in recent months, especially since that  
43 highly publicized event involving Mr. Dziekanski  
44 at YVR last year, a number of investigations,  
45 including this one, have been launched. And it  
46 may therefore be beneficial to you, Mr.  
47 Commissioner, if I provide you with some

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presenter)  
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1 background respecting my early involvement in  
2 commissioning a study in the use of the Tasers by  
3 the Victoria Police Department.

4 As early as 2004, four years ago, reports  
5 that subjects had died shortly after the Taser had  
6 been applied to them caused me to wonder whether  
7 there was any direct link between the use of the  
8 Taser by police and the subsequent death of the  
9 subject. My concern was that if the police had  
10 mistakenly been using the Taser in the honest but  
11 mistaken belief that it was a non-lethal weapon,  
12 and therefore a safe alternative to lethal  
13 application of force, that matter should be  
14 investigated. Now, I'm not saying that it is or  
15 it isn't. My concern was that they may have been  
16 using it in the belief that it was a non-lethal  
17 weapon.

18 Well, sir, the first case that actually  
19 prompted this was a case involving a Mr. Robert  
20 Bagnall. He died on June 23rd, 2004, shortly  
21 after Vancouver Police had deployed the Taser from  
22 two different instruments while trying to remove  
23 him from a locked hotel bathroom. Originally they  
24 had used normal means. The man had simply locked  
25 himself in there. But when the fire alarm went,  
26 they accelerated, of course, their efforts to  
27 remove him from the hotel because they believed  
28 the hotel was on fire, and they did so by opening  
29 the door. They had to Taser him and shortly  
30 thereafter he died.

31 Now, I ordered an external investigation into  
32 the matter to be conducted by the Victoria Police  
33 Department. In discussions with Victoria Chief  
34 Constable Battershill, he readily agreed to expand  
35 his investigation into the death of Mr. Bagnall to  
36 include:

37  
38 a review of the present use of force protocol  
39 and to make such interim recommendations as  
40 he deems appropriate for the use of the Taser  
41 by police officers in BC pending the results  
42 of emerging studies presently underway.

43  
44 I pause here to say, sir, that I was aware that  
45 there were studies underway, but I was concerned  
46 from my point of view. My responsibility was the  
47 use of Tasers in BC.

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presenter)  
Presentation

1 Well, Victoria had been one of the first  
2 police forces in Canada to use the Taser and was  
3 therefore the most experienced force that I had  
4 available within my mandate to conduct that study.  
5 Well, I can say that Victoria was extremely  
6 diligent about conducting the study and Chief  
7 Battershill allocated significant resources to it.  
8 They produced an interim report on September 29th,  
9 2004, entitled "Taser Technology Review and  
10 Interim Recommendations." That report is on our  
11 website.

12 Now, those interim recommendations  
13 included -- and now I'm going to be making some  
14 quotes, and in the interest of time, I will be  
15 summarizing. The preamble was:

16 Based on our research to date --

17  
18  
19 Now, don't forget, this was 2004.

20  
21 -- this Investigative Team is of the opinion  
22 that the TASER should be retained as an  
23 Intermediate Weapon for use by police in  
24 British Columbia, subject to any  
25 recommendations that may emerge from our  
26 Final Report. Our analysis of the field  
27 usages and the medical literature suggests  
28 appropriate use of the TASER presents an  
29 acceptable level of risk to subjects being  
30 controlled.

31 At the same time, we believe that more  
32 can be done to ensure uniformity of training  
33 across the Province, to provide enhanced  
34 levels of accountability, and to decrease the  
35 risk to those groups most at risk from sudden  
36 and unexpected death associated to restraint,  
37 whether or not the TASER is used.

38  
39 Now, you've heard some evidence today about  
40 restraint issues as well.

41 So the recommendations were:

42  
43 Standardized Training --

44  
45 On the basis that:

46  
47 -- there appears to be significant

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presenter)  
Presentation

1                   inconsistencies throughout the province in  
2                   the training of police officers in the use of  
3                   the Taser.

4  
5                   Secondly, they recommended mandatory  
6                   reporting. Apparently:

7  
8                   Not all agencies in the province currently  
9                   require officers to properly report TASER  
10                  deployment. Some agencies with mandatory  
11                  reporting policy may not be capturing all  
12                  usages due to insufficient levels of  
13                  supervision.

14  
15                  I pause here to say that was the case in 2004. I  
16                  also pause to say that the old M26 didn't have the  
17                  data recording equipment that is available in the  
18                  X26.

19                  They said:

20  
21                  Therefore, we are recommending that after any  
22                  deployment of a Taser (probes or push-stun  
23                  application) the user must submit a Use of  
24                  Force report that captures relevant  
25                  information and that will allow for  
26                  statistical analysis of TASER use across the  
27                  Province. Ideally, this Use of Force report  
28                  would be delivered via PRIME BC, in a format  
29                  created by the Justice Institute of British  
30                  Columbia, in consultation with Use of Force  
31                  coordinators.

32  
33                  The report also recommended acquisition of the new  
34                  Taser technology. That would be the X26, largely,  
35                  sir, because of the greater capability of  
36                  recording data, and apparently the X26 provides a  
37                  greater margin of safety through use.

38                  It also recommended excited delirium  
39                  training.

40  
41                  The phenomenon of Excited Delirium still  
42                  appears to be under recognized in the  
43                  policing community. Although relatively rare,  
44                  changes in patterns of drug abuse make it  
45                  likely officers will encounter victims of  
46                  Excited Delirium more frequently.

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1           So they recommended the creation of a standardized  
2           lesson plan/course training standard for excited  
3           delirium at the JI, and that training was to be  
4           delivered to all recruits as well as all in-  
5           service members, regardless of rank, in the  
6           province.

7           They also talked about restraint protocols:

8  
9           Although medical evidence remains  
10          inconclusive, there does appear to be a  
11          linkage between restraint positions and  
12          enhanced risk to arrested subjects.

13          Until definitive research has been  
14          conducted, we are recommending that that the  
15          use of the maximal restraint position, where  
16          handcuffs and ankles are bound behind the  
17          back, should be eliminated by police agencies  
18          in the Province. A Hobble restraint, a Wrap  
19          restraint or other similar devices should be  
20          provided to police along with appropriate  
21          training.

22  
23          Well, that was the interim report. The final  
24          report was produced on June 14th, 2005. It too  
25          can be found on our website. And that in my view  
26          is a very thorough report that made some  
27          recommendations which, in conjunction with the  
28          interim recommendations, if implemented just may -  
29          and I say possibly may - have prevented some of  
30          the problems that have subsequently arisen in  
31          cases.

32          The police said in their report:

33  
34          There will be situations, particularly in  
35          areas where back-up officers may be distant  
36          or unavailable, where multiple applications  
37          are necessary to control violent subjects.  
38          Training protocols, however, should reflect  
39          that multiple applications, particularly  
40          continuous cycling of the TASER for periods  
41          exceeding 15-20 seconds, may increase the  
42          risk to the subject and should be avoided  
43          where practical.

44  
45          And then they recommend that conventional use of  
46          force be used if the single application doesn't  
47          work.

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1           They also talked about -- they recognize that  
2 prolonged struggle heightens the risk to both the  
3 officer and the subject. So they say:

4  
5           A single TASER application made before the  
6 subject has been exhausted, followed by a  
7 restraint technique that does not impair  
8 respiration may provide the optimum outcome.  
9

10           Well, at pages 34 and 35 of that report,  
11 there were three final recommendations. The  
12 recommendation was:

13  
14           ...subject to situational factors, that  
15 they not be used against subjects who are  
16 demonstrating only passive resistance.

17           For subjects who are displaying active  
18 resistance, those who are resisting an  
19 officer's efforts to take them into custody  
20 without attacking the officer, where an  
21 officer believes the use of a CED is  
22 appropriate we are recommending that CED's be  
23 used in a push stun mode only.  
24

25 Not firing the barbs.

26           And although the report doesn't say it, Mr.  
27 Commissioner, I believe that it stands to reason  
28 that if you use a push stun mode, that is direct  
29 application, you have more certainty as to the  
30 location. There are also dangers associated with  
31 firing from a distance. You might strike them in  
32 the eyes, you might strike other vulnerable parts  
33 of the body, and if the body actually collapses,  
34 you're not in a position to take them to the  
35 ground. They may well fall from a balcony, say,  
36 or hurt themselves.

37           And three:

38  
39           In situations where officers are confronted  
40 by active resistance, assaultive resistance,  
41 or the threat of grievous bodily harm or  
42 death, where an officer believes that the use  
43 of a CED is appropriate we are recommending  
44 that CED's be used in either ... mode.  
45

46           Well, in my view, one of the most significant  
47 aspects of this report was the fact that it had

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1           been subjected to peer review by a medical review  
2           panel. There was a multidisciplinary group of  
3           experts that included a forensic pathologist, an  
4           exercise physiologist, a cardiologist, a forensic  
5           psychiatrist, the Vice-Chief of Emergency  
6           Medicine, a neurologist, a trainer with the  
7           Ontario Police College, the District  
8           Superintendent for the BC Ambulance Service, the  
9           Executive Director of the Canadian Police Research  
10          Centre and an advanced life support paramedic.  
11          Well, that panel met in October of 2004 to  
12          identify relevant issues for further study, not -  
13          and I emphasize this - they were not to draw  
14          conclusions about the safety of the Taser or other  
15          CEDs.

16          Well, that final report came out in June. It  
17          was accompanied by a letter from Dr. John Butt, an  
18          eminent forensic pathologist, and I believe you  
19          may have heard from Dr. Butt earlier in your  
20          inquiry. He provided a letter to our office on  
21          May 17th, 2005, wherein he commented on both the  
22          interim and the final reports. The letter is also  
23          on our website.

24          But one of the conclusions he drew was, and  
25          this is then:

26  
27                 More than one expert in the field of  
28                 cardiology and electrophysiology has been  
29                 consulted about the issue of the Taser shock  
30                 being capable (or potentially so) of  
31                 producing the fatal arrhythmia of the heart  
32                 called ventricular fibrillation. There seems  
33                 to be general agreement that in but one or  
34                 two circumstances, most notably persons with  
35                 pacemakers, the electrophysiology of the  
36                 normal heart would not be affected by  
37                 discharge of the Taser shock/energy when the  
38                 weapon is properly used.

39                 One is aware that it is difficult and  
40                 most times impossible to assess beforehand  
41                 those who might be medically at risk.  
42                 Frequently persons "shocked" with the Taser  
43                 had been using cocaine, a drug which causes  
44                 heart arrhythmias. The public is unlikely to  
45                 be aware of a dilemma; notably that in the  
46                 state of excited delirium itself, not  
47                 infrequently there are fatal consequences.

1  
2 I.e., excited delirium absent a Taser can lead to  
3 death.

4 Well, it's significant to note that that the  
5 medical review panel's purpose was to identify  
6 relevant issues for study. It didn't intend to  
7 draw conclusions about the safety of the Taser.  
8 The interim recommendations were based on the  
9 information available to them at the time. And I  
10 recognize, Mr. Commissioner, that here in 2008,  
11 considerably more information is available that  
12 may affect those recommendations.

13 It must be remembered that in my role as  
14 Police Complaint Commissioner for BC, I do not  
15 have the power or the jurisdiction to either ban,  
16 approve or otherwise regulate the use of the Taser  
17 or other weapons in this province. That is the  
18 sole jurisdiction of the Solicitor General. Other  
19 than commissioning this report and providing  
20 access to it as we have done, we have no  
21 jurisdiction to insist upon the implementation of  
22 its recommendations by any police force in the  
23 Province.

24 Well, one other important factor you should  
25 be aware of is that in conducting our review of  
26 the Bagnall case, we attempted to have the output,  
27 for lack of a better term, of the Taser used to be  
28 measured by an independent lab, to determine  
29 whether the Tasers in question actually performed  
30 the way that TASER International had advertised  
31 them to perform. Well, that question has until  
32 very recently not been satisfactorily answered  
33 because there was no known independent laboratory  
34 that had the specialized equipment to accurately  
35 measure it.

36 After the Final Report had been provided to  
37 us in June of 2005, we continued our investigation  
38 into the Bagnall matter. We were told in July of  
39 that year by the Victoria Police that the Canadian  
40 Police Research Council was working on the  
41 development for a testing program because no  
42 independent lab could be found. The Tasers in  
43 question were retained by Victoria police as  
44 exhibits until they could be tested.

45 Remember I told you in that case there were  
46 two applications by two instruments.

47 At one stage, it was thought that a private

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1 lab known as Intertek was able to provide an  
2 independent measurement. On the 13th of June 2005  
3 they had provided a report that indicated that the  
4 two Tasers measured did not produce a consistent  
5 output and that different voltages were measured  
6 from each of the Tasers with the same load. A  
7 test result accompanying the report indicated that  
8 the test results performed by Intertek were not  
9 identical to the submitted specifications from the  
10 manufacturer.

11 However, when those results were shared with  
12 TASER international, they hired another laboratory  
13 to review the Intertek report.

14 THE COMMISSIONER: I've read all that.

15 A Oh, you have.

16 THE COMMISSIONER: Go ahead, though.

17 A Okay. Let me just summarize, then, sir, that  
18 after they concluded that, "The discrepancy  
19 between the input power and the output power  
20 cannot be explained by the laws of physics, and  
21 suggests that an error was made in the  
22 measurements made by Intertek." Intertek  
23 subsequently, on February 7 says don't rely on our  
24 tests because basically:

25  
26 ...the data contained in the subject test  
27 report do not reflect actual performance of  
28 the Taser guns in their intended use.

29  
30 So we're back to square one. The report we  
31 thought helped was now withdrawn.

32 Well, we waited for two more years, sir, to  
33 find out what was going on with testing, and  
34 finally on February 19th of this year, 2008, we  
35 were told that the testing should be able to be  
36 performed within a week or two. And we received  
37 word on June 6th, just this month, from the  
38 Executive Director of the Canadian Police Research  
39 Centre in Ottawa that they have completed their  
40 testing but that they were still analyzing the  
41 results. But their preliminary view was that the  
42 Tasers being tested were within the  
43 specifications. Then they gave me a couple of  
44 paragraphs of how many volts and 250 ohm resistor,  
45 material that I'm not going to tell you about, but  
46 they just gave me the basis for it. It would  
47 require an expert to figure it out.

1 Well, turning to my conclusion on point one,  
2 sir. Having earlier said that I am not in a  
3 position to approve, ban or regulate the use of  
4 the Taser, I am nevertheless not advocating a  
5 moratorium on its use in its entirety at this time  
6 based on safety issues alone. Apart from  
7 anecdotal accounts of inappropriate use of the  
8 Taser in situations where they clearly ought not  
9 be used, there is not to my knowledge, apart from  
10 a reported recent jury decision in a civil case in  
11 the United States, a body of evidence or legal  
12 determination that directly connects Taser use  
13 with resultant death as its sole cause.

14 You've heard a lot of experts on that. I  
15 make no comment other than no one has brought  
16 anything to my attention that would change my view  
17 at this point.

18 What in my opinion is urgently required,  
19 though, is further study, further independent  
20 testing, and training. That was my view in 2004  
21 and it still is today. Unfortunately the issues  
22 we raised then are still unresolved and truly  
23 independent study and testing hasn't been as  
24 actively or as timely pursued as I would have  
25 hoped.

26 Part of the problem is, though, that when the  
27 Taser was initially introduced it was regarded as  
28 an alternative to lethal force. Police make the  
29 argument that the Taser has saved many lives  
30 because they have not had to resort to lethal  
31 force such as a handgun when they have deployed  
32 the Taser. As a matter of fact, in a very recent  
33 BC Coroner's inquest into a shooting death by an  
34 RCMP officer of a subject, the Coroner's jury  
35 *inter alia* recommended that all RCMP officers be  
36 trained in the use of the Taser. Clearly there is  
37 an acknowledgment there by the public that it is  
38 preferable to use the Taser to subdue someone than  
39 to shoot him with bullets.

40 The mortality rate when the Taser is deployed  
41 is far likely to be lower than when someone is  
42 shot with a firearm. That is not, however, a  
43 guarantee that the Taser can be used safely in all  
44 instances, nor that death will not result. The  
45 jury is literally out on that issue. There are  
46 reports of recent studies involving pigs that  
47 postulate that repeated applications of the Taser

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1           may cause fatal heart arrhythmia. There is also a  
2           recently reported concern that the multiple  
3           application of the Taser may cause a condition  
4           known as acidosis, about which very little is  
5           known and about which even less study or training  
6           has been undertaken.

7       THE COMMISSIONER: That's what the jury went on in the  
8           case in the States when they awarded the damages.

9       A       That's correct, sir.

10           Furthermore, Tasers are often being used on  
11           the very people that are already physically  
12           compromised. The mentally ill, people on drugs,  
13           those who are experiencing excited delirium are  
14           often difficult for officers to deal with using  
15           regular means or weapons, and they appear to be  
16           the most susceptible to adverse effects from the  
17           application of the Taser.

18           But therein lies the problem. Unfortunately,  
19           the Taser has become a tool of convenience in some  
20           situations, sort of a "come along" device. "Drop  
21           the beer. No?" Zap.

22           In essence it is being used in situations far  
23           short of an alternative to lethal force. In my  
24           view, the use of the Taser should be restricted to  
25           situations where the subject is clearly  
26           demonstrating combative behaviour and is likely to  
27           be a threat to the safety of the public, the  
28           officer or to himself. The deployment of the  
29           Taser should be approved for use considerably  
30           higher up on the use of force continuum than it is  
31           currently pegged. In brief, its use should be  
32           restricted to an alternative to using more lethal  
33           force in situations where that is appropriate.

34           One is likely prepared to acknowledge that in  
35           certain circumstances the use of the Taser may  
36           indeed amount to lethal force, the main difference  
37           being that the lethal consequences of using the  
38           Taser are less likely to occur than when a firearm  
39           such as a handgun is deployed at centre mass.

40           My recommendations for your consideration,  
41           Mr. Commissioner, should you accept them, include  
42           the following.

43           One of the most important requirements is for  
44           there to be a National Use of Force determination  
45           as to where the Taser fits in the use of force  
46           continuum. Once that has been determined, police  
47           forces across Canada should be trained to the same

1 standard.

2 Secondly, independent testing of the TASER is  
3 required to determine whether the device produces  
4 the appropriate output.

5 Thirdly, in the interim, I am of the view  
6 that it would be prudent if the recommendations  
7 contained in the Victoria Police Report of 2004  
8 and 2005 were to be implemented forthwith as a  
9 precaution.

10 I would also urge that an ongoing study by a  
11 multidisciplinary panel of experts be conducted to  
12 determine whether the Taser is capable of causing  
13 death in subjects, and if so, which subjects are  
14 most at risk.

15 Now, turning briefly to my second point, I  
16 feel obliged to share with you, Mr. Commissioner,  
17 some concerns that I have about the paperwork  
18 respecting the authorization for use of the Taser  
19 in this province and actually elsewhere in Canada.  
20 That's the second heading.

21 As you may know, in addition to the "Report  
22 by the Commissioner of Complaints Against the  
23 RCMP" - that's Mr. Kennedy - and the House of  
24 Commons Standing Committee on Public Safety and  
25 National Security on the use of Tasers,  
26 Commissioner Elliot of the RCMP also asked for an  
27 independent review on the use of conducted energy  
28 weapons by the RCMP. That study was being  
29 conducted by Mr. John Kiedrowski from the  
30 Compliance Strategy Group in Ottawa. As part of  
31 his review, I had the privilege of meeting Mr.  
32 Kiedrowski in April of this year. During that  
33 meeting he raised a extremely interesting point  
34 with me with respect to Tasers being misclassified  
35 as a prohibited weapon. Mr. Kiedrowski was very  
36 adamant that the classification of a Taser was  
37 that of a prohibited firearm under the *Criminal*  
38 *Code*. Furthermore Mr. Kiedrowski noted that  
39 because of this what he called misclassification,  
40 the policing community in Canada may be faced with  
41 a very major challenge.

42 Well, at first blush, I must admit that  
43 didn't attract my attention per se since in  
44 general I thought that a prohibited weapon would  
45 include a prohibited firearm since a firearm is a  
46 weapon. But the definitions are different.

47 Furthermore, many of the police policies and

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1           procedures and regulations that govern the use of  
2           the Taser are based on the assumption that the  
3           Taser is defined as a prohibited weapon. Not only  
4           have the RCMP treated the Taser as a --

5       THE COMMISSIONER: Just a minute. When Tasers first  
6           came out, the propellant was gunpowder.

7       A       That's correct, sir.

8       THE COMMISSIONER: And now that's been changed to --

9       A       To a gas.

10      THE COMMISSIONER: -- to gas. Doesn't that, then, take  
11           it out of that category?

12      A       Well, sir, I think it's confusing and convoluted,  
13           but I don't believe that the paperwork has caught  
14           up because if you look at the definition under the  
15           *Criminal Code*, it's still a prohibited firearm.  
16           And if you allow me to, sir, develop the logic --  
17           and I'm not sure I understand it. I'm raising it  
18           as a concern --

19      THE COMMISSIONER: Yes.

20      A       -- that you may want to look at, sir. The police  
21           policies and procedures and regulations that  
22           govern the use of Tasers are based on the  
23           assumption that the Taser is defined as a  
24           prohibited weapon. However, on reflection, seeing  
25           Mr. Kiedrowski's argument made me recognize that  
26           the regulations permitting its use and the  
27           authorization for deployment and the rules  
28           regarding training, storage, certification and  
29           reporting structures may depend on the appropriate  
30           classification of the Taser.

31           If - and I say "if" - it is indeed regarded  
32           as a prohibited firearm as opposed to a prohibited  
33           weapon, it may be argued that its present use in  
34           British Columbia and elsewhere may not in fact be  
35           authorized in accordance with the governing  
36           provincial acts and regulations. Despite having  
37           had dealings with the police and other experts,  
38           the first person to point that out to me was Mr.  
39           Kiedrowski. If he is right - and that's a very  
40           qualifying prefix - if he is right, that  
41           designation creates significant problems about  
42           whether the Taser is currently authorized to be  
43           used in this province and whether the training,  
44           certification and reporting protocols are  
45           adequate.

46           To shed some light on this confusion on how  
47           the Taser was classified as a prohibited weapon

1 versus a prohibited firearm, Mr. Kiedrowski  
2 pointed out that prior to October 1, 1998, the  
3 CEW, or Taser, was referred to as a prohibited  
4 weapon in Canadian law under Prohibited Weapons  
5 Order, No. 3 (SOR/78-278). That was called the  
6 "Order Declaring Certain Weapons to be Prohibited  
7 Weapons." That referred specifically to the  
8 "Taser Public Defender" as:  
9

10 a gun or a device similar to a gun capable  
11 of injuring, immobilizing or otherwise  
12 incapacitating a person by the discharge  
13 therefrom of darts or any other object  
14 carrying an electric current or substance.  
15

16 The Taser first became a prohibited weapon under  
17 the *Criminal Code* in 1992 under the *Cartridge*  
18 *Magazine Control Regulations*.

19 Now I recognize, Mr. Commissioner, that the  
20 Taser Public Defender, which is the instrument  
21 referred to, is an old model which has been  
22 replaced by various models including the M26 and  
23 the X26, and that the barrel length may not be the  
24 same. It may also be different in that it fires  
25 by gas as opposed to gunpowder. Nevertheless, it  
26 appears that confusion reigns because the  
27 paperwork regarding the designation and  
28 classification may not have caught up to the  
29 changes in technology.

30 Nevertheless, on October 1, 1998, the  
31 Governor General in Council, on the recommendation  
32 of the federal Minister of Justice, amended the  
33 *Criminal Code* to define the "Taser Public Defender  
34 (CEW)" as a prohibited firearm. This change in  
35 the *Criminal Code* in 1998 was part of the federal  
36 government amendments to the *Firearms Act*. And  
37 According to the Regulatory Impact Analysis  
38 Statement which the federal government publishes  
39 to explain why it's amending a regulation:  
40

41 The "Taser Public Defender," which discharges  
42 a dart carrying an electrical current and  
43 which is now in the prohibited weapons  
44 category, has been moved to the prohibited  
45 firearms class because it is a barrelled  
46 weapon and thus comes within the "firearm"  
47 definition in the *Code*.

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1  
2 That was their explanation for why it went from  
3 prohibited weapon to prohibited firearm.

4 So since December 1, 1998, under the  
5 definition section of prohibited firearm in  
6 section 84(1), that included "any firearm that is  
7 prescribed to be a prohibited firearm."

8 Well, the *Criminal Code* Regulations  
9 Prescribing Certain Firearms and other Weapons,  
10 Components and Parts of Weapons, Accessories,  
11 Cartridge Magazines, Ammunition and Projectiles as  
12 Prohibited or Restricted - that's in SOR/98-462 -  
13 define prohibited firearms as:

14  
15 any firearm capable of discharging a dart or  
16 other object carrying an electrical current  
17 or substance, including the firearm of the  
18 design commonly known as the Taser Public  
19 Defender --

20  
21 And here are the significant words:

22  
23 -- and any variant or modified version of it.

24  
25 Does that include the M26, the X26? I leave that  
26 for you to decide, sir.

27 That regulation also indicates that:

28  
29 The firearms listed in Part 1 of the schedule  
30 are prohibited firearms for the purposes of  
31 paragraph (d) of the definition "prohibited  
32 firearm" in subsection 84(1) of the *Criminal*  
33 *Code*.

34  
35 Hence, it appears to me that the Taser is a  
36 prohibited firearm, although I am the first to  
37 admit that the whole area is convoluted and  
38 confusing.

39 Mr. Kiedrowski, who was hired by the RCMP to  
40 conduct that independent review, has obviously  
41 challenged the conventional thinking of the  
42 Canadian policing community, who have considered  
43 that the Taser is a prohibited weapon. This  
44 revelation has major consequences on policing  
45 firearm regulations, operational policies and  
46 procedures.

47 First of all, as the Taser is classified as a

1 prohibited firearm, it must be treated in the same  
2 way as a police service pistol or revolver, in  
3 both legislation and in policy.

4 In British Columbia, our Use of Force  
5 Regulations stipulate that under section 10(1)  
6 each member of a police force who is authorized to  
7 carry and use a firearm must be requalified on the  
8 firearm within a period of not less than once a  
9 year. However, for example, the Vancouver Police  
10 recertification period for a Taser is every three  
11 years, while for the RCMP it's every two years.  
12 It's a firearm and if it fits that category, they  
13 have to have their recertification yearly.  
14 Arguably, if it's a firearm, it should be one  
15 year. The recognition that the Taser is a  
16 prohibited firearm also impacts the storage and  
17 reporting provisions which necessarily must be the  
18 same as for other firearms.

19 Now, under the current *BC Police Act* and the  
20 Use of Force Regulations, the legislation allows  
21 police officers to carry a firearm. Section 3(1)  
22 of the Use of Force Regulations lists the firearms  
23 and ammunition that a chief constable may  
24 authorize his officers to use. Under regulation  
25 3(1) it allows the police to carry a firearm that  
26 must be a semi-automatic pistol and includes its  
27 specifications. Under regulation 3(2) the police  
28 can also carry a firearm called a Smith and  
29 Wesson, which includes specifications for that  
30 weapon. However, there is no mention that the  
31 police can carry a Taser or a conducted energy  
32 weapon under the Regulations. Therefore, if the  
33 regulation is silent, it is arguable that there  
34 may not be authorization for its use at all.

35 The police community may argue that the  
36 police have authority to use the Taser under  
37 section 3(3) in that the chief constable or a  
38 police officer designated in writing by:

39  
40 The chief constable or a police officer  
41 designated in writing by the chief constable  
42 may authorize a member of his or her police  
43 force to carry, for a special purpose, a  
44 firearm and ammunition of a type other than  
45 that referred to in this section.

46  
47 However, the response to that suggestion is

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Questions by Mr. Vertlieb (cont'd)

1 that the carrying of a Taser for daily use is not  
2 a special purpose. If this is the case, I would  
3 suggest that it's a potential abuse of regulatory  
4 power and needs to be examined.

5 Now, my concern, sir, is that the policing  
6 community and those responsible for the governance  
7 of policing may have inadvertently misclassified  
8 the Taser as a prohibited weapon and consequently  
9 have developed a regulatory framework, policies  
10 and procedures based on that misclassification.  
11 Flowing from that is the fact that police may also  
12 be inadvertently in violation of the training,  
13 certification and reporting protocols that affect  
14 prohibited firearms as opposed to prohibited  
15 weapons.

16 Therefore, Mr. Commissioner, during the  
17 course of your very important deliberations, you  
18 may wish to consider this significant issue and  
19 make whatever recommendations you deem  
20 appropriate.

21 Thank you, sir. That's my submission.

22 THE COMMISSIONER: Thank you very much. Counsel, have  
23 you any --

24 MR. VERTLIEB: A couple of matters, Mr. Commissioner.

25  
26 QUESTIONS BY MR. VERTLIEB, continuing:  
27

28 Q Mr. Ryneveld, you spoke to us about your interim  
29 report and then your final report and the  
30 recommendations that were made by you. You said  
31 that you thought it was a very thorough report in  
32 2005 at the final report stage, and you made the  
33 comment that recommendations made were not  
34 implemented.

35 A Well, sir, I cannot say what happened to the  
36 report. Needless to say, we can only -- it was  
37 the Victoria Police that produced it. They  
38 distributed it. It went to various policing  
39 agencies. But I see no evidence that current  
40 policies and practice actually follow the  
41 recommendations. There have been too many  
42 instances that have come to my attention that  
43 appear to be not in accordance with those  
44 recommendations. There do not appear to be  
45 standardized policies that follow the  
46 recommendations.

47 Q Now, you have no power to compel change?

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presenter)

Questions by Mr. Vertlieb (cont'd)

1 A No, sir, I do not.

2 Q But just as a matter of respect for your office,  
3 as it were, has anybody in the policing line or  
4 any of the government agencies explained to you  
5 why any of those recommendations were not given  
6 effect? Have you had any explanation?

7 A No, sir.

8 Q I wanted to ask you about the wording in a comment  
9 you made to the Commissioner, and it was  
10 interesting wording. And I want to make sure that  
11 we understand what you're saying. It's on the  
12 subject -- and you mentioned it after the fact,  
13 that there was a group of citizens who wanted more  
14 police to have Tasers and it's a conundrum. We  
15 don't want people being shot if Tasers can be used  
16 yet at the same time the risk element. And I  
17 think you said that one is likely prepared to  
18 acknowledge that in certain circumstances, the use  
19 of Taser may indeed amount to lethal force.

20 A That is my interpretation of the fact that people  
21 die after the Taser has been used, and absent an  
22 explanation -- and I'm not making that linkage.  
23 But I think that from a risk analysis, until we  
24 know better, I think it's only prudent for police  
25 to realize that there is a possibility of death  
26 following. I mean, we've heard many instances,  
27 reported cases. I understand that there's  
28 anecdotal reporting that over 300 people have died  
29 since the application of the Taser in North  
30 America. Those figures may now be different.

31 So I think to simply stick to the line that  
32 the Taser is completely safe and there's  
33 absolutely no risk would not be prudent. I think  
34 officers should be aware that whenever you apply  
35 any kind of force, whether it's a baton strike or  
36 any one of the other kinds of weapons that they  
37 have at their disposal, there is a risk. And I  
38 believe that the Taser should be viewed as  
39 potentially life threatening in certain  
40 circumstances for certain subjects. That, I  
41 suppose, is what I'm saying. But it should also  
42 be recognized that in, shall we say, the quiver of  
43 tools that the police have available to them, they  
44 need to know when to use it and to use it in only  
45 very appropriate circumstances. To use it as a  
46 come-along tool was never its intention. It was  
47 an alternative to lethal force.

1           I understand from the former Attorney  
2           General, Mr. Dosanjh, who has said publicly that  
3           when he approved the use of it in this province,  
4           he thought that it was only going to be used as an  
5           alternative to lethal force and not lower down on  
6           the continuum of use of force protocols that seems  
7           to be currently applied.

8           Q    And is it therefore one of your concerns that the  
9           use has gone to the lower down, as you call it?

10           Is that one of your continuing concerns?

11           A    Yes, it is. It's being used inappropriately. It  
12           should be higher up on the use of force continuum.  
13           I still think it's preferable to using bullets  
14           because the percentage of risk - I think you just  
15           look at the statistics - is lower, but it's not an  
16           absolutely safe instrument in the sense there's  
17           potential for harm.

18           I believe that the training and the  
19           recognition must come from our police forces that  
20           there are risks involved, and if they honestly but  
21           mistakenly believe that they can zap somebody  
22           without -- shock somebody without any potential  
23           consequences, that would be imprudent, and I  
24           believe that they need to be told.

25           Q    You spoke to the Commissioner about having the  
26           benefit of medical advice and opinion back in 2004  
27           and 2005. You mentioned, for example, Dr. Butt,  
28           the pathologist, who did in fact come and give the  
29           Commissioner the benefit of his views. Have you  
30           been following some of the expert opinion that's  
31           been brought to this Commission in the last  
32           several months from doctors of differing medical  
33           backgrounds and other people? Are you aware of  
34           the extent of some of that?

35           A    I am aware that the Commissioner has had the  
36           benefit of many experts in this field. I have  
37           not, unfortunately, had the time to read the  
38           transcripts in their entirety. I'm aware of what  
39           is transpiring. Obviously this is an issue near  
40           and dear to my heart.

41           Q    Do you have the impression that since you worked  
42           on this subject in 2005, there's more knowledge  
43           and also that this Commission has had a broader  
44           perspective than was available and able for you to  
45           put together back in 04/05?

46           A    Absolutely. I think that the Commissioner is in  
47           the best position of anyone to look at the current

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1 state of information and make recommendations, and  
2 my hope is that the Commissioner's ultimate  
3 recommendations or decisions will be taken to  
4 heart.

5 MR. VERTLIEB: Thank you very much, Mr. Ryneveld.  
6 Thank you, Mr. Commissioner.

7 THE COMMISSIONER: Thank you very much. Very much  
8 appreciated that you took the time to come here,  
9 and you obviously put a lot of work into your  
10 presentation. Thank you.

11 A Thank you, Mr. Commissioner.

12  
13 (WITNESS EXCUSED)

14  
15 THE COMMISSIONER: Now I believe we're adjourned till  
16 2:00?

17 MR. VERTLIEB: Yes, sir.

18 THE COMMISSIONER: And Mr. Kennedy will come.

19 MR. VERTLIEB: Yes.

20  
21 (PROCEEDINGS ADJOURNED FOR NOON RECESS)

22 (PROCEEDINGS RESUMED)

23  
24 THE COMMISSIONER: Yes, counsel.

25 MR. VERTLIEB: Thank you, Mr. Commissioner. Mr. Paul  
26 Kennedy is sitting where the presenters are, and  
27 I'd like to introduce Mr. Kennedy and then  
28 introduce Mr. Mike MacDonald, who is also with us  
29 and may contribute to the discussion.

30 THE COMMISSIONER: Yes. Welcome, gentlemen.

31  
32 PAUL KENNEDY and MIKE  
33 MacDONALD, Interested groups  
34 and individuals presenters  
35

36 QUESTIONS OF MR. KENNEDY BY MR. VERTLIEB:

37  
38 Q First, Mr. Kennedy, let's deal with your  
39 background, if we may, and then we'll deal with  
40 Mr. MacDonald, who works with you.

41 You have a Bachelor of Arts from Loyola in  
42 Montreal in 1969 and then went to law school,  
43 graduating in 1972 at Western?

44 A That's correct, sir.

45 Q In 1974, you were called to the Bar of Ontario and  
46 immediately started working with the federal  
47 Department of Justice. You worked there from 1974

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1 to 1998.

2 A That's correct.

3 Q And you were senior counsel as part of your duties  
4 dealing with drugs and money laundering in your  
5 years with the Department of Justice.

6 A That is correct. I was actually a senior general  
7 counsel. You strive very hard to get to that  
8 level. So I was a senior general counsel, yes.

9 Q Thank you. You correct me every chance you get.  
10 Now, Mr. Kennedy, then from 1998 to 2005, you were  
11 the senior assistant deputy minister in the  
12 Solicitor General Ministry, which became known as  
13 the Department of Public Safety in about 2003.

14 A That's correct.

15 Q So your service, then, was in effect as a senior  
16 Crown prosecutor for many years in the federal  
17 Department of Justice and then in a senior civil  
18 service position as a senior assistant deputy  
19 minister.

20 A That is correct. And I had responsibility at the  
21 level of senior assistant deputy minister for  
22 policing issues, national security issue, and  
23 latterly emergency management issues.

24 Q And then in October 2005, you were asked to take  
25 on the position of chair of the Police Complaints  
26 Commission, a position you accepted and that's  
27 what you are doing now at the present time?

28 A That is correct.

29 MR. VERTLIEB: Now briefly let me deal with your  
30 colleague, Mr. MacDonald, Mr. Commissioner.

31

32 QUESTIONS OF MR. MacDONALD BY MR. VERTLIEB:

33

34 Q Mr. MacDonald, you went to Simon Fraser University  
35 here in our city and you graduated with a  
36 criminology degree in 1990.

37 A Correct.

38 Q And then, sir, you stayed on in your studies and  
39 obtained a master's, a Master of Arts, again in  
40 criminology in 1994.

41 A Yes, that's correct.

42 Q And then in 1997, you joined the federal public  
43 service and you've worked exclusively in the area  
44 of national security and law enforcement at the  
45 Solicitor General Ministry, now the Department of  
46 Public Safety.

47 A That's right.

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1 Q And in 2007, you joined the Commission for Public  
2 Complaints against the RCMP. Your present  
3 function is as director of strategic policy and  
4 research?

5 A Yes, you're right.

6 MR. VERTLIEB: Thank you, Mr. MacDonald. We wish to  
7 thank both you gentlemen for your courtesy in  
8 coming here. I understand, Mr. Commissioner, that  
9 the main presentation will be from Mr. Kennedy and  
10 Mr. MacDonald may fill in some of the detail.  
11 With that in mind, Mr. Kennedy, would you please  
12 feel free to make your comments to the  
13 Commissioner, keeping in mind that we have your  
14 report that was recently filed and given  
15 widespread comment here in our country. So we  
16 have both your interim and your final report.

17

18 PRESENTATION BY MR. KENNEDY:

19

20 A Thank you very much. I would like to say some  
21 introductory presentation. I won't go into the  
22 detail of the report. You have the report and  
23 we're hoping -- currently in a bilingual format,  
24 there's about 13 pages executive summary on our  
25 website, and we hope very shortly to have the full  
26 78 pages translated as well, and we look forward  
27 to linking that to your site if that's at all  
28 possible.

29 THE COMMISSIONER: Yes, it will be.

30 A Thank you very much, sir. So definitely I'd like  
31 to thank you, Mr. Chairman, for inviting me to  
32 speak here today, and of course accommodating my  
33 schedule. I thought it would be more fruitful if  
34 I appeared before you having had the report issued  
35 than earlier.

36 THE COMMISSIONER: Oh, indeed. And it gave us time to  
37 think.

38 A I think that's a key thing in this particular too  
39 is achieving the correct balance in terms of what  
40 the solution may be for this challenge. And  
41 obviously I'm hoping that not only the interim  
42 report but the final report, which has more detail  
43 in it, will actually contribute to your  
44 deliberations in terms of the conducted energy  
45 weapon and what should be done with it. And as  
46 you pointed out, I'm here with my colleague today,  
47 and he's led a team that has been clearly very,

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1 very instrumental in us being able to achieve some  
2 work here and we're fortunate that the Minister of  
3 Public Safety, Minister Day, gave us some money so  
4 we could hire the staff to do this particular  
5 task.

6 The Minister, in fact, in November of 2007  
7 asked that I review the RCMP's conducted energy  
8 weapon protocols, their implementation and  
9 internal compliance, and to say the least, I  
10 wholeheartedly took on this task. I had  
11 referenced the matter in my 2006 annual report.  
12 There was a concern I saw arising and this gave me  
13 a chance, I think, to put some value-added work in  
14 terms of what the Commission could bring to this.

15 And more importantly, it allowed us to ask  
16 the questions that I think police typically do not  
17 ask and in addition allowed us to see and identify  
18 problems that the police themselves may have  
19 trouble seeing when we look at these kinds of  
20 activities.

21 And I believe as a civilian oversight body,  
22 the Commission in fact does bring a different and,  
23 I believe, a much needed perspective to systemic  
24 policing issues. That's, I believe, where our  
25 strength lies. And hopefully our report will  
26 prove that that comment in fact bears truth.

27 Policing in Canada is built upon a series of  
28 guiding principles, and you'll find those  
29 principles anchored in comments by Sir Robert  
30 Peel, who was a two-time Tory prime minister of  
31 England but was also the home secretary prior to  
32 that. And in particular of his nine principles  
33 that are in my report, there were four that struck  
34 me that are paramount and are of particular  
35 interest to the particular issue we're dealing  
36 with here today. And these are ones that were  
37 actually issued back in 1829, so it shows you, I  
38 think, that there are some things of wisdom that  
39 actually keep through the years and are as  
40 relevant today as they were then.

41 First is the fact that the police can only  
42 perform their duties if they have the public's  
43 approval of their actions. Second is the reality  
44 that the police are the public and the public are  
45 the police. What they mean by that is  
46 historically all civilians had a policing  
47 function. They used to identify one amongst the

1 members who would play a role on behalf of the  
2 rest of us. You've heard of the famous watchmen  
3 and so on.

4 The first time that we actually had a  
5 professional police force was in London, England,  
6 around the time of Sir Robert Peel, the famous  
7 Bobbies that he created. And what they were doing  
8 as a professional body, because of the urban  
9 challenges that a city like London posed, were  
10 then doing that activity on our behalf. I think  
11 that's important because people forget they are  
12 merely your agent. They are doing a function at  
13 another time you as members of society had to  
14 function, and that's why, I believe, citizens have  
15 a voice in terms of how this function in fact has  
16 been carried out.

17 Third, the police must use physical force  
18 only to the extent that it is necessary and to  
19 preserve public order. And then finally, the  
20 police rely on the willingness of the public  
21 cooperation to undertake their duties.

22 And part of what I see as my obligation is to  
23 restore and maintain the public confidence in the  
24 police. I find that there are problems. I try to  
25 identify them and make concrete recommendations  
26 and hopefully action would be taken. Clearly if  
27 I'm right and action is not taken, I think there  
28 can be a loss of faith in the police. And if you  
29 look at how societies function, we require  
30 citizens to phone in, whether it's on tip lines,  
31 neighbourhood watch, to come forward as witnesses.  
32 Society has to assist the police. The police  
33 require that assistance. There are just  
34 insufficient numbers of officers otherwise.

35 That said, when I looked at the issue of the  
36 RCMP's use of the conducted energy weapon, I  
37 believe that in fact all police services across  
38 the country can learn from each other. The  
39 challenges that others have faced and the  
40 responses that they've taken to those challenges  
41 are valuable examples for all to learn from.

42 Now, what is unique about the RCMP experience  
43 with the conducted energy weapon is that the RCMP,  
44 of all police forces, is present in every province  
45 and in every territory. In addition, they've been  
46 using this particular weapon since 2001. They  
47 have approximately 3,000 devices and they have

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1 over 9,000 members that have been trained. So our  
2 research on the RCMP's use of the conducted energy  
3 weapon and the largest single database in Canada  
4 brings, I believe, a truly pan-Canadian  
5 perspective to this issue.

6 Now, across this country, the debate on the  
7 conducted energy weapon use has in fact matured.  
8 Others have looked at it in fits and starts over  
9 the years. Other oversight bodies have looked at  
10 it. Non-government organizations have looked at  
11 it. Law enforcement agencies have attempted as  
12 well to understand the weapon's use, and of course  
13 the unforeseen consequences deployment may have  
14 had.

15 Of the numerous analyses currently being  
16 undertaken in Canada, including the previous work  
17 of the British Columbia OPCC -- Dirk Ryneveld, I  
18 believe, has appeared before you, and he and I had  
19 occasion to appear before a parliamentary  
20 committee on this very issue. We also have the  
21 report from the Parliamentary Committee on Public  
22 Safety and National Security. And of course,  
23 Amnesty International. And there are certain  
24 themes that repeat themselves from the review of  
25 these different bodies. We've all found a lack of  
26 training, examples of inappropriate use, a lack of  
27 meaningful data collection, and a lack of  
28 transparency and accountability.

29 Overall I have three interrelated concerns  
30 with the RCMP's use of the conducted energy  
31 weapon. First, the inappropriate assessment of a  
32 subject's behaviour has resulted in elevating the  
33 level of intervention beyond that which would be  
34 considered acceptable.

35 Second, that the position of the conducted  
36 energy weapon on the use of force model allows for  
37 a deployment of the weapon far too early in police  
38 encounters.

39 And finally, that the RCMP data collection  
40 and analysis practices for the conducted energy  
41 weapon usage databank are both ineffective and  
42 inefficient.

43 I firmly believe that policy decisions that  
44 the police make that affect their interaction with  
45 the public need to be based on sound factual data.  
46 In addition, communicating these policy decisions  
47 is essential to obtaining public support. This is

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1 absolutely true with respect to the conducted  
2 energy weapon.

3 When I look at the issue of the conducted  
4 energy weapon in today's climate, I believe that  
5 the police use of the weapon is a public policy  
6 issue. The public has expressed grave concerns  
7 about this weapon.

8 Following Sir Robert Peel's principle that  
9 the police can only perform their duties if they  
10 have the public's approval, how can the public not  
11 have a right to say how it will be policed? The  
12 RCMP has not effectively engaged the public nor  
13 have they explained their actions in this regard.  
14 The public's voice must be heard. Otherwise, the  
15 RCMP risks losing their support.

16 When it comes to the current conducted energy  
17 weapon policy, the RCMP decide how the device is  
18 deployed against whom they police, who gets  
19 medical treatment, and what data is collected and  
20 released to the public. In my opinion, this is a  
21 flawed system. To create effective and relevant  
22 public policy, appropriate and diverse input into  
23 the policy development process is essential. The  
24 police must have an impartial body who can act as  
25 a reasonable, well informed interlocutor to  
26 partake in this process. And this is the role  
27 that currently I've tried to fulfil.

28 The police are accountable to the public and  
29 their ability to function is contingent upon the  
30 public's approval of their actions. The conducted  
31 energy weapon debate has brought this into focus  
32 like, I believe, no other issue. Members of the  
33 public are rightly demanding a voice in how they  
34 are policed and what type of policing will be  
35 acceptable in Canada.

36 Now, strip away for the moment the public  
37 policy debate, the deaths in custody, the almost  
38 instinctive aversion to electricity, and at least  
39 the bottom line is this: we are dealing with a  
40 device that causes intense pain. Law enforcement  
41 and certainly TASER International speak to the  
42 fact that the conducted energy weapon renders  
43 subjects incapacitated and unable to fight back.  
44 This may be true, but it is a thoroughly sanitized  
45 description of what happens.

46 What is missing from the debate and what  
47 concerns me is that we have a pain compliance

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1 technique being whole-heartedly advocated across  
2 the country without a full appreciation of the  
3 impact on the human body. I believe this  
4 obviously might now be changing.

5 There are certain limits that we all  
6 instinctively recognize with regard to certain  
7 types of police use of force. What appears to be  
8 different with the conducted energy weapon is that  
9 police officers do not seem to appreciate the  
10 seriousness of the device, at least not to the  
11 same extent as they view the baton or a handgun.  
12 Police officers recognize that drawing their  
13 service weapon is very serious. I have not seen a  
14 similar recognition with the conducted energy  
15 weapon, and this lack of recognition is evidenced  
16 when the weapon is used and operationally viewed  
17 as an appropriate intervention tool with at-risk  
18 populations or those who are not posing a serious  
19 threat to the officer.

20 If the state or its representatives want to  
21 introduce a device for use against a member of the  
22 public, it bears the onus of ascertaining what  
23 level of risk to the public flows from the use of  
24 the device. If there's any ambiguity and  
25 uncertainty, that doubt should be resolved in  
26 favour of the citizen.

27 With respect to the conducted energy weapon,  
28 there is an ongoing debate concerning deaths  
29 proximal to the weapon's use. Until this debate  
30 is resolved, I have proceeded on the assumption  
31 that there may be a statistically small but  
32 nevertheless material risk that serious injury or  
33 death may occur following use, and this is  
34 particularly relevant with respect to at-risk  
35 groups.

36 Given the disproportionate number of people  
37 with substance or alcohol abuse issues who come  
38 into police contact and who in turn are more  
39 likely to become an in-custody death statistic, I  
40 am not convinced that the conducted energy weapon  
41 is always the best option to subdue such persons.  
42 This is of course absent a risk of harm to  
43 themselves, the member or to the public.

44 As I stated in my final report, there has  
45 been an absence of input from the medical  
46 community in this debate, which I believe has  
47 unfairly placed the burden of care for those

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1           experiencing signs of mental health crises or in  
2           the throes of drug toxicity on the police.

3           The conducted energy weapon is not a medical  
4           device. It is a tool available for public safety  
5           purposes only. The medical community should be  
6           firmly engaging by the law enforcement community  
7           on the use of the weapon, in particular with  
8           reference to at-risk populations.

9           Now, despite my concerns about the inducement  
10          of pain, I fully recognize that police work  
11          involves violent encounters with people in order  
12          to gain control of a situation. However, the  
13          profile of the individual who is most likely to be  
14          subject to the conducted energy weapon is no  
15          different than the profile of those who are most  
16          likely to come into police contact. It is  
17          typically the same group of people that the police  
18          have been dealing with long before the conducted  
19          energy weapon was ever introduced. These are not  
20          easy people to deal with. These encounters may  
21          involve those who are irrational and unable to  
22          function properly. At worst, they are focused on  
23          harming themselves or others with little  
24          appreciation of the consequences.

25          The RCMP's use of force model promotes the  
26          use of verbal interventions wherever possible,  
27          both to defuse potentially volatile situations and  
28          to promote professional, polite and respectful  
29          attitudes in any intervention. And these  
30          guidelines, in fact, are based on the RCMP's CAPRA  
31          problem solving model and require members to  
32          consider all relevant situational factors when  
33          determining whether to use force and the necessary  
34          amount of force to be used.

35          Now, this does not mean that a member needs  
36          to be physically assaulted before they can  
37          contemplate using the conducted energy weapon. It  
38          means that a proper assessment of situational  
39          factors must precede any decision to employ a use  
40          of force option. This is no different from what  
41          we expect of members when they decide to use a  
42          joint lock, a baton or OC pepper spray.

43          Police must be able to properly assess the  
44          situation and respond accordingly. The ability to  
45          do this comes with real life experience, ideally,  
46          under the mentorship of those who have  
47          successfully dealt with this kind of situation in

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1 the past, using the least degree of force required  
2 to maintain public safety. This is in keeping  
3 with Sir Robert Peel's principle that the police  
4 must use force only to the extent necessary to  
5 maintain public order.

6 Current RCMP coaching and mentoring programs  
7 sometimes involve mentors who have little more  
8 than two years of experience themselves. New  
9 members need good mentors. All members need good  
10 policy direction and guidance. If mentoring is  
11 weak, then policy and training need to be more  
12 focused. So while policing skills can be gained  
13 through scenario-based training, which our  
14 Commission believes is a preferred training  
15 method, it still does not replace the dynamics of  
16 real life situations.

17 To ensure appropriate behaviour, you need a  
18 strong balance, a balanced system of laws,  
19 policies, training and mentoring. If one of those  
20 is weak, the system must respond by strengthening  
21 the other areas. This, I believe, has not  
22 happened with the RCMP.

23 However, there are serious administrative  
24 issues within the RCMP that are affecting the  
25 operational capacity of the force and therefore  
26 member behaviour. There is a high rate of new  
27 recruits, a high rate of turnover, a lack of  
28 resources, have resulted in little mentoring,  
29 understaffing of detachments, and morale issues.  
30 All of these can adversely affect the frontline  
31 member attempting to deal with the public.

32 Based on similar findings outlined in the  
33 Auditor General of Canada's report in 2005, the  
34 RCMP must gauge and communicate its staffing and  
35 resource requirements in order to effectively  
36 police all of their communities.

37 To equip junior officers with a conducted  
38 energy weapon before they have picked up real life  
39 experience in the range of other techniques, I  
40 think, is unfair to them and is unfair to the  
41 Canadian public. So although to err is human, the  
42 consequences for an error in judgment in deciding  
43 when to use a conducted energy weapon, or any  
44 other use of force technique for that matter, can  
45 be quite severe and may be fatal.

46 I have already stated publicly that since the  
47 introduction of the Taser in 2001, the Commission

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1 has seen a policy shift within the RCMP that  
2 allows for the use of the weapon in circumstances  
3 far less constraining than what was originally  
4 proposed. The Commission coined the expression in  
5 the less restrictive use in December of 2007's  
6 interim report as usage creep. This has resulted  
7 in cases where individuals who have exhibited  
8 behaviours that were clearly non-combative or not-  
9 assaultive, and which could not even be classified  
10 as resistant, have been Tasered.

11 On June the 11th, 2008, I delivered my final  
12 report to the Minister of Public Safety and I made  
13 12 recommendations that encompass three broad  
14 conclusions. One, that the RCMP needs to  
15 appropriately instruct its members on the use of  
16 the Taser as a means of instituting appropriate  
17 and proportionate use of the weapons. The RCMP  
18 needs to clarify the nuances within its use of  
19 force model to its members and to the public about  
20 when it is permissible to deploy the weapon. And  
21 the RCMP needs to nationally coordinate and  
22 strengthen its efforts relating to reporting, data  
23 collection and analysis of conducted energy use.

24 The final report examined and presented the  
25 policies and practices of conducted energy weapon  
26 use from other domestic and international police  
27 forces. This goes back to my topic. I've looked  
28 at North America, other Commonwealth countries,  
29 and police forces across Canada. The situations  
30 that we're confronted with in terms of public  
31 safety challenges in each of those communities  
32 would be similar, I would think, to what the RCMP  
33 are confronted with and would be a useful model.

34 Comparative analyses have highlighted  
35 important differences in practices that I believe  
36 can assist the RCMP in their decision-making.  
37 When we analyzed the trends that exist within the  
38 RCMP usage form database, some of the results were  
39 surprising. And how can policy discussions within  
40 and outside the RCMP not include such statistics?  
41 Based on the data, we were able to establish a  
42 profile of who would be subject to use of this  
43 weapon. It is an unarmed male between the ages of  
44 20 and 39, under the influence of drugs or  
45 alcohol, involved in a caused disturbance or  
46 assault-related offence. This profile, I would  
47 submit, is not new to the police. It is a profile

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1 that they have encountered long before the  
2 introduction of the Taser.

3 Other trends the Commission uncovered were  
4 that the greater the number of members present at  
5 the scene, the greater the use of the conducted  
6 energy weapon. I think people thought that was  
7 counter-intuitive, that the officer needed it  
8 because he didn't have backup. In fact, the more  
9 of them that were present, they just kept  
10 increasing. Constables on general duty are  
11 overwhelmingly the ones using the weapon. I  
12 believe the figure is almost about 75 percent.  
13 There are conducted energy weapon deployments  
14 against those as young as 13 years of age, and our  
15 document referred to 13 up to in their 80s. So  
16 very, very broad.

17 We found that the weapon, which can be used  
18 as either touch stun or in probes, where the  
19 probes come out, the push stun is used two or more  
20 times in 40 percent of the cases. So if you're  
21 looking for multiple usages, you're going to find  
22 it in the touch stun mode.

23 If a person is under the influence of  
24 substances or is in a cell, confined in a cell,  
25 they are less likely to receive medical attention  
26 than those who are suffering from mental health  
27 crises or are over 50 years of age.

28 Now, unfortunately, due to the poor quality  
29 of the data collection of the RCMP, we were unable  
30 to determine if conducted energy weapon usage has  
31 proportionately increased over the years. It's  
32 difficult to sort that out. It would be very  
33 useful for us to know, in a constant universe, X  
34 number of officers, X number of devices, was there  
35 a growth? But the data didn't allow us to do  
36 that. And it also didn't allow us to make  
37 comparisons from one division across the country  
38 to the other.

39 Of greater concern to the Commission,  
40 however, because we all look at data and  
41 statistics -- since I have a public pulpit here,  
42 I'll put on record that I'm a fan of Disraeli, who  
43 said, "There are lies, damned lies, and  
44 statistics." So whenever you show me statistics,  
45 I always get my long stick out and poke them. And  
46 what we found here when we looked at the reports -  
47 we had 4,234 reports from the RCMP - we thought we

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1 would check our data against their data because we  
2 had a number of complaints that we'd received  
3 through the year. So we did a mini-audit,  
4 comparing our two numbers against theirs. Our  
5 mini-audit uncovered that nearly 68 percent of  
6 complaints lodged with our Commission involving  
7 conducted energy weapon deployment could not be  
8 found within the RCMP usage database. Where the  
9 device had been threatened but not deployed, we  
10 found that 100 percent of our complaints were not  
11 in their databank.

12 So if you extrapolate these numbers, you  
13 quickly see that the RCMP may have a serious and  
14 large-scale case of under-reporting, and I say  
15 that in the context that people have expressed  
16 concerns even with the data they see, which I  
17 think last year had about 1,700 usages, what I'm  
18 indicating to you is that that may be a  
19 significant under-reporting. So the gap in the  
20 usage database, that means the RCMP is unable to  
21 make fact-based policy decisions.

22 Despite the concerns the Commission has about  
23 the conducted energy weapon use, the RCMP and  
24 ourselves in fact are not, I believe, at opposite  
25 ends of the spectrum at this stage. There are  
26 choices available to the RCMP and an opportunity  
27 for positive collaborative change. That is to say  
28 the RCMP can choose to implement change, they can  
29 choose to account for the use of their weapons,  
30 and they can choose to listen to the public. At  
31 this point the choice for change rests solely with  
32 the RCMP and obviously with the Minister of Public  
33 Safety.

34 If, over time, sound analysis of usage data  
35 indicates a persuasive argument for changing  
36 policy to either further restrict or lessen  
37 restrictions on use, then a debate should occur at  
38 that time. This is an approach our colleagues in  
39 the United Kingdom have taken and the approach I  
40 believe is more closely aligned with what  
41 Canadians want and expect from their national  
42 police force. And you'll see my reference to the  
43 practice in the United Kingdom in the final  
44 report.

45 Therefore, I believe there should in fact be  
46 immediate constraints on use. A more fulsome  
47 description of the situations where the weapon is

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1 being used would allow both the Commission and the  
2 RCMP to say to the public, that was an  
3 inappropriate use. Or conversely, I can  
4 reasonably say, that was a justified use  
5 proportionate to the circumstances. Police have  
6 to understand the value of articulating their  
7 justification for their actions.

8 Now, I have not recommended a moratorium on  
9 conducted energy weapon use by the RCMP. Rather,  
10 it is my position that use be restricted to only  
11 those situations where the individual is  
12 combative, sometimes also called assaultive, or  
13 poses a significant risk of death or grievous  
14 bodily harm. In addition, use should be  
15 restricted to senior constables in rural areas and  
16 corporals in urban areas. However, we also  
17 recognize that members of specialized units need  
18 to carry this weapon and have allowed for their  
19 use even if they do not possess five years of  
20 experience, and the rationale for this is because  
21 of their significant level of training and  
22 knowledge of use of force tools by such members.  
23 As you will recall, I pointed out that the  
24 greatest use now is by constables on general  
25 patrol. Clearly, if you're going to have  
26 specialized units, they're going to be highly  
27 trained in use of force and their engagement will  
28 usually be at the high end in terms of a violent  
29 encounter.

30 When I came up with those recommendations, I  
31 benefited clearly from looking at other models in  
32 other police forces. And I think there are two  
33 things that we have to look at here if you want to  
34 constrain use. I'll use by way of example -- I  
35 used the Metropolitan Toronto police force as an  
36 easy example because it's a very large police  
37 force, 6,000 members. They have 5,000 devices  
38 that they use. Pardon me, 500. Five hundred for  
39 the 6,000 police force. Compare that to the RCMP,  
40 3,000 devices, 9,000 members who are there. They  
41 restrict theirs to sergeants, frontline sergeants  
42 and members of specialized teams. And it is at  
43 the assaultive/combative kind of level.

44 So what you have to do, I believe, is  
45 approach the problem from two levels: one, who  
46 has the devices, and then what is the situation in  
47 which you say the device can be used? So you have

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1 to approach this at two levels, I believe, if you  
2 want to actually constrain potential abuses.

3 Right now the police have a wide range of  
4 weapons that are currently available to them.  
5 They are authorized to enforce the law and to use  
6 whatever force is reasonable to do so. There are  
7 other weapons available to the police beyond the  
8 handgun, that also carries the risk of a fatal  
9 outcome, and these too have their place in the  
10 police arsenal. But they in fact have  
11 restrictions in terms of specific uses. When they  
12 talk about an intermediate device, if you look at  
13 that category, you'll find it is catchall. You  
14 have OC pepper spray, you have a baton, you have  
15 the Taser, you have sock rounds, plastic bullets,  
16 all sorts of things, all of those things one would  
17 never conceive of using as an intermediate device  
18 earlier on. And yet we seem to have Taser, which  
19 is in that category, used in situations that don't  
20 have the policy constraints that these others  
21 would have.

22 Now, no one is calling for the RCMP to be  
23 disarmed or not to use weapons. That would be a  
24 reactionary, defensive argument that would fail to  
25 take into consideration the reality of police  
26 work. The operating position of the Commission is  
27 that central to the debate of RCMP conducted  
28 energy weapon use is that deployment should be  
29 based on the principle of proportionality. The  
30 amount of force used should bear some reasonable  
31 relationship to the nature and the amount of  
32 resistance the member is facing.

33 Now, when I talk about nature and amount, I  
34 do that intentionally because I want to make a  
35 distinction. You can define behaviour, for  
36 instance, that says if a person is assaultive and  
37 you can describe what assaultive behaviour is. Or  
38 you can talk about flight. But you need context  
39 there. If you have a 13-year-old girl who is  
40 struggling, I don't think that is assaultive the  
41 same way as if I was dealing with someone who had  
42 martial arts skills, who was very large and was  
43 posing more of a challenge. So just body strikes  
44 don't make it. You have to look at the nature and  
45 the context of that. Likewise, if we talk about  
46 flight has been a factor, if someone is fleeing  
47 for a traffic offence or something minor, you

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1 don't justify Taser. You have to look at the  
2 nature of it, if it's a bank robbery, those things  
3 should all play into it. So nature and amount of  
4 resistance should be ones that are considered.

5 And as with similar models, the RCMP use of  
6 force model is based on the principle that the  
7 best strategy employs the least intervention  
8 necessary to manage risk accordingly. The best  
9 intervention causes the least harm or damage. So  
10 policy, procedure, guidelines, training, and  
11 members' overall appreciation of and approach to  
12 the weapon, all need to be based on the central  
13 principle.

14 Now, before I end my discussion, I'd like to  
15 address specifically the issue of officer safety  
16 and the role the public can play in this issue.  
17 Legitimate concerns have been raised that by  
18 restricting the conducted energy weapon, members  
19 will be put at greater risk when dealing with  
20 those that are combative. Now, I put that in  
21 caveats because the reality is that not all police  
22 forces have those weapons, not all members have  
23 them, and they're daily engaged in circumstances  
24 where no one has it. And even with the RCMP as  
25 the device rolled out across the country, there  
26 were divisions that didn't have this weapon. But  
27 for those who say, "Once I have it, you're going  
28 to take it away from me" -- because that's the  
29 other thing I've done in my report. I've said  
30 that those who currently have the weapon who don't  
31 meet our criteria should be prohibited from using  
32 it. So if you had someone who's just graduated,  
33 who's got a year and a half's experience and got a  
34 Taser, and doesn't fit my profile, I say, "You  
35 don't get to play with it, because the principle  
36 is you haven't learned real life experience. You  
37 haven't learned to develop the judgment as to what  
38 the proper discretion is, and you haven't learned  
39 those other techniques that we expect from all  
40 police officers to use before they use the Taser."

41 But there is a challenge here, I think, that  
42 we have to address, and that's a lessening of  
43 respect towards the police. I think clearly there  
44 are those in society who do not respect the  
45 authority of the police and obviously have no  
46 problem in harming officers, who in fact are our

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Questions by Mr. Vertlieb (cont'd)

1 representatives. They are out there doing our  
2 job. Remember when I took you back prior to 1829.  
3 It's the community's responsibility in terms of  
4 security. So a blow against that police officer  
5 is in fact a blow against society. Police must  
6 charge these individuals, the Crown must prosecute  
7 these offences and judges need to send a strong  
8 message that reflects society's abhorrence of  
9 violence towards police officers.

10 While we as a society should in fact have a  
11 voice in how we are policed, we also have a  
12 responsibility and an obligation to ensure that  
13 the social institution of policing is respected  
14 and that those who take on this difficult job of  
15 policing are valued. This is exactly what Sir  
16 Robert Peel was advocating in 1829. Today the  
17 entire system needs to send a clear message and  
18 not allow people to get away with assaulting  
19 police officers. So we all collectively have a  
20 role in enhancing public safety.

21 I'd like to conclude by stating that during  
22 the production of the interim and final report,  
23 the level of cooperation and openness of the RCMP  
24 has been commendable. Our relationship is good  
25 and this in fact has been key in helping us to  
26 achieve our vision of increasing police excellence  
27 and accountability.

28 So thank you for your indulgence, and I'm  
29 quite happy to entertain any questions you may  
30 have.

31 THE COMMISSIONER: Thank you very much.

32 MR. VERTLIEB: Thank you.

33  
34 QUESTIONS BY MR. VERTLIEB, continuing:

35  
36 Q Mr. Kennedy, in your report you talk about this  
37 weapon being classified as an impact weapon. That  
38 change has not yet been made. What do you mean by  
39 impact weapon in terms of the use of force model?

40 A Well, one of the things that we have to be aware  
41 of is that there is a National Use of Force Model.  
42 Maybe I can just very quickly describe it for  
43 people. If you just envisage the face of a clock.  
44 The face of a clock reflects on it an escalation  
45 of difficulty and options that the police officer  
46 has. If you start at, let's make it slightly  
47 after 12 o'clock, around one o'clock, it's officer

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Questions by Mr. Vertlieb (cont'd)

1 presence. We've all had a situation, you're  
2 driving your car. What's the first thing you do  
3 when you see a police car go by? You take your  
4 foot off the gas. That's officer presence  
5 demonstrated, okay? An officer comes in, everyone  
6 looks, things quite down. Mere officer presence  
7 is in fact a technique.

8 Then there's verbal intervention. The  
9 officer talks to you. He talks to you, calms you  
10 down and things like this. That can work. Those  
11 are the things that work.

12 Then you go along, well, the person isn't  
13 listening to the officer. Then the officer might  
14 reach out and touch you, nicely, just touch you.  
15 He can make contact with you. That obviously,  
16 physical contact, can then escalate. And we've  
17 all heard, we move from verbal jujitsu to physical  
18 where you might find yourself in an arm lock or a  
19 takedown, those sort of things.

20 They can then move physically up to hard  
21 blows, strike blows and so on. So you've come  
22 down now, about three o'clock is where you've got  
23 the end, let's say, of the verbal, and then from  
24 three to six you're into the hands-on tactics. We  
25 call that open hand, soft hand tactics. They'll  
26 be painful but they're soft hand tactics.

27 As you then start moving up around nine  
28 o'clock, at nine o'clock is where you'll start  
29 seeing those devices that are called intermediate  
30 devices. Around that point, it's assaultive/  
31 combative behaviour. That is normally where an  
32 officer would be using hard blows or would have  
33 recourse to something such as a police baton,  
34 pepper spray, Taser. Those would be coming in  
35 around that area. As you keep moving up, that  
36 will get you up just before midnight, 11:00 to  
37 12:00, that's where you have lethal force. That's  
38 where the officer and so on is concerned about  
39 violence to the point of his safety or that of a  
40 member of the public and a reasonable portion of  
41 response would be to use a firearm or to use  
42 carotid -- the various chokeholds and so on that  
43 are also quite deadly.

44 So you see that going, and what you have is  
45 it's cascading that says all of these techniques,  
46 though, continue, because even if an officer has  
47 his gun drawn, he is still going to be talking to

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Questions by Mr. Vertlieb (cont'd)

1           you. So they don't exclude each other. They're  
2           cumulative. All right.

3           Now, in terms of what I wanted with my  
4           interim report, where I said I'd like this  
5           classified as impact, what I wanted was to send a  
6           signal that at that point the officer should be  
7           asking himself, would I be justified in terms of  
8           use of force to use my baton, as a for instance,  
9           because police officers know to pull out the baton  
10          is serious. Why is it serious? Because they'll  
11          tell you, it's very painful, it can have broken  
12          bones, broken flesh. It depends where you're  
13          struck. There's not supposed to be any blows to  
14          the head, but if you're struck blows to the head,  
15          you can die. So this is a serious thing to be  
16          struck with this metal baton. Okay?

17          And what I wanted was not that the officer  
18          had to use the baton before he used the Taser, but  
19          he or she had to ask themselves, am I at that  
20          point of intervention where I think it's justified  
21          to use this level of force. Okay? Clearly if you  
22          are at that point, the officer is better off and  
23          the individual is better off, I think, for the  
24          Taser to come out because with a baton the officer  
25          is going to have to close with you, and I've had  
26          to deal with cases where the officer's baton was  
27          taken away and he was on the ground and being  
28          struck over the head with it too. So there's a  
29          great deal of risk that is attendant for the  
30          officer. The Taser can come in at that point.  
31          That's what I wanted.

32          Now, the RCMP obviously has changed the  
33          wording on that particular diagram that I've just  
34          talked about, and they, of all police forces, had  
35          that category impact weapon. No one else had it.  
36          They've now changed it. Likewise they had  
37          cooperative/non-cooperative behaviour, and that's  
38          been changed to active and passive resistance.  
39          They have now put a new word in, "assaultive." So  
40          assaultive would sort of capture that. Assaultive  
41          or combative, for me, would capture what I was  
42          aiming at before in terms of the area where you  
43          would bring that judgment as to is it appropriate  
44          to use something as severe as a baton. That's  
45          what I'm asking for.

46          The challenge we have, I believe, with the  
47          Taser is not at the upper end of use. Any one of

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1           you can be shown a video of use where you will  
2           say, that's an appropriate use. And where is it  
3           generally? I've seen ones with a gentleman in a  
4           mall and he had broken a case and he had a sword.  
5           Here he is in a mall, obviously under the  
6           influence of some drug, with a sword, swinging it  
7           around. You're not going to get in close with the  
8           person because you're going to get potentially  
9           killed, the person has a sword. That was a  
10          classic case where officers - there were more than  
11          one officer there - one officer had the gun drawn  
12          out, pointed at him. The other chap brought out  
13          the Taser, and the Taser resulted in the person  
14          being subdued. But for that Taser, that might  
15          have been a death from firearm. Clearly there is  
16          no problem in the upper ends with that.

17          The challenge is the floor. There is no  
18          floor for this, and the floor has fallen out. And  
19          it's fallen out because -- when I look at the  
20          cases, if I see a 13-year-old boy who's  
21          intoxicated, causing trouble and running and the  
22          officers tase him, I have a problem. If the  
23          police are called to a scene and there's a 14-  
24          year-old girl and when the officers appear she  
25          flees and she's Tasered with probe mode, I have a  
26          problem with that. I have a problem with the  
27          elderly, because there's no way that a person in  
28          their 70s or 80s -- we might go to the gym and  
29          work out, but we're not going to pose the same  
30          kind of a challenge that someone else is going to.  
31          When I see that, I have a problem. When I see  
32          people handcuffed, in the back of cars, and they  
33          are not quick to bring their feet in and the Taser  
34          is employed to encourage them. When I see a  
35          case - and it's up on our website - with a woman  
36          who's handcuffed and she's Tasered four or five  
37          times and she's in the police station one of the  
38          times and she's threatened to be Tasered again as  
39          she stands on the threshold of the cell because  
40          she's crying because she's afraid to go into the  
41          cell, I have problems with it.

42          There's a bottom that goes out of here. When  
43          I look at that, I say to myself, where is the  
44          officer safety issue? Where is the threat to the  
45          public? It may be inconvenient, but there is no,  
46          I believe, realistic justification in those cases  
47          for it. So you have to put some clarity in so

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1           that those kinds of things which I believe are  
2           inappropriate uses do not occur. I think it's  
3           problematic because we have officers using this  
4           device when they don't know if the other person  
5           has underlying health concerns. We do have people  
6           that are frequently -- I think statistically more  
7           often find themselves being Tasered, and they  
8           might be people living on the streets with either  
9           a drug addiction problem or mental health crises.  
10          They're not living a lifestyle that is conducive  
11          to the best of health, and they in fact are likely  
12          the ones that are being Tasered more often and  
13          they are the ones that may very well pose the  
14          highest risk of fatal consequences because of  
15          their health and lifestyle.

16          These are things that I think call out for  
17          judgment. I have a concern when we talk about  
18          excited delirium. I don't know if you want me to  
19          talk about that. But in terms of people that I  
20          think inappropriate uses, we actually have a  
21          policy that the RCMP had, and as of two weeks ago  
22          I saw it re-articulated in one of their divisions,  
23          about a person who is suffering from excited  
24          delirium, that the best solution for that person,  
25          because they have a medical condition, is to be  
26          Tasered. Then they can be subdued and receive  
27          medical treatment. Well, no one has convinced me  
28          or told me that the Taser is a medical device and  
29          the police officers have first aid. They're not  
30          doctors. They don't know what the consequences of  
31          this are. If this was a medical device, I suspect  
32          we would see the Department of Health having  
33          approved this as a medical device for use by  
34          doctors and people in medical settings. To my  
35          knowledge, that hasn't happened.

36          What we have is a public safety tool but that  
37          somehow the police are using, because they're  
38          confronted with these health issues, not for  
39          public safety purposes but for health purposes.  
40          This, to me, is simply wrong-headed. These are  
41          uses, I think, that ought to be stopped.

42          Q       Well, we appreciate your comments about the  
43          excited delirium. That's in your report in a  
44          brief way, and the Commissioner has heard quite a  
45          bit about that from others. So it's helpful to  
46          hear your thoughts.

47                Going back to the question about impact

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Questions by Mr. Vertlieb (cont'd)

- 1           weapon, that is part of the RCMP use of force  
2           model, whereas many of the municipal forces will  
3           not have impact weapon on that wheel.
- 4        A     That is correct. And I believe the RCMP is  
5           themselves considering removal of that. I believe  
6           there's a reference in the report from the  
7           parliamentary committee, the Public Safety  
8           Committee and National Security Committee, where  
9           they have themselves said they want the police to  
10          put it back in, because they, like I, want that  
11          clarity as to it is there. I think the key thing  
12          is, using that example of the clock again, it's  
13          where it's placed. I don't care what they call  
14          it, but I want to have a bright line that says,  
15          this is the floor. You don't use it in any other  
16          circumstance. I don't care if you call it  
17          assaultive, combative or if you use impact weapon  
18          for it. I use that because that was the wording  
19          on their chart where I could hang it. And I don't  
20          want them to slide out from under that  
21          recommendation by removing that word. That would  
22          be too clever by half. So what I'm trying to say  
23          is that's the level of violent encounter I want  
24          that would justify this, or anticipatory violent  
25          encounter.
- 26        Q     Now, your recommendation for impact weapon wasn't  
27           just made now. It was made actually on December  
28           11, 2007, in your interim report.
- 29        A     That's correct.
- 30        Q     And you've again made it in your final report as  
31           part of recommendation number one.
- 32        A     That's correct.
- 33        Q     So are we to conclude, then, that that  
34           recommendation was not implemented? The police  
35           did not act on that recommendation?
- 36        A     Certainly not to my satisfaction. I think that  
37           recommendation -- the first two recommendations in  
38           my interim report, one dealing with the  
39           classification as an impact weapon and the other,  
40           which was don't use this device against a person  
41           who's got excited delirium unless they themselves  
42           are posing a risk of harm to themselves, the  
43           public or the officer. Those, I think, are two  
44           keystone recommendations.
- 45           What the police did is they came out and  
46           they've used wording that you'll see in other use  
47           of force models that the police have, which is a

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Questions by Mr. Vertlieb (cont'd)

1 reference to active and passive resistance. Now,  
2 they agree that you ought not use it for passive  
3 resistance. And I'll give you a simple example of  
4 what active and passive resistance is and why I  
5 think the movement they made is inadequate.

6 Passive resistance would be if the officer  
7 comes upon you -- and let's pretend you're doing a  
8 protest or something and you don't want to move  
9 and cooperate. Well, all of those who lived  
10 through the 60s have seen the pictures. They sit  
11 there and they go stiff and then you have to cart  
12 them off. Okay, that's passive resistance.

13 Active resistance, as it's defined, would  
14 be -- let's pretend that this was a pole and I  
15 reached and I held onto the pole and I've somehow  
16 tensed or flexed my muscles. That now is called  
17 active resistance, and under their definition  
18 you'd be able to use the device for active  
19 resistance. Now, I look at that and say, well,  
20 wait a sec. Just because you're holding onto  
21 something, where is the danger to the public or to  
22 the officer by the person making your chore of  
23 removing them a little bit more difficult,  
24 justifiable for Taser use? I don't think the  
25 public would accept that and I don't accept it.  
26 And there's also, when you look at the wording,  
27 it's very fuzzy as to, well, what is active and  
28 what is passive. And if there's any vagueness,  
29 any ambiguity, it's going to lead to continued  
30 mischief.

31 Also the fact that you can resist an officer,  
32 active resistance, by pulling away and fleeing,  
33 which goes back to my earlier comment. Well, wait  
34 a second. Flight by itself ought not to be the  
35 determining factor. You have to also consider the  
36 seriousness of the offence. If it's something  
37 minor -- and I know you've been confronted with  
38 minor things here such as whether or not a person  
39 is paying a fee to go on the SkyTrain or whether  
40 or not maybe a person was, you know, jaywalking or  
41 something like that and was fleeing the officer.  
42 That flight by itself cannot, in the absence of a  
43 consideration of the gravity of the offence, be a  
44 justification for it.

45 So those things cause me concern. And when  
46 we did a comparative analysis to other police  
47 forces, even those that sometimes use that

1 language, they put in caveats. So it isn't just  
2 they have active and passive. They say that  
3 flight alone is not a determining factor. You  
4 have to consider the gravity of the offence. Or  
5 they say, have you considered other use of force  
6 options before you use the Taser. So there's  
7 language when you get beyond just the definitions  
8 that are caveats that are not present, I believe,  
9 in the RCMP.

10 But even if there were, I want it up higher.  
11 I want it, as I say, at a combative or assaultive.  
12 That is what the Toronto police do. I don't  
13 think -- although it was called Toronto the Good,  
14 I don't think it is so good that it is that much  
15 different than other major cities in the country  
16 in terms of the public safety issues they're  
17 confronted with. And yet, it seems to have worked  
18 there.

19 Q Just speaking of assaultive and combative, we  
20 heard from Superintendent Federico from Metro  
21 Toronto Police, and their category is assaultive.  
22 In your final report you talk of the word  
23 combative. Just for the Commissioner's benefit,  
24 explain why you use the word combative.

25 A Well, for me you can use them as equals, and I try  
26 to cover that off in my opening speech. Because  
27 you look at different models, and like I said, the  
28 wording slips and slides depending where you are,  
29 but it's that placement. Like I said, put it  
30 number eight or eight and a half on your clock,  
31 and you'll find that that's where they're talking  
32 either combative or assaultive behaviour. So that  
33 would work for me.

34 Q I wanted to ask you something about data. At page  
35 3 of your report, I think it's the fourth  
36 paragraph. Maybe I've got this wrong; just bear  
37 with me. It's the point about our universe,  
38 what's happening here in Canada.

39 A Yeah.

40 Q And so much of the data on this particular subject  
41 relies on American statements, anecdotal or  
42 statistical or whatever. What's your view of  
43 that?

44 A Well, I consciously approached this to avoid a  
45 number of problems. One, I did benefit from  
46 reading work of other colleagues. And Mr.  
47 Ryneveld, I looked at the work that the Victoria

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Questions by Mr. Vertlieb (cont'd)

1 Police did on his behalf, and they relied upon a  
2 fair amount there of TASER International data.  
3 And even that, I think they commented that it only  
4 reflected 10 percent of the data because some  
5 police forces couldn't share their data. So when  
6 you get 10 percent of a universe, it isn't a whole  
7 universe. They've been to the States. It's a  
8 300 million person population. It's a huge  
9 variety in terms of what practices are. So I  
10 looked and said why am I looking at that? Why  
11 would I look at that? Not only that, there's an  
12 issue here of conflict of interest, at the very  
13 least perception of conflict of interest. I think  
14 most people would say that the manufacturer of the  
15 device has an interest in marketing this  
16 particular product. I did not want to associate  
17 myself with anything that would result in my  
18 product in the public mind being undermined,  
19 whether by an obvious or a perception of interest.

20 But not only that. I had a fairly large  
21 statistical database. So I had 4,200 and some odd  
22 reports, and I had it concerning the activities of  
23 the police force that I was concerned with. So  
24 there's wonderful examples of whether it's Miami  
25 Dade or Cincinnati and so on, but what is the  
26 likelihood that their community situation is  
27 similar to ours either in terms of public  
28 expectation, police practices or social challenges  
29 they have? We should look at what are our social  
30 challenges and what are the behaviours of our  
31 police force? That is the most telling debate.  
32 Otherwise I could go and look at the man in the  
33 moon. Well, that doesn't help me. We're here on  
34 earth.

35 So my universe, because I had a large enough  
36 statistical base, was the RCMP as a police force  
37 across Canada doing both rural as well as urban  
38 policing. So I thought it gave us something that  
39 was more valuable. And I consciously stayed away  
40 from it.

41 Likewise I stayed away from the medical  
42 issue. All lawyers know that -- I've done that  
43 myself. I've called expert witnesses and my  
44 opponent called expert witnesses, and the poor  
45 judge is left with competing expert witnesses.  
46 There are issues that they're only there to help  
47 you, but at the end of the day it's your judgment

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Questions by Mr. Vertlieb (cont'd)

1 as the trier of fact to use your good judgment and  
2 expert opinions are useful for you. I found this  
3 very unhelpful. So I looked at what did we know.  
4 We know, from whether it's the police themselves  
5 or from Amnesty International and people like  
6 that, that if you're Tasered, it is really going  
7 to hurt you. I mean, they describe as it's so  
8 painful they wouldn't want it to be done again.  
9 Some described it as being punched a hundred  
10 times. And they're talking -- this is officers  
11 who would be subjected to a controlled Taserung on  
12 the back for one cycle. We have people that have  
13 multiple cycles of the use of this weapon and we  
14 have it being used sometimes against them both in  
15 probe and in touch stun, which has got to be very  
16 uncomfortable. And they're not all necessarily as  
17 fit nor as prepared for this event.

18 So what do we know? It really hurts. That's  
19 one. And we do know as a reasonable person -- and  
20 I say this as a person who's done work in the  
21 public policy area in terms of bringing forth laws  
22 and things of that nature, at least helping  
23 ministers and Parliament do that. When you  
24 look at something, you don't make your decision  
25 based upon a strict legal test. And this happens  
26 all the time in the work I do. I can have an  
27 event where an officer is charged, let's say, with  
28 a criminal offence, or investigated and it goes to  
29 the Crown. The Crown says, well, there's no  
30 evidence here of criminal activity. Well, that's  
31 not the end of the matter, because the rules of  
32 the game for a criminal trial are very elaborate.  
33 They're designed to exculpate, as opposed to  
34 inculcate: the old premise that it's better to  
35 have ten guilty men go instead one innocent man  
36 convicted. So the rules are very strict. No  
37 hearsay or very restrictive rules on that. Viva  
38 voce testimony, beyond reasonable doubt. So a  
39 finding for that purpose doesn't really inform you  
40 as to whether or not something went wrong.

41 Likewise, if you're doing a civil trial in  
42 terms of a tort liability, you have the same  
43 thing, all these evidentiary principles that we've  
44 done and principles of causality and so on. Well,  
45 that's great when you're trying to establish  
46 damages and you're trying to sort this out.

47 But there's a different thing when you get to

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Questions by Mr. Vertlieb (cont'd)

1 public policy. When I want to introduce something  
2 afresh into a public environment, in this case a  
3 device, a weapon that causes pain, I'm not using  
4 those standards. What I'm looking at is -- I bear  
5 the onus, and I mentioned that. I bear the onus  
6 for making sure this is appropriate. Now, with  
7 this device it is clear it is painful and it is  
8 clear that we have a public debate. We have a  
9 medical debate about whether or not it has any  
10 causal relationship to some of the deaths or other  
11 major health injuries that are occurring.

12 I think a reasonably prudent person, without  
13 meeting a legal test, when they look at and they  
14 see a person Tasered and they see the person die  
15 seconds or minutes thereafter, and if they see  
16 this happen on a number of occasions, the  
17 reasonably prudent man says, hmm, there may be a  
18 problem here. What is the wise thing to do? Do I  
19 have to be successfully sued before I do the wise  
20 thing? Or do I say, I should -- because I'm a  
21 public officer fulfilling a public task, do the  
22 prudent thing and resolve this in favour of the  
23 citizen until these other legal and medical issues  
24 can be resolved. That's why I say in this issue,  
25 to me, the tie clearly goes to the citizen.

26 My common sense tells me there are red flags.  
27 When I see red flags, that means caution. My  
28 caution here says, okay, this thing may, at some  
29 stage, be proven to have a connection to these  
30 fatal outcomes.

31 Now, I've approached it, then -- you can say,  
32 well, why then haven't you had a moratorium?  
33 Quite simple. We already have peace officers with  
34 guns. Police officers are allowed in appropriate  
35 cases, justifiable, they can shoot you and kill  
36 you. They don't want to kill you. I'm sure they'd  
37 like to shoot you and have you survive. But  
38 obviously two shots to the chest are probably  
39 going to have a very negative impact. So we have  
40 already crossed that Rubicon in terms of  
41 authorizing the officers to use deadly force.  
42 Okay. And I know statistically the negative  
43 outcome is quite high. So now I have this device  
44 which I know is painful. So that's one  
45 assumption: it's more painful than --

46 And it can't moderate the pain. If someone  
47 took me in an arm lock or a thumb lock, they can

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Questions by Mr. Vertlieb (cont'd)

1 moderate the degree of pain that they want to  
2 apply to me. When the Taser is applied, it's the  
3 same pain level that comes in unmoderated, so I  
4 have to move it up in terms of where it is in  
5 terms of the pain threshold.

6 Then I say I have to approach it on the  
7 likelihood that there may be a statistically small  
8 but material risk. Material risk for doctors  
9 means you do the operation and they want to get  
10 your valid consent. They say, "Well, by the way,  
11 one in a million die. It's probably good for you.  
12 You make the decision." But one in a million is  
13 going to die. Well, statistically here we don't  
14 have a lot of experience but we do see some  
15 deaths. We do see high risk people and we do see  
16 deaths proximal to. So I'm saying there may be,  
17 then, a fatal outcome, and that's how I'm  
18 approaching it. So we're authorized to use deadly  
19 force. It's painful. So put it on this  
20 continuum. Show it the respect that it currently  
21 isn't getting but I think it deserves. And that's  
22 my thinking there.

23 THE COMMISSIONER: Just to turn the perspective around  
24 a little bit, you spoke about you were not in  
25 favour of banning the weapon, and you gave some  
26 reasons concerning the obvious impact of a firearm  
27 on an individual. In terms of that same argument,  
28 I think I heard you make a comment on the impact  
29 on the officer. Would you care to comment on  
30 that?

31 A Yes. I've been in the public safety area for 34  
32 years now, and clearly during that course of time  
33 I've come into contact with many, many police  
34 officers, both RCMP and non-RCMP officers, from  
35 constables up to multiple commissioners. And I've  
36 talked to officers who have been involved in  
37 situations where they've had to use deadly force,  
38 and I've at first hand seen the effect on the  
39 officers. These officers are significantly  
40 traumatized. They'd be traumatized the same way  
41 as you or I would be. You think you aren't. If  
42 there's one major taboo, it is to take a human  
43 life. That is a major taboo for that to occur.  
44 And that's why it's not uncommon to talk to a  
45 police officer and find out that during their  
46 career -- and I've talked to officers who in  
47 30-year careers never had to draw their gun.

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1 They've been in physical altercations but they  
2 know the significance of drawing their guns. And  
3 I've talked to officers who had to draw their  
4 guns. It's not unusual to see their careers  
5 subsequently terminated because they've had great  
6 difficulties dealing with that reality.

7 Generally, if you look at who is -- if you  
8 try to go into and be recruited as a police  
9 officer, you'll see that it's very high standards.  
10 I keep telling people it's the best and the  
11 brightest of your community. It's your brothers  
12 and your sisters. These are not thugs. This  
13 isn't some third world country. It's the best  
14 people, who've got ideals, who want to serve the  
15 public. And when they find themselves in a  
16 situation -- and particularly if it happens to a  
17 young officer. They are significantly traumatized  
18 by that. And that's something we have to bear in  
19 mind, and that's why I say we have a duty to, I  
20 think, try and craft a process that will work to  
21 allow these officers to provide their functions  
22 well. And that's why I want to give them an  
23 opportunity with good mentors and time to develop  
24 these other skills.

25 And by the way, my support for the -- when I  
26 said no moratorium, that's on the basis that it's  
27 subject to the fact that they move ahead with some  
28 degree of dispatch and put these things in place,  
29 because if no action is taken, then clearly I will  
30 find it difficult to continue associating myself  
31 with its use because I know that there will be  
32 continued inappropriate usages which will rebound  
33 to the reputation of the police as an institution.

34 THE COMMISSIONER: Is that everything, counsel?

35 MR. VERTLIEB:

36 Q Just one corollary just to what you were saying.  
37 You've said in other contexts that because the  
38 police are the community and the community are the  
39 police, you've said the police must be seen to win  
40 by the community in terms of officer safety and  
41 public support. Just explain that, please.

42 A That has to be a given. A lot of social behaviour  
43 is based upon self-discipline, self-monitoring and  
44 compliance with the laws. No one's looking over  
45 your shoulder all the time to make you do these  
46 things. So if there's a breakdown in that  
47 particular paradigm and people think that they can

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Questions by Mr. Vertlieb (cont'd)

1 break the law with impunity, then we are in fact  
2 going to have chaos. So when an officer goes to  
3 an event, the officer is our representative. What  
4 is the officer's ability to restore peace and  
5 order? You cannot have officers go there and have  
6 them come away unsuccessful because society is  
7 unsuccessful. It sends a message of lawlessness.  
8 So that's why the police are authorized to use  
9 whatever force is reasonable, including deadly  
10 force, because if they lose, we lose.

11 Now, what I'd like to see obviously by  
12 people, even those who fit the profile of the  
13 Friday and Saturday night gents who go out and get  
14 liquored up, that when the officer appears on the  
15 scene, they know that this is the time to cool  
16 their jets, that this isn't just someone else in a  
17 bar that they can take a swing at. Because like I  
18 said, when they take a swing at the officer,  
19 they're taking a swing at us. We cannot afford  
20 that to happen. We just can't.

21 MR. VERTLIEB: Those are all the areas, Mr. Kennedy,  
22 that we wanted to cover. Mr. MacDonald, thank you  
23 so much for being with us. Thank you, Mr.  
24 Commissioner.

25 THE COMMISSIONER: Mr. Kennedy, thank you very much for  
26 taking the trouble of travelling all the way here  
27 and sharing your research and your opinions with  
28 us. It's been very, very helpful, and thank you  
29 very much.

30 A My pleasure, sir, and I wish you the best in your  
31 task.

32 THE COMMISSIONER: Well, thank you.

33  
34 (WITNESS EXCUSED)  
35

36 THE COMMISSIONER: Now, I must say that we've reached  
37 the end of the hearing phase of my task and I must  
38 say that I've been very pleased with the  
39 cooperation that I've received from the various  
40 police forces, including indeed the RCMP and all  
41 those specialists who gave up their time and  
42 effort to come forward. We have a staff that is  
43 going through the material and reading reports and  
44 doing research.

45 The next phase has to do with the  
46 investigation of what occurred, I'll just say at  
47 the airport, and we hope that that will begin on

1           October the 20th.  
2            Thank you all.  We're finished here.  
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4            (PROCEEDINGS ADJOURNED)

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