

INQUEST INTO THE DEATH OF

L I S A S H O R E

THE TESTIMONY OF MR. STEPHAN BAUER

TAKEN JANUARY 17, 2000

BEFORE DR. JAMES CAIRNS, DEPUTY CHIEF CORONER

CORONER'S COURT, TORONTO

A P E A R A N C E S:

Counsel for the Coroner	MARGARET BROWNE, MS.
Counsel for the Shore Family	FRANK K. GOMBERG, ESQ.
Counsel for the Hospital for Sick Children, et al	PATRICK HAWKINS, ESQ. RENEE A. KOPP, MS.
Counsel for Drs. Schily, Catre and Wright	ANNE POSNO, MS.
Counsel for Corometric	VAN KRKACHOVSKI, ESQ.

REPORTING PLUS
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1 THE CORONER: Good afternoon, ladies and
2 gentlemen of the jury. Just before we get
3 started on evidence, during the necessary
4 adjournment we had at the inquest, we did
5 make available to you the transcripts of the
6 witnesses that we had heard prior to the
7 inquest adjourning, so you should have had an
8 opportunity to review Dr. Gallant's evidence,
9 who was the family doctor; Dr. Schily, who
10 was the anaesthetic fellow who was on duty;
11 Nurse Pauline Matthews, who was the emergency
12 nurse and Dr. Catre who was the orthopedic
13 resident who came into the room that morning.

14 You were not given as part of the
15 transcript, evidence that was given by
16 Mr. Bauer. I would indicate to you that we
17 would like you to ignore the evidence that
18 was given by Mr. Bauer when he first
19 appeared. He will be reappearing very
20 shortly to give other evidence, but since the
21 inquest adjourned, in terms of both review of
22 some of the issues that he brought up, and a
23 review of that evidence including an
24 affidavit that I think will be put in by

1 Counsel for Dr. Catre, there's an affidavit
2 from him that, in fact, when he entered the
3 room, he took off the leads, it was his
4 evidence he took the leads off Lisa's chest.

5 What wasn't asked of him at that time was
6 did any alarm go off or not and we have an
7 affidavit which I think has been accepted by
8 all Counsel that in fact no, he heard no
9 alarm going off at that time.

10 So for the purposes of the inquest, with
11 that further evidence, with an analysis by a
12 number of experts and with the agreement of
13 all Counsel, you can accept for the purposes
14 of this inquest that if a monitor was in
15 Lisa's room at 7:00 a.m., now it's up to you
16 to decide later, but if a monitor was in
17 Lisa's room at that time, then if it was in
18 the room it either was not attached to Lisa
19 and was turned off, or if it was attached to
20 Lisa, it was turned off and the theory that
21 was being put forth that electrical activity
22 from the heart, while not being productive
23 electrical activity that would help her to
24 have a heartbeat, may have in some way

1 confused the monitor to think that she was
2 alive when she wasn't alive, that is not an
3 issue that needs to be addressed.

4 Everyone has accepted that if the
5 monitor was in the room either attached or
6 unattached to Lisa, it was in the off
7 position and therefore that theory of the
8 complex issues that were arising on the day
9 that we stopped the inquest have now been
10 addressed. I would just ask, Counsel, have I
11 fairly represented the views that you all
12 came to?

13 MR. GOMBERG: Yes, on behalf of the Shore
14 family, I'm Frank Gomberg, I agree with that.

15 MR. HAWKINS: Yes, that's acceptable.

16 MR. KRKACHOVSKI: On behalf of G.E.
17 Marquette, yes, Mr. Coroner.

18 MS. POSNO: That's fine.

19 THE CORONER: I hope my Counsel isn't going
20 to disagree with me.

21 MS. BROWNE: No.

22 THE CORONER: It is -- you've had an
23 opportunity to review the evidence of those
24 and I think you had an opportunity this

1 morning to meet with each other in that
2 regard, as well, so with those few comments I
3 think we're now ready -- oh, sorry, yes, if
4 we could have the affidavit by --

5 MS. POSNO: I have three original copies of
6 it and copies could perhaps be made for each
7 member of the jury.

8 THE CORONER: That's fine, thank you. That
9 will be the next exhibit.

10 CONSTABLE CULLETON: Exhibit 12.

11 MS. POSNO: Counsel have a copy.

12

13 EXHIBIT NO. 12: Affidavit of Dr. Catre, dated
14 January 14, 2000

15

16 THE CORONER: Ms. Browne, would you like to
17 call the next witness?

18 MS. BROWNE: Yes, thank you. I believe it
19 is Mr. Stephan Bauer.

20

21 STEPHAN BAUER, AFFIRMED

22 EXAMINATION IN-CHIEF BY MS. BROWNE:

23 Q. Welcome back, Mr. Bauer, and we have --
24 the last exhibit that we have is marked as Exhibit 11,

1 that was a copy of your CV.

2 A. Yes.

3 Q. I see that you brought with you a
4 Corometric monitor. Is that one that can be made an
5 exhibit or should we leave this one?

6 A. It can be made an exhibit.

7 Q. All right, then. Would you just produce
8 it, please?

9 MR. HAWKINS: I'm sorry, is there any reason
10 why this inquest needs two?

11 THE CORONER: None whatsoever.

12 MS. BROWNE: Not really, no.

13 MR. HAWKINS: Because I gather the Coroner's
14 office has been in possession of one for a
15 number of months, so I guess I prefer to have
16 one marked as an exhibit or one kept rather
17 than two.

18 THE CORONER: I agree, we have no need for
19 us to have two. If you feel that you've had
20 an opportunity to test this one recently and
21 it's in good functioning order, perhaps it's
22 better to use it and we'll give you back the
23 other one.

24 MR. HAWKINS: Yes, that's good. Why don't

1 you keep that one and we can take the other
2 one back.

3 MR. GOMBERG: Dr. Cairns, just so it's
4 clear, neither of these monitors that we're
5 talking about is the monitor in issue, is
6 that correct?

7 THE CORONER: That is correct. We have not
8 been able to obtain the actual monitor in
9 question. The purpose of this monitor is to
10 demonstrate to the jury how any monitor
11 functions, but it is not the monitor that
12 we're talking about in terms of Lisa's death.

13 MR. GOMBERG: Thank you.

14

15 BY MS. BROWNE:

16 Q. We'll just deal with that one that's out
17 of the plastic. This is what we know as a Corometric
18 monitor, as you indicated the last time that you were
19 here. Can you tell us what its purpose is?

20 A. The purpose of the Corometric monitor,
21 it's known as an apnea monitor. Its purpose is to look
22 for and monitor a patient in terms of their heart
23 activity, i.e., giving a digital display of the heart
24 rate and also of the respiratory rate, and to alarm

1 standby clinicians if there's problems with the heart
2 rate and the -- or a respiratory rate, depending on the
3 alarm settings.

4 Q. All right. Can you just show it to us?
5 Remember that ---

6 A. Sure, yeah, yeah.

7 Q. --- we're lay people. You're saying it
8 monitors both the heart rate and the respiratory rate?

9 A. That's correct.

10 Q. Are there two separate switches to make
11 that clear?

12 A. No, there's two different displays on
13 the front that show simultaneously the heart rate and
14 the respiratory rate. Sorry.

15 Q. Why is that alarm going off?

16 A. That's because it's not connected up to
17 a patient right now, and there's no way to silence it
18 until I ---

19 Q. Can you tell me, will that alarm keep
20 going off if it's detached from a patient?

21 A. It will.

22 Q. Is there any way to shut the alarm off?

23 A. Unless you turn it off, no. You can
24 reset, but not the leads off.

1 Q. You said ---

2 A. Now it's off.

3 Q. --- unless you turn it off; can you turn
4 off the alarm?

5 A. With the leads off, no. You have to
6 turn off the monitor to override the leads off alarm.

7 Q. Perhaps we can just go through it.
8 There's a lot of switches here.

9 A. Yes, okay, we'll go through that again.
10 Basically, this is just an AC power that's plugged
11 into the wall, there's a battery back-up in the unit,
12 as well, just in case of power failures. If the power
13 fails, there's a battery back-up in the unit that's
14 about two hours -- at least two hours of continuous
15 use.

16 Q. Generally, when a monitor is prescribed
17 or advised to have for a patient, is it used by
18 plugging it into the wall?

19 A. Yes, it would always be.

20 Q. And can you plug it into wherever you
21 find a plug?

22 MR. GOMBERG: There's one right behind
23 the ...

24 MR. HAWKINS: It might be of assistance to

1 plug it in down in the front here.

2 MR. GOMBERG: That's an idea. That's a good
3 idea ...

4 THE WITNESS: Now there's power to it.
5 There's actually an indicator on the front
6 that shows that it's connected to the power,
7 as well.

8

9 BY MS. BROWNE:

10 Q. That little green light?

11 A. The little green light.

12 Q. Just show it -- make sure the jury sees
13 it, it's a little green light in the middle?

14 A. Yes.

15 Q. That shows that it's plugged into power,
16 right?

17 A. That little green light here.

18 Q. Now this is designed to monitor a
19 patient's breathing and heart rate?

20 A. That's correct.

21 Q. Now can you show me the part that
22 monitors the breathing?

23 A. Both functions ---

24 Q. Point to the ---

1 A. Yes, both functions are monitored
2 through the same set of leads, basic leads.

3 Q. All right. And you're showing at the
4 end of it there's two ---

5 A. Three.

6 Q. --- three ---

7 A. Three connections that are applied to
8 the patient's ...

9 Q. To the patient's body?

10 A. Yes.

11 Q. And there are three connections; can you
12 tell us what each one is for?

13 A. Yeah, each one -- basically the right
14 arm, the left arm and the left leg. All approximately
15 -- approximately in this position on the patient's
16 body.

17 Q. Two for the chest and one for the leg?

18 A. That's correct.

19 Q. Now, the box itself, can you tell me
20 where the display is shown?

21 A. Sure. The display is shown ---

22 Q. Can the jury see it, too?

23 A. Yeah. I will turn it on and you can see
24 where the numbers are coming up, right there. That is

1 where the -- I'll try that again.

2 Q. The breath one, the monitor of how many
3 breaths per minute, where's that?

4 A. Right here in this -- in the right ---

5 Q. On the right-hand side?

6 A. In the right part of the windows.

7 Q. That indicates the number of breaths per
8 minute, is that right?

9 A. Correct, the respiratory rate. And on
10 the right is the heart rate.

11 Q. And there is ---

12 MR. GOMBERG: On the left.

13

14 BY MR. BROWNE:

15 Q. On the left of ---

16 A. On the left is the heart rate, on the
17 right is the respiratory rate.

18 Q. The right, as we're looking at it, the
19 left as we're looking at it, okay.

20 A. The left is the heart rate.

21 Q. Yes.

22 A. The right is the respiratory rate.

23 Q. And you have something plugged in next
24 to the heart rate part.

1 A. That's this cable.

2 Q. This cable, that's with the leads that
3 go to the patient?

4 A. That's correct.

5 Q. Two for the chest, one for the leg?

6 A. That's correct.

7 Q. Now what about the leads for the other,
8 the respiratory?

9 A. That's also using these leads, as well.

10 Q. Can you indicate what the other socket
11 is for on the right, there?

12 A. This socket is just the audible alarm,
13 the speaker. This is a speaker that just gives that
14 loud alarm.

15 Q. I'm sorry, what?

16 MR. GOMBERG: It comes out of the hole.

17 MR. HAWKINS: That's where the speaker is.

18 THE WITNESS: It's the sound, it's just the
19 sound.

20 MR. GOMBERG: The sound comes out of the
21 hole.

22 THE WITNESS: Yeah, that's all it's for.

23 MS. BROWNE: Oh, the sound comes out of the
24 hole.

1 THE WITNESS: Yes, that's all it's for.

2

3 BY MS. BROWNE:

4 Q. And how do you turn off the apnea part
5 of it, the respiratory part?

6 A. You mean the apnea alarm or the
7 apnea ---

8 Q. You tell us where they are.

9 A. Okay, the ---

10 Q. When you say "apnea," you're referring
11 to breath, correct?

12 A. Breaths, right. On the bottom there is
13 a section where you can actually set upper and lower
14 heart rate for an alarm and also the respiratory rate
15 alarm. If you violate those parameters, i.e, if you go
16 -- if the heart rate goes above the alarm maximum heart
17 rate or it goes less than the lowest heart rate, the
18 monitor will alarm. The same with the apnea setting.
19 The apnea setting you can actually turn off, that's
20 important, you can actually turn off so that you can
21 disable the apnea alarm. If you don't have it
22 disabled ---

23 MR. HAWKINS: Sorry, if you unplug it, maybe
24 you can show that.

1 THE WITNESS: Oh, okay, sure.

2 MR. HAWKINS: You've got to look fairly
3 closely at it.

4 THE WITNESS: Yeah, you do.

5 MR. HAWKINS: It might not be a long enough
6 cord.

7 THE WITNESS: The low heart rate, you cannot
8 disable; the high heart rate you can turn
9 off. The same with the apnea alarm, you can
10 also turn that off. The low heart rate, the
11 high heart rate and apnea.

12

13

14 BY MS. BROWNE:

15 Q. Now, essentially, if I can just
16 summarize and see if I'm correct: You showed us a
17 little box of the underside -- or, to the top,
18 actually, of the monitor -- which one's the top? The
19 underside, the bottom of the monitor.

20 A. Yes.

21 Q. That little box that you opened reveals
22 three dials for setting it, two are for the breathing
23 rate and one for the heart rate.

24 A. Two are for the heart rate.

1 Q. Two are for the heart rate and one for
2 the breathing rate?

3 A. That is correct.

4 Q. And you can turn off either the
5 breathing rate or the heart rate by those dials?

6 A. For the high heart rate alarm only. You
7 can only turn off the apnea alarm and you can turn off
8 the high heart rate alarm. You cannot turn off the low
9 heart rate alarm.

10 Q. If you have a patient who's asleep,
11 needs to be monitor with this device, what you do is
12 attach the leads, set the heart rate for a specific
13 range of beats?

14 A. Yes.

15 Q. And if it goes either higher or lower,
16 that thing will alarm?

17 A. That's essentially correct.

18 Q. And the apnea monitor which measures the
19 respiratory rate, breaths per minute, is also set at a
20 specific number of breaths per minute. If they go
21 below it, it will alarm?

22 A. It's not breaths per minute, it's
23 actually seconds between breaths in this case.

24 Q. Okay, seconds between breaths and the

1 alarm will go off. Now if the device is plugged in,
2 how is the alarm stopped?

3 A. This power bar. This device is plugged
4 in and it's powered off. (??)

5 Q. Should it go off, should it be set off
6 by what is dialled into it, how would one stop it?

7 A. You can temporarily reset the monitor so
8 if it does alarm -- except for a lead off. Except in
9 this situation, where there's no leads connected to the
10 patient, you can silence the alarm temporarily, either
11 heart rate alarm or apnea alarm by temporarily pressing
12 the button and that's it. I believe it's two minutes
13 silence and then it will alarm again.

14 Q. All right. And if it goes off when it
15 shouldn't be going off and you don't want it, do you
16 reset the entire machine?

17 A. You can just -- there's a reset button
18 here.

19 Q. Right.

20 A. Hit the reset button and that will
21 temporarily silence the alarm for, I believe, it's two
22 minutes.

23 Q. Now, if this is attached to a patient --
24 if this is attached to a patient and it's put in place

1 to monitor that patient, the breathing and heart rate
2 during a certain period of time, what would happen if
3 the patient accidentally detached a lead from the
4 chest?

5 A. The chest leads, which are these two
6 leads, if either of these leads are detached, the
7 monitor will automatically alarm, that's the alarm that
8 you hear when I initially turn it on. This lead here
9 will not cause an alarm, its purpose is to allow a
10 better signal to be received by the monitor, it sort of
11 acts as a reference, it's what's called a reference
12 electrode, so this one here, these are here, if either
13 of the two chest leads come off, that's what's actually
14 picking up a signal. If one falls off or comes off,
15 the monitor will alarm, you will not be able to reset.

16 Q. Are there any other reasons that the
17 monitor may alarm?

18 A. The monitor alarms if there is a low
19 battery received. So I've plugged into the wall; if
20 for some reason I'm not plugged into the wall and the
21 battery drains, the amount of power available in the
22 battery drains, it will eventually alarm. If the
23 monitor encounters what's called a -- in less technical
24 terms, if there's something wrong with the monitor

1 itself in the internal circuitry, the monitor will also
2 alarm.

3 Q. Anything else?

4 A. The loose lead I've spoken about, and
5 heart rate or apnea rate violations are the other two.

6 Q. All right. And those are the only
7 circumstances that you know of that will cause that
8 noise?

9 A. That's correct.

10 Q. Low battery?

11 A. Low battery.

12 Q. Chest leads off, or indeed it goes
13 outside the parameters for which it's been set?

14 A. Or internal error.

15 Q. Or internal error.

16 A. Right.

17 Q. And I gather in this particular inquest,
18 that is not going to be in question as we understand,
19 so we'll leave it with three. All right. Can you tell
20 me, you are the Chief of Biomedical Engineering at Sick
21 Kids?

22 A. I'm the Manager of Medical Engineering.

23 Q. Manager of Medical Engineering. And, as
24 such, did you have anything to do with sending --

1 segregating some devices after Lisa's death and sending
2 them to be tested?

3 A. That is correct.

4 Q. Can you tell me which devices you got,
5 how you put them together and where you sent them?

6 A. Basically, after -- when I received word
7 that there was an incident, my understanding at the
8 time was that the room had already been removed -- any
9 equipment in the room had been removed. Basically, the
10 pumps were already in the hands of the Coroner's office
11 and my concern was the fact that the -- my
12 understanding was that the heart rate monitor itself
13 had not been isolated.

14 What we then did, and this was -- I'm
15 trying to remember the times and I apologize, I do not
16 remember, I think they're documented somewhere -- this
17 is a number of hours after we received a call that
18 there was an incident, we went up to the floor and any
19 patient -- any Corometric monitor that was on that
20 floor, we immediately isolated and pulled out of
21 service.

22 Those monitors were subsequently
23 checked, fully checked for functionality by my
24 department. As well, we went around through all areas

1 of the hospital and tried -- and located all the
2 monitors that were currently not connected up to a
3 patient, and what we did for those monitors, is we
4 actually did a functional test on the site.

5 To do a functional test, you can connect
6 up the monitor, you turned it on and you made sure it
7 alarms briefly. It's the self-test, basically, that
8 the nurses do. The nurses actually go through a self-
9 test when they connect it on. When you turn it on, it
10 goes through a self-test and it will give you that
11 really annoying alarm. As soon as you see that it goes
12 through that self-test and it gives you that audible
13 alarm, we know that the monitor is functioning.

14 So any monitor that we saw in the
15 hospital that wasn't connected to a patient, we
16 immediately just did a self-test on those monitors as
17 well, the assumption being that any monitor -- any
18 monitor that was currently on a patient would have
19 already have passed the self-test before it was applied
20 to a patient.

21 Q. So in other words, the Corometric
22 monitor that was used on Lisa remained at the hospital
23 and all of the monitors were self-tested at the
24 hospital, is that correct?

1 A. That's correct. We couldn't -- we did
2 not isolate the exact monitor that was on Lisa.

3 Q. Now what about the other devices that
4 we're going to hear a little bit more of later, the
5 patient controlled anaesthesia pump? Now that was, I
6 understand, isolated and sent somewhere to be tested?

7 A. Right. The Coroner was on the site and
8 actually isolated and, I don't know, subpoenaed,
9 whatever the word is, both the patient controlled
10 analgesic pump and the syringe pump -- sorry, the
11 infusion pump that was used at that time.

12 Q. And they're known as a PCA pump ---

13 A. That's a PCA pump and ---

14 Q. --- and an IVAC pump?

15 A. Well, IVAC pump or a general infusion
16 pump, yes.

17 Q. And where were they sent to be tested?

18 A. Those devices were sent down to an
19 institution called the Emergency Care Research
20 Institute under the directions of the Coroner and were
21 sent for independent testing by that institution. The
22 Emergency Care Research Institute is a, in my field,
23 it's sort of the institution that -- they do a lot of
24 work in medical devices, they sort of write the book in

1 terms of medical devices, they're very well versed in
2 all the -- all of this stuff. They're sort of a
3 reference centre, if you will.

4 Q. All right. I wonder if Constable
5 Culleton can just hand you -- show you two letters
6 dated March the 12th of 1999, and they are from an
7 institution called ECRI. Would you look at those and
8 indicate if the other reports the Coroner's office
9 received with regard to the PCA pump and the IVAC pump
10 that was sent there?

11 A. They do look like a copy of that report,
12 yes.

13 Q. Perhaps that could be made the next
14 exhibit, and we have copies for the jury, and I believe
15 all Counsel have copies. Could that be an exhibit?

16 CONSTABLE CULLETON: Exhibit 14.

17
18 EXHIBIT NO. 14: ECRI report dated March 12,
19 1999

20
21
22 BY MS. BROWNE:

23 Q. They basically indicate that there's
24 nothing wrong with either the IVAC or the PCA pump?

1 A. That is correct.

2 Q. We'll hear more about these pumps later,
3 but these were the results that came back. All right,
4 those are my questions, sir, perhaps there'll be
5 others.

6 THE CORONER: It will perhaps help to
7 clarify for the jury that the two pumps that
8 were attached to Lisa, one was to give her
9 morphine and the other was to give her IV
10 fluids. They were seized by the Coroner's
11 office, they were sent out for independent
12 examination. Although you have a detailed
13 report, it would probably suffice at this
14 time to say that the independent examination
15 found that both of those pieces of apparatus
16 were working as they normally should.

17 There was obvious concerns at the time
18 of Lisa's death that she was on a morphine
19 infusion pump and had she, in fact, got more
20 morphine than she was meant to, you'll get an
21 opportunity to read through those, but it's
22 saying, no, the pumps in fact themselves
23 worked in the manner which they were and I
24 don't think for any of Counsel at the inquest

1 or yourselves that you need to worry too
2 much, there is not a controversy on the pumps
3 themselves. Any questions?

4 MR. KRKACHOVSKI: I'm sorry, Mr. Coroner, do
5 we have an order of proceeding? I have a few
6 questions, but I don't want to violate any
7 order that we have at present.

8 THE CORONER: Well, normally Mr. Hawkins
9 will be going last. This witness is from the
10 Hospital for Sick Kids and normally I have
11 the family going second last, and I don't
12 mind who goes.

13 MR. KRKACHOVSKI: I don't mind going.

14

15 CROSS-EXAMINATION BY MR. KRKACHOVSKI:

16 Q. Mr. Bauer, you indicated that when the
17 monitor is first turned on, it goes through the cycle.

18 A. Yes.

19 Q. What does that mean exactly?

20 A. Basically that cycle is called -- it's a
21 self-test. It allows the monitor to test out its
22 internal circuitry and make sure that the monitor is
23 correctly working before it is applied to a patient.

24 Q. And if the monitor isn't correctly

1 working, what does it do?

2 A. If the monitor is incorrectly working or
3 if there's a problem with the monitor, you'll get that
4 very annoying loud beep like you heard, indicating, in
5 this case, that the leads are not on the monitor.
6 Basically, that is a quality assurance measure that
7 when this monitor is put on the patient, if the monitor
8 itself passes its self-test, it's working and can be
9 applied to the patient.

10 Q. And as part of the self-test, do I
11 understand that the alarm will actually sound as we
12 heard?

13 A. It will -- right at the end of the self-
14 test to make sure that the audible portion is working,
15 it will give that one tone.

16 Q. Just like that?

17 A. Just like that, and that is also a sign
18 that the audible section of that monitor is working, as
19 well.

20 Q. All right. And I gather, it would be
21 fair to say, anyone in Lisa's room would have heard
22 that at the time? It's a fairly loud alarm?

23 A. Yeah, it's a loud alarm, yes.

24 Q. Now I notice there is a red sticker on

1 the top of the unit with a number; I believe it's 127?

2 A. That's correct.

3 Q. Are each of those units numbered?

4 A. Each of these Corometric monitors --
5 it's just a quick way to -- it was applied by the
6 hospital some years ago just to identify quickly the
7 number of the monitor.

8 Q. And do I gather all of the equipment in
9 the hospital is numbered in a similar way to keep track
10 where goes to what room?

11 A. No. All the equipment in the hospital
12 has what's called a tromagron**, which is this silver
13 button -- this silver bar underneath, and that's used
14 by Medical Engineering to track equipment records.
15 That's our control number.

16 Q. All right.

17 A. This red sticker is just applied -- was
18 just applied to the Corometric monitors.

19 Q. Were staff encouraged in any way to make
20 note of what monitors are used on a patient by noting
21 the number?

22 A. That's something, again, you'd have to
23 ask the staff, but that's what the numbers are there
24 for, yes.

1 Q. And would I be right in saying that
2 there's no notation in Lisa's chart up to the time that
3 she was discovered of a monitor or a monitor number?

4 A. I've actually never seen Lisa's chart
5 outside of just the ECG strips.

6 Q. I see, okay.

7 A. I just glimpsed this here during the
8 inquest.

9 Q. You mentioned that after Lisa was
10 discovered, a series of monitors were pulled for
11 testing. Can you give us any idea of how many?

12 A. There were about approximately ten
13 monitors on the floor at that time, the same floor that
14 Lisa was on, that were not connected up to any patient.
15 Those monitors were pulled and given a complete,
16 thorough preventative maintenance/functional test. In
17 terms of the other monitors throughout the hospital, I
18 didn't get a clear number of how many were not on a
19 patient that we tested, but there's somewhere upwards
20 of 132 monitors in the hospital.

21 Q. In total?

22 A. In total.

23 Q. So some percentage of those were tested?

24 A. Some percentage of those were --

1 excluding the ten that we did a full functional test
2 on, some percentage of those we tested for functional
3 test, just like I just did now, and they were all
4 working fine.

5 Q. You mentioned that the apnea alarm, that
6 is the respiration alarm, can be turned off.

7 A. That is correct.

8 Q. When the apnea or respiration alarm is
9 turned off, does the monitor still give a reading for
10 the respiration rate?

11 A. Yes, it does.

12 Q. So it's simply the alarm function that
13 is disabled?

14 A. That's correct.

15 Q. That's all I have. Thank you, sir.

16 THE CORONER: Ms. Posno.

17
18 CROSS-EXAMINATION BY MS. POSNO:

19 Q. Mr. Bauer, I don't have any questions on
20 the Corometric, I just wanted to ask about an
21 attachment that would have been to Exhibit 14. It
22 doesn't appear that that was made an exhibit and I just
23 wanted to confirm some of the information that the jury
24 may want to hear. At least in my brief ---

1 A. Which attachment?

2 Q. --- it would be at pages 56 and 57 which
3 would be in the records. What I think it is, is a
4 printout of all of the demands made on a PCA pump?

5 A. That is correct.

6 Q. Okay. And it is an attachment to the
7 letter. Am I reading this correctly, then, where it
8 says "the total amount of (inaudible) drug delivered by
9 way of the PCA pump," and this would be the morphine
10 that was put into the pump, is 10.5 milligrams?

11 A. That's what the report says, yes.

12 Q. Okay, and there were 34 demands?

13 A. That's correct.

14 Q. And seven of those demands resulted in
15 the administration of morphine to the patient?

16 A. Yes.

17 Q. And the next two pages of that, there
18 appears to be a number of times at the bottom of that
19 page and at the top of the page, some say "demand" some
20 say "complete."

21 A. Mm-hmm.

22 Q. For example, there's a word "complete"
23 next to the number 18, 14.

24 A. "Dose complete," yes.

1 Q. Oh, does it say "dose"? Mine is cut
2 off.

3 A. I believe it says "dose complete;" it's
4 a very poor copy, actually. "Dose complete" is what it
5 -- it would say "good demand, dose complete" or "bad
6 demand."

7 Q. Okay. And if you count up the number of
8 "completes," which I've done, you'll have seven of
9 them, and the last one on the second page of that
10 indicates that the last amount of morphine given by way
11 of a PCA pump was at 1:08.

12 A. Again, I don't -- is that a good demand
13 or a bad -- I believe ---

14 Q. There's a bad demand and then there's a
15 "dose complete," I think, at 1:08.

16 A. It's completely chopped off of this
17 copy. All I see is "demand" -- I see a "demand
18 complete, demand, demand."

19 THE CORONER: If you have a better copy that
20 you'd like to show the witness.

21 MS. POSNO: It's in the middle of the page.

22 I think it may be helpful for the jury to
23 know the last time that morphine was
24 administered by way of the PCA pump, if it's

1 recorded on your copy.

2 THE WITNESS: I have a better copy,
3 actually.

4 MS. BROWNE: What page?

5 MS. POSNO: 58. Page 58.

6

7 BY MS. POSNO:

8 Q. This is not in the hospital chart. It
9 will be attached to the exhibit that was just marked,
10 Exhibit 14.

11 A. The good copy that I have, at "1:07.49
12 there was a good demand;" at "1:08.16 dose complete"
13 followed by a "bad demand at 1:08.37" and also a "bad
14 demand at 1:10.51."

15 Q. Okay, so from reviewing this document,
16 it appears that the last amount of morphine the patient
17 would have received would have been at 1:08.16?

18 A. That's correct, that's the end of the
19 infusion.

20 Q. Okay. And can you tell if the PCA pump
21 was connected? Can you tell from this document?

22 A. Can I tell from this document the PCA is
23 connected to the patient?

24 Q. Yes.

1 A. From this document? Can you tell from
2 the document -- I'm trying to remember if there's
3 actually a low pressure alarm on that. If the catheter
4 is not in the patient, how did the patient -- can you
5 tell if it's actually delivering a drug; I don't
6 believe you can.

7 Q. Okay, let me ask the question a
8 different way. From this document it appears that's
9 the last time she received any drug, either by way of
10 demands or otherwise?

11 A. That's what it appears, yes, from the
12 PCA pump itself.

13 Q. Right. Those are my questions, thank
14 you.

15 THE CORONER: Mr. Gomberg.

16
17 CROSS-EXAMINATION BY MR. GOMBERG:

18 Q. Mr. Bauer, just to be clear, you can
19 offer this court no evidence as to whether or not that
20 Corometric monitor was ever attached to Lisa Shore,
21 true?

22 A. That is true.

23 Q. All right. So we have to rely on other
24 witnesses, including the nurses and Mrs. Shore to reach

1 a conclusion on whether or not the machine was in the
2 room, right?

3 A. I believe so, yes.

4 Q. If in the room, whether it was plugged
5 in, right?

6 A. Correct.

7 Q. And if it was in the room and plugged
8 in, whether the leads were attached to it, right?

9 A. Correct.

10 Q. And if it was in the room and plugged in
11 and the leads were attached to it, whether the leads
12 were attached to Lisa, right?

13 A. Correct.

14 Q. All right. So you can offer no evidence
15 on any of that right now?

16 A. That's correct.

17 Q. All right. Now let's just talk about
18 the theory of the machine for a minute and the way it
19 operates. If I may? Are you able to help me with
20 that, please?

21 A. Just use a nickel or a dime.

22 Q. First of all, it's worth noting that to
23 get into the controls, if I can call them that, you
24 have to turn the machine upside down and pry open the

1 little box, right?

2 A. That's correct.

3 Q. All right. And, presumably, you'd have
4 to either have the lights on or a flashlight to do
5 that, right? I mean, it's not the easiest thing to do
6 in the dark, is it?

7 A. If you've got experience, I would assume
8 that someone could probably do it in the dark.

9 Q. All right, so you can do it in the dark.

10 A. I've never tried it myself, but ...

11 Q. All right. And then you'd have to play
12 with the buttons and the buttons are not that big,
13 right?

14 A. No.

15 Q. All right. So you'd need some light to
16 play with the buttons to make sure that you could
17 adjust the buttons to the appropriate settings, right?

18 A. Some light would be beneficial, yes.

19 Q. Well, it would be more than beneficial,
20 it would be mandatory.

21 A. Right.

22 Q. I mean, the ---

23 A. Again, again, I can't say mandatory, but
24 it would definitely -- it would help me and it would

1 help you because we're not as familiar with the monitor
2 in setting it up.

3 Q. All right. And the apnea part, as you
4 said, there are a number of settings; one of them is
5 off.

6 A. Right.

7 Q. And if the machine is attached to the
8 child, to the patient, and the machine is turned on,
9 it's then set at something between 5 and 30. So it's
10 5, 10, 15, 20, 25, 30 or off, right?

11 A. Mm-hmm.

12 Q. All right. And that's just by turning a
13 dial?

14 A. That's correct.

15 Q. Now, if -- just so I understand this and
16 I'm struggling with this myself, if it's turned -- if
17 the apnea part is on; is on, in other words it's set at
18 5, or 10, or 15 or 20, and if it's making noise and you
19 want it -- because it's going off, it's alarming for
20 some reason, and you want to get the alarm to turn off,
21 to stop ringing, what do you do just with regard to the
22 apnea part? Do you have to hit the reset or can you
23 just come in and turn the apnea part to off?

24 A. You would turn the -- hit the reset

1 button first, it's much easier to get to, obviously.

2 Q. All right, it's easier because you know
3 where it is and you can hit it in the dark.

4 Q. And you don't have to invert the
5 monitor, as I said.

6 Q. All right. So you don't have to invert
7 the monitor, you can hit the reset button and that will
8 stop the alarm temporarily?

9 A. Correct.

10 Q. Then what do you do? Let's assume that
11 happens again, a second time, you do the same thing,
12 you can keep doing that or I guess at some point you
13 can invert the machine and turn it to off, right?

14 A. (non-verbal response)

15 Q. Now, if you turn it to off when it's
16 ringing, in other words you invert the machine, it's
17 making noise, it's alarming and you turn it off, will
18 that stop the alarm?

19 A. I don't even know.

20 Q. You don't know?

21 A. I don't know that answer.

22 Q. All right. But hitting the reset button
23 will stop it?

24 A. Temporarily.

1 Q. Temporarily. Temporarily being for two
2 minutes?

3 A. At least.

4 Q. All right. Now do you know whether
5 inverting the machine and turning the apnea dial to off
6 will stop the machine? You don't know at all whether
7 it will stop it for two minutes, or one minute, or one
8 minute or at all, you don't know?

9 A. Well, if it turns it off, it will turn
10 it off for good.

11 Q. For good? Permanently?

12 A. Yes, if it turns it off.

13 Q. Now do you have directives or
14 information that goes out to the medical staff or to
15 the nursing staff advising them what they should do
16 with a machine if it's alarming incorrectly, if I can
17 put it that way? In other words, I take it, common
18 sense dictates that when a machine alarms, people come
19 into the room and check it out; that's the whole
20 purpose of the machine, right?

21 A. Right.

22 Q. All right. And then if they check the
23 machine out and it appears to be working, it's
24 attached, first of all, and the breathing, 'cause we're

1 only talking about breathing now, appears to be within
2 the appropriate parameters, then one concludes that
3 there may be a problem with the machine, right?

4 A. I wouldn't make that conclusion, no.

5 Q. Well what conclusion would you make if
6 the leads are appropriately attached to the patient and
7 if the patient's breathing is within the appropriate
8 parameters?

9 A. There may have been a temporary
10 violation of that alarm.

11 Q. All right. Do you have directives, or
12 instructions or anything like that going to the medical
13 and the nursing staff telling them what they ought to
14 do with the machine if they do conclude that there's a
15 problem with that machine?

16 A. The process is to send it down to
17 Medical Engineering as soon as they identify a problem
18 with the machine.

19 Q. Right. So just to be clear, what one
20 should do is stop using that machine and send it down
21 to Biomedical Engineering, right?

22 A. That would be the appropriate course of
23 action.

24 Q. And, in fact, that's what you've told,

1 either in writing -- I take it there must be some
2 directive or something that emanates from your
3 department to the staff telling them that, am I right?

4 A. I'm just trying to read the policies, if
5 there is one. I believe so, yes. If there's a problem
6 with any device, it's to be returned. There are,
7 actually, work tags that are out, as well, on the
8 floors.

9 Q. And, I take it, as part of that
10 policy ---

11 A. It's a direct policy. As I say, I'm
12 not ---

13 Q. If there is one?

14 A. Right.

15 Q. All right, but if there isn't one, it's
16 common sense, surely? Right?

17 A. I would hope so.

18 Q. Well, if there's a problem -- well,
19 we're talking about the Hospital for Sick Children ---

20 A. If there's a problem with the machines,
21 the process is to tag the device, pull it out of
22 service, and send it down to Biomedical Engineering.

23 Q. All right. And just an adjunct to that,
24 of course, is replace it with a machine that there

1 isn't a problem with?

2 A. That's correct.

3 Q. Right? All right. So disabling the
4 apnea alarm because it's ringing too much, if somebody
5 did that, that wouldn't be in keeping with what you
6 would expect as the Biomedical Engineering supervisor?

7 A. Well, there are different reasons why an
8 apnea alarm could be ringing without -- without it
9 actually being a problem with the monitor. Maybe the
10 -- well, as I was trying -- there could be a
11 possibility that the signal strength was not large
12 enough for the monitor itself to pick up a respiratory
13 rate.

14 Q. All right, but look, just to cut to the
15 heart of it, whatever the reason is, turning the apnea
16 part off is the worst of all choices because then
17 what's going to happen is there won't be alarm if it's
18 necessary, right?

19 A. That's again a clinical decision, if
20 they want to look at the apnea rate or not.

21 Q. Well, I'm asking though -- no, but just
22 a minute, I'm asking you as the Biomedical Engineering
23 person, if the apnea part of the alarm is disabled,
24 that is, turned off, all right, we've already heard

1 that it may give you -- that it will give you a digital
2 reading on the number of breaths if you're in the room;
3 that's what you said in response to Mr. Krkachovski,
4 right?

5 A. Yes.

6 Q. All right. But to be clear, if those
7 breaths go down to zero, in other words, no breaths and
8 you get a zero on the read-out, you will not get any
9 alarm at all if the alarm has been disabled?

10 A. That's correct.

11 Q. All right. And that's not something
12 that you, as a Biomedical Engineer, recommend in terms
13 of a properly functioning monitor, is it?

14 A. It's there -- the zero position is
15 there, the off position is there for a reason. If you
16 do not wish to monitor apnea, you can turn it off.

17 Q. All right. So if you're prepared to
18 have it function only on the cardiac side, in other
19 words, not monitor the apnea at all, then it's
20 appropriate to turn it off?

21 A. Yes.

22 Q. But if you're monitoring heart and
23 apnea, then it's not ---

24 A. You cannot turn the low heart rate alarm

1 off and it's designed as such.

2 Q. All right, just to be clear, if the
3 machine is designed to monitor both heart rate and
4 respiration rate, then it's not appropriate to turn the
5 apnea, that's the breathing part, off?

6 A. The monitor is designed to monitor
7 either apnea, or heart rate or both. If you want to
8 monitor heart rate, you turn the apnea alarm off.

9 Q. Well, no, that's not -- that's not
10 entirely right. I suggest to you that if you want to
11 monitor heart rate only and you've advertently made
12 that decision, then it may be appropriate to turn the
13 apnea part off?

14 A. You can make a decision that I just want
15 to monitor the heart rate, that's a clinical
16 decision ---

17 Q. That's what I ---

18 A. --- that's up to the individual and what
19 they're looking for.

20 Q. Let me try and ask the question clearly.
21 If one makes a clinical decision to monitor heart rate
22 and apnea, in other words, any breathing, then you'd
23 agree with me that it's not appropriate to turn the
24 apnea part of the monitor off?

1 A. If they want to monitor apnea, if they
2 want to be alarmed on apnea, it would be inappropriate.

3 Q. That's my question. If you want to be
4 alarmed, if you want to be advised that the apnea, that
5 the breathing rate has fallen below a certain
6 parameter, then it's not appropriate to turn the alarm
7 off?

8 A. If you want an alarm.

9 Q. So you agree with my statement?

10 A. I believe so.

11 Q. Now when were you advised that there was
12 a problem, or that there might have been a problem, or
13 that there was an issue about a Corometric monitor and
14 Lisa Shore?

15 A. May I refer to my notes because I ---

16 Q. Yes, please.

17 A. --- I don't remember the exact ---

18 Q. Do we have these notes?

19 A. I believe ...

20 MR. HAWKINS: This is a binder of notes that
21 was certainly available to the Coroner when
22 you attended. I believe Mr. Krkachovski has
23 a copy of that. I don't know if other
24 Counsel have a copy.

1 THE WITNESS: It's approximately 1:30 p.m. on
2 October 22nd we were notified that there was
3 an incident.

4 MR. GOMBERG: Deputy Chief Coroner, I have a
5 problem here. I don't know if I've seen the
6 notes.

7 THE CORONER: I don't know, I don't think I
8 have seen them.

9 MS. BROWNE: I don't think I have either.

10 MR. GOMBERG: Then I'd ask for a recess for
11 me to look at the notes.

12 THE CORONER: How many pages do these notes
13 go to?

14 THE WITNESS: The notes are just detailing
15 -- it's basically a lot of the waybills even
16 for sending down to ECRI, those kind of ---

17 MR. GOMBERG: No, I don't care about that.
18 Just to be clear -- I'll proceed a little bit
19 and then it may be that I don't need an
20 adjournment. Let's get back to the question.

21

22 BY MR. GOMBERG:

23 Q. The question is when were you first
24 advised that there might have been an issue with the

1 Corometric monitor as opposed to the IVAC pump or the
2 PCA pump?

3 A. We were notified of the fact that there
4 was an incident at 1:30 p.m. on the 22nd. It wasn't
5 until the next day that we realized that there was a
6 Corometric in the room and that the Corometric had not
7 been isolated at that time.

8 Q. All right, so just to be clear, you
9 found out on October 22nd at 1:30 in the afternoon that
10 there had been a death on the orthopedic ward and it
11 was only the next day, that's on October 23rd of 1998,
12 that you found out that there might have been, or that
13 there was, a Corometric involved?

14 A. At that time, might have been, yes.

15 Q. All right. Now what were you told on
16 October 22nd and by who?

17 A. On October 22nd, we were advised by our
18 Risk Management Department that there was an incident
19 -- no, it wasn't, sorry. It was not Risk Management,
20 it was one of the people in the Pain Service that there
21 was an incident. We were responsible for incident
22 investigation at that time. The Coroner had already
23 been advised and was in the hospital, and had secured
24 the two -- the IV pump and the PCA pump.

1 Q. All right. Well, just to be clear about
2 this, the Coroner was the investigating Coroner, do you
3 know who that was? Was that Dr. Reingold?

4 A. I believe so, yes.

5 Q. All right. So Dr. Reingold was advised
6 of the death and came to the hospital, right? Did you
7 have any dealings with Dr. Reingold?

8 A. None personally, no.

9 Q. None personally. Okay, did you have any
10 dealings indirectly with Dr. Reingold?

11 A. One of my techs was involved in the
12 incident. As soon as he was notified of it, he was
13 involved with insuring that the pump was -- he's the
14 one that eventually ended up shipping the pump down to
15 ECRI.

16 Q. All right, but just to be clear about
17 this, did somebody -- somebody from the Pain Service,
18 was it a doctor or nurse who told you about the death?

19 A. It was a nurse, Lori Pallozzi.

20 Q. So, Lori Pallozzi, who's a pain nurse,
21 if I can call her that, she's on the Pain Service?

22 A. I believe so, yes.

23 Q. All right. And she, what, called you
24 and told you that there had been a death?

1 A. She informed my senior tech, who's
2 responsible for those pumps, that there was an
3 incident.

4 Q. All right. And when you say your senior
5 tech who's responsible for the pumps, you're talking
6 about the IVAC and the PCA pump?

7 A. Specifically the PCA pump.

8 Q. All right. Did anybody from the Pain
9 Service or anyone from any other place at the hospital
10 inform you or any of your techs or anyone in your
11 department on October 22nd, that's the date of the
12 death, that there might have been an issue with a
13 Corometric monitor?

14 A. The focus at that time was definitely on
15 the PCA pump and the IV pump, but as far as I remember,
16 no, no one told me specifically that there was anything
17 to do with the Corometric.

18 Q. All right. Did anybody from your
19 department approach the nurses, and I'm talking now
20 specifically about Nurse Doerksen and Nurse Soriano who
21 we're going to hear from later, to ask them what
22 machinery was in the room so that you could segregate
23 the machinery? I'm talking now about in the morning or
24 at 1:30 p.m. on October 22nd.

1 A. My understanding is by the time that we
2 were informed, the room had already been basically
3 cleaned out. The pumps were in the hands of the
4 Coroner's office and if there was a Corometric in the
5 room, it had already been cleaned. That's the standard
6 procedure and back into service, or out into the
7 general use.

8 Q. All right. Now when you say "the
9 general use," where do those Corometrics reside?

10 A. Generally, they reside on the wards
11 because they're fairly heavily used.

12 Q. All right.

13 A. There is a process whereby they are sent
14 down to Central Services Department for cleaning and
15 re-packaging, that's why you have that plastic bag,
16 just clean and sterilized and ready for use and then
17 delivered back up to the wards as they're required.

18 Q. All right. So just to be clear, in the
19 normal course, orthopedics, that's the floor that Lisa
20 was on, would have 10, or 15, or 20 or whatever the
21 number is, Corometric monitors that they would normally
22 use, is that the idea?

23 A. Approximately, but they're part of a
24 central pool.

1 Q. A central pool being the 132?

2 A. Correct.

3 Q. All right. And what are you saying,
4 that if the demand goes beyond what they normally have,
5 then they would call on the central pool, and if the
6 demand elsewhere goes high, then they may call on some
7 of the Corometrics that would normally be on
8 orthopedics, is that the idea?

9 A. Yes.

10 Q. Now do you know how many Corometric
11 monitors were on the orthopedic floor, that's on 5A or
12 B on October 22nd, 1998?

13 A. No, I do not.

14 Q. All right. Has anybody attempted to
15 figure that out?

16 A. Oh, there at least 10. I told you the
17 10 that we pulled on the ward.

18 Q. Right.

19 A. Beyond that, no, I don't know if -- I
20 don't have any records as to whether there was a count
21 done.

22 Q. All right. And just to be clear so we
23 understand it, those 10 that were on the orthopedic
24 floor, you can't say for certain whether the Corometric

1 monitor that was allegedly in Lisa's room is one of
2 those 10? You can't say that for certain?

3 A. I cannot.

4 Q. All right, so the only thing that you
5 can say is that the monitor that was in her room, if
6 there was one, was one of the 132?

7 A. That's correct.

8 Q. All right. And just to be clear for the
9 jury, what you're also saying is that of those 132,
10 none of them required servicing after the event?

11 A. That's not true, I didn't say that. At
12 the time ---

13 Q. Let me be ---

14 A. I'm sorry, go ahead.

15 Q. No, I'm not trying to confuse you, I
16 misstated it. None of them required servicing of the
17 alarm, or of the apnea part of the monitor or of the
18 heart part of the monitor?

19 A. Yeah. Over the course of the next year
20 as we went through all of the Corometric monitors for
21 their annual PM, we specifically paid additional detail
22 or additional -- we looked additionally at that
23 specific function of the monitor to make sure that
24 there was no monitor that could have failed in such a

1 way that it would not have alarmed or whatever.

2 Q. And, just to be clear, you reached the
3 conclusion after looking at those in the preventative
4 maintenance, the PM program that you've described, that
5 in fact of those 132 monitors, none of them could have
6 failed in such a way as not to alarm ---

7 A. That's correct.

8 Q. --- if it was attached?

9 A. That's correct.

10 Q. All right. Now I guess it leads us back
11 to the notes, Deputy Chief Coroner, I don't know what's
12 in the notes and rather than getting him to tell us
13 page by page what's in them, maybe the best thing is
14 for us to take a five minute break and have me look at
15 them.

16 THE CORONER: We'll have a five minute
17 recess.

18

19 --- A BRIEF RECESS

20

21 MS. BROWNE: Mr. Coroner, before we go on
22 with Mr. Gomberg, can I just indicate that
23 Ms. Posno was very helpful and in case
24 Exhibit 14 that the jury has is cut off at

1 all by the staples on the left, we have
2 additional ones which are quite clear and ask
3 that one be appended to Exhibit 14 and the
4 rest I'll give to the jury.

5 THE CORONER: Thank you, Ms. Browne.

6 MS. BROWNE: It's just a -- sort of a
7 clearer version of the tables that we have.

8

9 BY MR. GOMBERG:

10 Q. I haven't gone through all of the stuff,
11 it appears that most of it doesn't have much to do with
12 anything. There's a note, though, dated October 23rd,
13 1998 that I'd like to ask you about if I can, and I'm
14 reading from it, "October 23rd, approximately 11:05
15 a.m." First of all, who made these notes? I mean,
16 they're typed.

17 A. That's made by my senior tech, Murray
18 Greenwood.

19 Q. All right. So -- Murray or Mary?

20 A. Murray.

21 Q. Murray. So Murray Greenwood what, took
22 some notes and then typed these up, or did he type them
23 up right away or you don't know?

24 A. I'm not sure. I think he typed them up,

1 but he's very meticulous in his note keeping, he may
2 have entered them right on his computer.

3 Q. All right. And it says:

4 "... Called by Marion Stevens and
5 informed that an ECG monitor and a pulse
6 oximeter were also in the patient room
7 at the time of the incident ..."

8 A. That's what our understanding was at
9 that time, yes.

10 Q. All right. And did you later on develop
11 an understanding that that was either correct or that
12 it was incorrect?

13 A. My understanding is that it was
14 incorrect, there was no ---

15 Q. Incorrect.

16 A. --- no pulse oximeter, yes, that's
17 correct.

18 Q. All right. So there was no pulse
19 oximeter in the room ---

20 A. I believe there will be testimony later
21 that says there was no pulse oximeter in the room.

22 Q. Right. But just to be clear, your
23 understanding or at least Murray Greenwood's was on
24 October 23rd at 11:00 in the morning, that there was

1 another machine in that room aside from the IVAC and
2 aside from the PCA?

3 A. Mm-hmm.

4 Q. Right?

5 A. Yes.

6 Q. Did anybody do anything to investigate
7 what that other machine was? By "anybody" I mean
8 anybody that you know about?

9 A. Anyone that I know about, no.

10 Q. All right.

11 A. As soon as we found out that there was
12 an ECG monitor, and what they mean by that is this
13 Corometric, that that's what we pursued.

14 Q. Oh, I'm ---

15 A. An ECG monitor is the Corometric.

16 Q. Okay, so I'm confused then. Just to be
17 clear, because you've just set me straight on
18 something, where it says here "informed that an ECG
19 monitor and a pulse oximeter," what that means to you
20 is a Corometric monitor plus a pulse oximeter?

21 A. Yes.

22 Q. All right. And that therefore as of
23 11:00 in the morning, the following morning, you were
24 aware of information that turned out to be partially

1 correct and that is that there was a Corometric monitor
2 which reads "ECG monitor" here, but the part about the
3 oximeter was wrong?

4 A. That's correct.

5 Q. All right. And just to be clear,
6 because I'm sure that I quite got this, did you go on a
7 search to try and find what's referred to as the ECG
8 monitor, namely the Corometric monitor, beginning ---

9 A. Yes.

10 Q. --- at 11:00 on October 23rd?

11 A. It may have actually begun slightly
12 before that, I'm not sure of the chronology. Marion
13 may have told me earlier and we started pulling
14 Corometrics, but because by 3:00 we had already secured
15 the Corometrics that were loose in that area and had
16 begun a hospital-wide sweep, that's stated earlier,
17 just to do a functional test on all the non-applied
18 Corometric monitors.

19 Q. Well, just to be clear, this isn't ---

20 A. The Corometrics (inaudible) the same as
21 the ECG monitor. It's the same as (inaudible).

22 Q. All right. No, I understand, but what
23 I'm saying is this, the first reference to a Corometric
24 monitor, all right, is to what you've called an ECG

1 monitor so we can just, for purposes of the inquest,
2 "ECG" you said means "Corometric" in the note of
3 October 23rd at 11:05?

4 A. That's what it's understood as meaning
5 at that time.

6 Q. All right. So is that the first
7 reference to a Corometric monitor, vis-a-vis the Shore
8 case, that you're aware of?

9 A. I believe so, yes. As I say, I could
10 have found out slightly earlier on that day that there
11 was an ECG monitor or a Corometric monitor.

12 Q. All right. So "slightly earlier" would
13 be what, maybe an hour earlier?

14 A. An hour, two hours -- four hours maximum
15 because I'm in at 7:00, so ...

16 Q. All right. So the earliest that you
17 would have known about a Corometric monitor was 7:00 in
18 the morning the following day?

19 A. That's correct.

20 Q. All right. And then what happens is the
21 next reference that appears to be relevant at all is a
22 reference at:

23 "... 3:05, seen the Corometrics 502
24 monitors in Marion's office that have

1 been removed from ward 5A ..."

2 A. Yes, that's from the perspective of my
3 tech, yes.

4 Q. All right. Have you spoken to your tech
5 to find out how many -- is that the number ten that you
6 were referring ---

7 A. That was the number ten, yes.

8 Q. All right. And just because my attempt
9 to go through this was slightly truncated, is there
10 anything else in this material that refers to
11 Corometric monitor or to what you call ---

12 A. The ECG monitors.

13 Q. --- ECG monitor, aside from -- there's a
14 lot of stuff dealing with shipping of IVACs and PCAs
15 that I don't care about.

16 A. There are some work orders in this
17 manual that deal with actual monitors that we'd tested,
18 the ten monitors.

19 Q. All right. But anyway, to summarize it,
20 there was nothing wrong with any of those ten?

21 A. There was miscellaneous problems,
22 nothing to do with an audible alarm that would not have
23 been heard.

24 Q. All right.

1 A. Miscellaneous problems, one monitor was
2 completely non-functional.

3 Q. Right.

4 A. Other than that, just miscellaneous,
5 little problems here and there, nicks on leads, things
6 like that.

7 Q. Now just as a matter of interest, the
8 monitor that was non-functional, you mean you'd plug it
9 in and it wouldn't work at all?

10 A. Completely.

11 Q. So in other words, you'd plug it in and
12 it would not go through the cycle that you've
13 described?

14 A. That's correct.

15 Q. And I take it that anybody, that the
16 nurses would know -- you may be the wrong person to ask
17 this, but I take it that somehow they're instructed by
18 somebody in your department that if the machine doesn't
19 go through the cycle at all, then that machine is not
20 to be used?

21 A. That's correct.

22 Q. And I think that's it. Just bear with
23 me for a minute, Deputy Chief Coroner. Thank you.
24 That's it.

1 THE CORONER: Does the jury have any
2 questions of Mr. Bauer?

3

4 CROSS-EXAMINATION BY THE JURY:

5 BY JUROR #2:

6 Q. We just wanted to see one more time the
7 on/off and if you could just -- if you could just take
8 a moment to show us again.

9 A. Certainly. That's on.

10 JUROR #1: That light indicates that it's
11 on?

12 THE WITNESS: This -- you'll see --

13 JUROR #1: It's on. It's right there.

14 THE WITNESS: That indicates that it's
15 powered on.

16 JUROR #2: Yes.

17 THE CORONER: Can we have one member of the
18 jury asking questions one at a time so the
19 court reporter can get it, please?

20 JUROR #2: So we wanted to make sure that
21 that indicates ---

22 MS. BROWNE: I'm sorry ---

23 MR. GOMBERG: We can't hear either.

24 MS. BROWNE: We have to hear that. I wonder

1 if you can stand slightly to the side, you're
2 sort of a big man so ...

3 THE WITNESS: Sort of?
4

5 BY JUROR #2:

6 Q. So what we want to verify is that that
7 green light indicates that the machine is on and
8 functional? It's on?

9 A. No, the green light indicates that
10 there's power to the machine.

11 Q. Power to the machine.

12 A. It doesn't indicate that it's powered,
13 turned on.

14 Q. The settings on the bottom, the apnea
15 can be turned off?

16 A. Correct.

17 Q. The high heart rate can be turned off?

18 A. Yes.

19 Q. The low heart rate cannot ---

20 A. Cannot be turned off.

21 Q. --- be turned off. So if the leads were
22 attached to the patient and taken off, the alarm would
23 sound on the low heart rate?

24 A. The alarm would sound as a leads off

1 alarm.

2 Q. Leads off, right.

3 A. As soon as -- regardless of the heart
4 rate itself, as soon as a lead becomes detached ---

5 Q. Right.

6 A. --- these two leads here, as soon as
7 they become detached the monitor will alarm. That's
8 what's alarming now when I turn it on.

9 Q. Right. Okay. The only way that the
10 monitor would not alarm if the leads came off would be
11 if the off button was turned off, if the button ---

12 A. That's correct.

13 Q. And that's at the back? Can we see ---

14 A. That's this on/off button right here.

15 Q. On/off button. Do you have any other
16 questions?

17 JUROR #1: Yes.

18

19 BY JUROR #1:

20 Q. So in other words, that button can be
21 turned off and this light ---

22 JUROR #2: Stays on.

23 THE WITNESS: That light stays on.

24

1 BY JUROR #1:

2 Q. --- stays on?

3 A. Yes. If it's plugged in.

4 Q. So if I come into the room and I want to
5 know if this machine is on, is it correct that I must
6 look at this button rather than ---

7 A. What you'll see when ---

8 Q. --- that green light?

9 A. The green light only tells you it's
10 plugged in.

11 Q. Okay.

12 A. What you'll see when the monitor is on,
13 there are actually two numbers here. You'll see those
14 two numbers and that will tell you that the monitor is
15 on and picking up a signal.

16 Q. So if I don't see any figures on this
17 digital here, I know the machine is on, is that
18 correct?

19 A. Correct.

20

21 BY JUROR #2:

22 Q. And then also if you hit the reset
23 button that only gives a two-minute delay?

24 A. Two minutes.

1 Q. And then it would go back to alarming?

2 A. It would go back to the alarm stage.

3 Q. Just for my own speculation, on Exhibit
4 14, the last "dose complete" was at 1:08.15, and the
5 very last demand ---

6 A. Yes, the last complete dose ---

7 Q. --- was at 1:10 ---

8 A. The last demand is at 1:07:49, that dose
9 is completed at 1:08.16 and the last demand is at
10 1:10.15.

11 Q. And at that point, no more.

12

13

14 CROSS-EXAMINATION BY THE CORONER:

15 Q. I have just one or two questions.

16 Assuming that we have a normal and functioning monitor,
17 and it's my understanding that you have not found a
18 monitor since this incident at Sick Kids that was not
19 functioning correctly?

20 A. That was not functioning in such a way
21 that you would not get an audible alarm.

22 Q. If the monitor was on the patient and
23 the apnea alarm is turned off, if it is functioning
24 properly, then the lowest heart rate setting that it

1 could be set at, I think, is 50, is that correct?

2 A. I have to look. I believe so.

3 Somewhere around 40 or 50. It's actually at 30.

4 Q. Thirty. So that if the heart rate goes
5 below 30, and this is a normally functioning monitor,
6 the alarm will go off?

7 A. That is correct.

8 Q. You also commented that let's say we
9 have it in both modes and it's properly functioning
10 that it will give you a read-out of the respiratory
11 rate, it will give you a read-out of the heart rate and
12 there will be, in fact, green little flashing lights at
13 the same time ---

14 A. That's correct.

15 Q. --- indicating that not only is that
16 your heart rate and your respiratory rate, but the
17 green light indicating they are within the parameters
18 of which the machine has been set?

19 A. That's correct.

20 Q. If the machine alarms because either the
21 respiratory rate or the heart rate falls outside the
22 parameters, then an alarm will go off, a red light will
23 come on and that alarm will continue to sound until it
24 is reset by a nurse, is that correct ---

1 A. That's ---

2 Q. --- or by human hand coming in and
3 resetting it?

4 A. Sorry. I'm fairly certain, but I'd have
5 to re-verify that if the -- if there's a temporary
6 violation of an alarm parameter, the alarm will sound.

7 If that parameter then rectifies itself, the heart
8 rate goes higher, the apnea -- the patient breaths
9 again, the audible portion of the monitor will reset,
10 but the indication will still be on the top of the
11 monitor that there was a violation.

12 Q. It alarms and it comes back and someone
13 comes in and resets it, it may be that by the time it's
14 reset, the parameters have come back to normal, as
15 well, in which case when you reset it, it will not
16 alarm; is that correct?

17 A. Right, but there will still be an
18 indication ---

19 Q. There will still be an indication it had
20 alarmed?

21 A. Yes.

22 Q. But that means in the interval it's back
23 into the normal parameters.

24 A. Normal parameters.

1 Q. And, finally, that if for whatever
2 reason the lead comes off the chest, and we had some
3 evidence from the first resident into the room that
4 morning, who's indicating that the leads were attached
5 to Lisa's chest, and that those leads were removed, if
6 this is functioning and is on, then it would alarm that
7 there is a loose lead?

8 A. That's correct.

9 THE CORONER: Thank you. Any further
10 questions of Mr. Bauer? Yes.

11 MS. BROWNE: Ask Mr. Hawkins if ...

12 MR. HAWKINS: I have not yet been asked if
13 I've got any questions ---

14 THE CORONER: My apologies, Mr. Hawkins.

15 MR. HAWKINS: --- but I do not.

16 THE CORONER: My apologies.

17 MS. BROWNE: Does the jury have any
18 questions?

19

20 RE-EXAMINATION BY THE JURY

21 BY JUROR #1:

22 Q. Yes. I'd like to see where that red
23 light comes on and if the red light is indicative
24 specifically of one or the other function -- not

1 function -- as it's programmed or set.

2 A. It's difficult to do.

3 Q. Okay, can you tell me where the red
4 light is?

5 A. Yes, sure, I can tell you. On the top
6 of the display, there are indications that we might be
7 able to get when it's powered on, the green light here,
8 here, the red lights here and here. The green lights
9 for heart, every time there's a heart beat, the green
10 light will flash.

11 Q. Yes.

12 A. Every time there's a breath, this green
13 light will flash. If there is a violations ---

14 Q. So that's the apnea or the breath ---

15 A. That's the apnea, right.

16 Q. --- that green light?

17 A. Right.

18 Q. And that's the ---

19 A. Heart rate.

20 Q. --- heart rate?

21 A. Right. Any time there's a violation of
22 that, either the low heart rate, high heart rate or the
23 apnea light will come on, or loose leads which is a
24 yellow condition, or low battery which is also yellow.

1 Q. Okay, I understand that. I think I'm
2 clear. Thank you.

3 THE CORONER: Any further questions of this
4 witness? Yes.

5

6 BY JUROR #5:

7 Q. Is there anybody that a nurse can reach
8 to tell you that there was a malfunction in the
9 machine, in the office, 24 hours?

10 A. In my office we have a long-range pager
11 that's ---

12 Q. That's all?

13 A. --- functioning 24 hours, yes.

14 Q. Nobody else is on duty?

15 A. One person is always on call, 24 hours a
16 day, 365 days a year.

17 Q. Thank you.

18 THE CORONER: Thank you, Mr. Bauer. I don't
19 know if we have made that Corometric monitor
20 an exhibit yet, have we?

21 THE WITNESS: Yes, that's yours.

22 CONSTABLE CULLETON: Exhibit 13.

23 MS. BROWNE: 13.

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EXHIBIT NO. 13: Corometric monitor, model Neo-Trak
502

THIS IS TO CERTIFY that the foregoing
is a true and accurate transcription
of my recording and notes, to the best
of my skill and ability.

Barbara A. Pollard
Certified Court Reporter

Photostatic copies of this transcript are not certified and
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Act, January 1, 1990.