IN THE COURT OF COMMON PLEAS

CUYAHOGA COUNTY, OHIO

XAITLIN STEVENS,
etc., et al.,

Doc. 325

Plaintiffs,

-vs-

JUDGE CALABRESE
CASE NO. 221097

HURIKADALE SUNDARESH, M.D.,
et al.,

Defendants.

- - - -

Deposition of JOANNE C. MORTIMER, M.D., taken as if upon cross-examination before Dawn M. Fade, a Registered Professional Reporter and Notary Public within and for the State of Ohio, at the Case Western Reserve University School of Medicine, 2119 Abington, Cleveland, Ohio, at 1:10 p.m. on Monday, March 23, 1992, pursuant to notice and/or stipulations of counsel, on behalf of the Defendants in this cause.

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On behalf of the Defendants
Hurikadale P. Sundaresh, M.D. and
Joanne C. Mortimer, M.D.

ALSO PRESENT:

Diane M. Kaluszyk R.N., legal assistant

JOANNE C. MORTIMER, M.D., of lawful age, called by the Defendants for the purpose of cross-examination, as provided by the Rules of Civil Procedure, being by me first duly sworn, as hereinafter certified, deposed and said as follows:

CROSS-EXAMINATION OF JOANNE C. MORTIMER, M.D.

BY MR. KAMPINSKI:

. Okay. Would you state your full name, please.

MR. JACKSON: You might want to indicate on the record that we called.

MR. KAMPINSKI: We're taking the deposition of Dr. Mortimer. Mr. Goldwasser's office was notified of the time and place. It is now, what, about 1:10 and there's nobody here from his office yet. Apparently, there is somebody en route. And we are going to go ahead and get started. If they need to review anything that we have gone over, I assume Mr. Jackson will give them the opportunity to do so.

MR. JACKSON: Yes.

. Would you state your full name, please.

. Joanne Clarage Mortimer.

. Doctor, I'm going to ask you a number of

questions this afternoon. If you don't understand any of them, tell me, I'll be happy to rephrase any question you don't understand. When you respond to my questions, I'd ask that you do so verbally. She is going to be taking down everything we say, she can't take down a nod of your head.

. All right.

. I have just been handed your CV, and to be honest with you, I haven't had an opportunity to absorb it all. Is this up-to-date, is this a current CV?

. No, it's a little behind.

. Why don't you at least update me on anything that is not on here.

. Okay. Since this CV was origina ly done, I no longer go to Health Hill Hospital.

. When did you stop going there?

. November 21st,

. Of '91?

. Of '91, yes. Middle of last November, right before Thanksgiving. So I no longer am an attending physician at Health Hill for children.

I am director of the Edward I. and Fannie L. Baker ARC Down syndrome Research Center,

International Down syndrome Research Center. I'm also director of the Down Syndrome Clinic. I'm also, now, medical director of 6 West, which is one of the inpatient units at RB&C. I still work with children with spina bifida, cerebral palsy, cleft lip and palate, but less so.

I have, the article on, with Dr. Drotar has actually been published. I can get you the actual reference if you want it.

And I also have in press at this point a chapter for a book. The book is on pediatric emergency room medicine, and my chapter is on emergency management of the child with multiple handicaps.

Q. Does that deal at all with Down syndrome children?

A. Yes.

Q. Okay. Does your book chapter on Practical Guide to --

A. Pediatric Intensive Care. That chapter is more general. In other words, it deals with children on respirators which might or might not.

Q. Okay. All right. When you say it's in press, it has not been published yet?

A. Actually, this one has also been published.

Q. Okay. The one you just indicated that was in press has not been published?
A. Right.
Q. Okay. And where would I get a copy of that?
A. You could call to find out about it. You call 844-8260 and ask for Dr. Robert Reese. He is the editor.
Q. Reese?
A. Yes.
Q. Okay. He would be able to provide me with a copy, then?
A. Well, if it's -- the last I saw of it, it was in the galleys.
Q. You would have copies?
A. He has them.
Q. Well, do you have copies?
A. Of my chapter?
Q. Yes.
A. Yes.
Q. Okay.
A. Not beautiful ones.
Q. All right. But if we made a request --
A. Yes.
Q. You could provide those to Mr. Jackson?
A. Yes.

. Doctor, you grew up or you were born in California. Is that where you grew up?
. No. I grew up in Cleveland.
. Where did you graduate high school from?
. Cleveland Heights.
. When was that?
. 1966.
. Okay. And did you then go to Smith College?
. Yes.
. And when did you start there?
. 1966.
. And did you graduate?
. Yes, I did.
. BA, okay. When was that?
. 1970.
. Why did you do a postgraduate year doing premed curriculum; is it you didn't have the right subjects in undergraduate school?
. Yes.
. And just, for example, what kinds of subjects did you need to take?
. I needed to take physics, chemistry and organic chemistry.
. Then you continued at New Mexico, and you went to the medical school there?

. Uh-huh.
. Okay. After you did your internship and residency in Rochester, you then remained in Rochester and worked for some period of time?
. Yes.
. What did you do for the Brown Square Health Center and the Monroe County Department of Public Health?
. Brown Square was a neighborhood health center on a family practice model, and I worked there.
. Okay. As a physician?
. As a physician.
. Okay.
. And for the Monroe County Department of Health I was a school physician.
. For the entire school system or --
. There were, I don't remember, there was some number of us, five or something, and they had the school system divided up, in Rochester, among the physicians.
. How would that work, would you go to a different school each day, then?
. We had very specific tasks assigned to us. For example, go look in the ears of everyone who failed a hearing test, and we would go from

school to school and do that.
I see. Okay. What is the reason that you spent, what, 14, 15 months doing that?
I was trying to clarify in my own mind whether I wanted to remain in pediatrics or do family medicine or internal medicine.
Okay. And you were doing both, then, I take it? And the family medicine was what was done at the Brown Square.
Right.
Right. There are different training programs, so I was considering what my options would be in terms of training programs.
Okay. I take it you kept your hand in pediatrics?
Oh, yes.
Working for Monroe County Department of Public Health?
Yes. And also at Brown Square I saw a lot of kids.
I take it you then decided on going into pediatrics?
That's right.
So that you did an additional residency at Loyola?

A. Yes. I completed the residency.
Q. Okay. And then you did a fellowship, it says, special - limited. What does that mean?
A. That means I got a grant and got to take a small three-month sabbatical to go study pediatric rehabilitation at the Rehabilitation Institute of Chicago.
Q. What is pediatric rehabilitation?
A. In terms of what kind of patients or --
Q. No. I mean that is a field of medicine?
A. Yes. It's a field of medicine. It's a subspecialty, it's a nonboarded subspecialty of either physical medicine and rehabilitation or of pediatrics.
Q. And this would be of impaired children?
A. Yes.
Q. All right. Are you boarded, then?
A. In pediatrics, yes.
Q. And when were you boarded? Oh, I see, May of '83?
A. I have to look. Uh-huh.
Q. Okay. Was that the first time taking the test?
A. Yes.
Q. Do you have any other boards?
A. No.

. Have you tried to obtain any other boards?
. No.
. Are there any specialty boards for either CP children, spina bifida children, Down syndrome children?
. Not at this point, no.
. Okay. I notice, in just briefly going through your CV, a lot of it has to do with spina bifida children?
. Yes.
. Many of the community activities, some of the positions that you apparently held, specifically related to those. Would you consider yourself a specialist in spina bifida children?
. I would consider myself an expert.
. Okay. And did you focus on those c'hildren at some portion of your training and then work?
. Yes.
. When was that?
. Back when I was in Chicago at, working at, starting about in '81 and going forward.
. That's right after your residency, is that correct?
. Yes.
. What did you do from July of 1980 until -- oh, I

see. You were assistant professor at the Chicago Medical School?

. Yes.

. After your residency?

. Yes.

. Okay. And it was during that period of time, then, that you specialized in spina bifida children?

. No. What I would say is it's an area in which I studied and gained experience from then until probably up to including now.

. How about Down syndrome children, at what point did you obtain expertise regarding those kinds of children?

. I'd say over the same period of time.

. Well, was there any fellowship or specific course of study that you undertook dealing with Down syndrome children?

. No.

. All right. This is something that you would have learned through your general pediatric training as well as your experience with children?

. As well as through specific continuing education programs.

. Uh-huh.

And through things like the time I spent at the rehabilitation institute.

And that was when?

. That was in --

. Oh, you are talking about that limited fellowship?

. Yes.

. All right. Doctor, you mentioned, in updating me on your CV, that *you* were director of the Down Syndrome Clinic?

. The Down Syndrome Clinic.

. All right. What is the Down Syndrome Clinic?

. It's a practice associated with Rainbow Babies & Childrens Hospital where patients are seen at the Park East Medical Building at the Rainbow subspecialty center.

. Well, is it a corporation, is t a legal entity? What is the Down Syndrome Clin C?

. I have no idea.

. Well, I mean, do you receive a paycheck from them?

. No.

. Okay. Who are you employed by currently?

. Case Western Reserve University School of Medicine.

. Okay. And that's for your teaching duties?
. That is where all of my salary comes from, comes through Case Western Reserve.
. For your seeing and treating Xaitlin Stevens, who were you employed by?
. Case Western Reserve University.
. All right. And how is it that they would have paid you for seeing her, do you know?
. NO.
. All right. Do you have a private clinical practice aside from Case Western Reserve?
. No.
. You don't have private patients, then?
. I guess I don't understand your question.
. Well, you see patients where?
. I see patients in Rainbow.
. Okay.
. At Park East Medical Center, and at the Lakewood Professional Building.
. All right. Is the name of the offices at Park East Down Syndrome Clinic or what is the name of the offices?
Rainbow Pediatric Subspecialty Clinics or Subspecialty Center, maybe.
Okay. Let's go slow. How long have you been

here at Case Western?
Six years.
All right. When you first came here what was your job?
. I was --
MR. KAM INSKI: Let the record sh that Mr. Aveni has just joined us.
MR. AVENI: Thank you.
. I was the liaison between Rainbow and Health Hill Hospital to set up some special programs there, and I worked in the birth defects center at Rainbow.
. Okay. And who were you employed by when you came here?
. Case Western Reserve University.
. And has that been true throughout?
. Yes.
. Have you received checks for your medical services from anybody else since you have worked for Case Western Reserve University?
. No.
. So you have been an employee of theirs, no matter what actual physical things you have done, they paid you for doing it?
. Yes.

Q. In addition, you have teaching duties, correct?
A. Yes.
Q. You teach, what, residents, medical students, both?
A. Both.
Q. Okay. Let me go back again. This Down Syndrome Clinic, where is it located?
A. At the Rainbow Pediatric Subspecialty Center at Park East.
Q. All right. And how is it staffed? I mean, who runs that office? Is it other physicians --
A. I don't understand your question.
Q. Who is in the office besides yourself?
A. You mean just at the time that I'm there.
Q. At any time. How many physicians are there? Almost all of the subspecialists from Rainbow are out there at one time or another.
When you say subspecialists, what do you mean?
A. Pediatric cardiologist, pediatric GI, pu monary, and so on.
Q. So is this -- I'm sorry. Go ahead.
A. Ask.
Q. Is this like a satellite office allowing people on the east side to get treatment for their children as opposed to coming to Rainbow?

A Yes.
Q Okay. So it's part of Rainbow Babies & Childrens Hospita1?
A Yes.
Q And the clinic is just a part of the hospital, then, or do you know?
A I don't understand your question.
Q I'm trying to figure out what the clinic is, I mean, whether it's some separate entity, you know, specifically what it is. Do you know?
A I guess I must not know. I can't answer your question.
Q You mentioned something else as it related to your CV, and I don't remember what it was, other than director of the Down Syndrome Clinic; do you remember?
A I'm medical director of 6 West.
Q No, there was something else that you mentioned before being director of the Down Syndrome Clinic.
A I'm director of the Down syndrome Center, which has a long name.
Q What is that?
A That is a --
Q Well, first of all, what is the long name?

. Edward I. and Fannie L. Baker ARC International Resource Center for Down Syndrome located at Case Western Reserve University Medical School.
. What is that?
. That is, it's an entity which is funded by grants which does not have any clinical responsibilities or clinical arm. It is strictly related to education, research, and being a resource for persons with Down syndrome, their families, other interested persons in the community, professionals, and so on.
. How long has that been in existence?
. About 18 months.
. And did you have something to do with its coming into existence?
. I was one of the people who wrote the grant, yes.
. When you say, wrote the grant, that is applied for funds?
. Applied for funds, yes.
. Who is funding it?
. It is funded through the ARC
. And that's what?
. Association for Retarded Cit zens.
. Okay. The Down Syndrome Clinic, how long has it been in existence?

A. A couple of years, probably.
Q. And did you have something to do with its foundation?
A. I was the physician who was asked to run it.
Q. Okay. Are there other physicians who are also involved in running the Down Syndrome Clinic?
A. NO.
Q. so you are the only physician, then?
A. Yes.
Q. Has that been true since its incept on?
A. Yes.
Q. Then you mentioned you are director of 6 West?
A. Yes.
Q. What is 6 West?
A. 6 West is one of the floors, one of the units at Rainbow, and it has a different form of organization than the other various floors or patient care units at Rainbow in that it is not staffed full time by house officers, and the intent and plan is to admit children with lower equity problems there and run it more like a private hospital might run; and it also, there's, it costs less.
Q. Is it for mentally as well as physically disturbed children?

No. It's for, basically it's for any child with a problem for which they need to be hospitalized, like asthma, but which is under good enough control that they don't need to be hospitalized on, in an area where 24 hours a day there is a resident within ten feet of them.

All right. So patients who would be admitted there could be Down syndrome children?

Yes.

But not necessarily for being a Down syndrome child, but some condition associated with it or not even necessarily that, for example, if a Down syndrome children had asthma?

Yes.

They could be admitted there?

Yes.

When you see -- are those just staff patients that are there?

There are a variety of people that actually do the attending physician jobs on those. I am the attending physician for patients who come from the pediatric practice, which is the pediatric clinic on the first floor of Rainbow, as well as for patients that are followed through the Down Syndrome Clinic or spina bifida, cerebral palsy.

Q. Okay. What is the Children's Research Foundation of Cleveland?
A. I think it's a, it's where the patient billings go, I think.
Q. Where your patient billings --
A. In other words, when they get the money, I think that's where they send it.
Q. When they get the money?
A. Whoever collects the money, the hospital.
Q. Okay. In other words, if you treat a child who has insurance, for example, how do you physically bill for your treatment?
A. On an outpatient basis or inpatient basis
Q. Let's do both.
A. On an outpatient basis, the chart comes w th a charge ticket attached on the front of it I write, I make an X by whatever level of care this was, was it an initia visit, a brief visit, and so on. And then down below there's a whole list of diagnoses, and I e ther mark the child's diagnosis or down where it says other I put other, then I hand it to people at the front desk.
Q. All right. How about inpatient?
A. Inpatient, we have cards that we stamp with the

patient's name and hospital number off their hospital plate, and it also has levels of visit from, you know, extended, intermediate, brief, initial, and then it has the days of the month across the top, and under each day of the month you put an X in the box that corresponds to how, you know, the level of your service to the patient on that day.

Okay. And then these slips, what happens to them, do you know?

I put them in a box in my division office and they magically turn into bills.

Okay. Do you know who does the billing?

In my, the business manager in the division that I am currently in is Diane Kodger.

Is she an employee of the hospital?

Yes.

So the hospital, then, bills for your services?

Yes.

Do you know what arrangement they have, if any, with Case Western to then reimburse Case Western in some fashion for the payment to you?

No, I don't.

All right.

All I know is that I am considered a Case Western

employee and my paycheck comes from Case Western.
Q. Does your paycheck or the amount depend, to some extent, on the services you provide to the patients?
A. No.
Q. All right. So are you totally salaried, then?
A. Yes.
Q. And it doesn't matter how much work you do for any patients in any given month, you receive the same pay?
A. Yes.
Q. Does it, does the amount of work constitute some basis for your increases in salary in any subsequent years?
A. NO.
Q. Okay. So your billings out have nothing to do with what you receive?
A. Right.
Q. How are or who is paid for the work you do at the Down Syndrome Clinic, do you know, or is that the same scenario that we just went through?
A. Same scenario.
Q. So there would be slips that you would fill out for kids you would see at the clinic?
A. Same kind of billing slips I just described.

Q. Okay. All right. The children that you see at the Down Syndrome Clinic, do you keep a file on them?
A. Yes.
Q. Where physically is the file kept?
A. It's kept in a file cabinet in my office
Q. And your office is where?
A. At this point it's kept over here.
Q. Where was it?
A. In my office in the hospital.
. How long have you been here in the medical school?
. I moved the Down syndrome charts over here in the middle of January.
. Of this year?
. Of this year.
. And how long were your offices in the medical school -- or in the hospital?
. Ever since I got here, six years.
. Okay. Did you bring Kaitlin Stevens' file with you?
. Yes.

- - - -

(Thereupon, Plaintiffs' Exhibit Mortimer 1 was mark'd for purposes of

identification.)

- - - -

. Doctor, I'm going to hand you what has been marked Exhibit 1, and if you would identify that, please, for the record.

. It is Kaitlin Stevens' chart from my office.

. That is your entire record regarding Kaitlin Stevens?

. Yes, it is.

. Has there been anything removed from that chart to your knowledge?

MR. JACKSON: Just correspondence and pleadings, that's all, we did that before the deposition.

MR. KAMPINSKI: Let her answer.

MR. JACKSON: You can answer.

. Just like correspondence and interrogatories and questions and stuff like that.

. When you say correspondence, correspondence between whom?

. Between me and my attorneys.

. Okay. Have there been any phone messages removed?

. NO.

. Has there been anything added, since the lawsuit,

to your chart?

A. No.

Q. All right. Doctor, I'm going to hand you at least what I received from your office when I requested your records.

A. Okay.

Q. And if you would take a look at that for just a second.

A. Okay.

Q. Now, in your record is an EKG, correct?

A. Uh-huh, yes.

Q. All right. That's not in what was sent to me. Could you explain that?

A. No. I have no idea why it wasn't there.

Q. Additionally, there is a phone message apparently relating to some conversation that apparently your secretary had with --

A. Yes.

Q. .. Mrs. Stevens?

A. Yes.

Q. That's also not in the records that were sent to ne. Do you know why?

A. No.

Q. Well, let me ask you this: When you received a request for records from Mr. Mellino, who is my

associate, what did you do?
A. Handed them to my secretary.
Q. Handed what to your secretary?
A. Your request for records to my secretary.
Q. That was before there was any lawsuit, correct?
A. I don't even remember when it was.
Q. Well, had you shown your records to anybody before handing them to your secretary?
A. NO.
Q. I mean, had you called an attorney or were you represented by anybody at that time?
A. I don't honestly remember.
Q. Well, had anybody gone through your records before they were sent to me is my question?
A. You mean had an attorney looked at them before they were sent out?
Q. Yes, ma'am.
A. NO.
Q. To your knowledge, was the EKG and this message in your records at the time they were requested by my office?
A. Yes.
Q. When did you get the EKG?
A. I don't, I can't give you an exact date. I would guess within two weeks, probably, of when it was

done. That's allowing for hospital mail.
Okay. What did you do with it when you got it?
I looked at it and put it in the chart or gave it to my secretary to put in the chart. Sorry.
Is it normal or abnormal?
I guess I don't understand. Do you want to know what I thought at the time or do you want to know --
Yes, I want to know what you thought at the time?
Okay. The reading on the EKG isn't inconsistent with a pediatric EKG.
Is it -- well, okay. I don't know if that's an answer to my question. I mean, is that normal or abnormal?
Well, first of all, are you a cardiologist?
NO.
Do you feel competent, though, to read and interpret a pediatric EKG?
Excuse me. With the use of references, there are things that I can read and interpret off an EKG. I would not call myself an expert in any way in reading EKGs.
Well, when you received this, did you seek any consultation from anybody who was an expert in reading EKGs for purposes of determining whether

this was a potential problem in Kaitlin Stevens?
. No. I read the reading on the EKG.
. When you say the reading, you are talking about the typed portion there?
. Yes.
. Okay. What did that tell you?
. Poor quality, poor data quality, not unexpected in children who squirm around.
. Okay.
. Sinus tachycardia, fast heart rate, not unexpected in children, they run faster heart rates than adults.
. Okay.
. Pulmonary disease pattern and right ventricular hypertrophy. Children often have what looks like right ventricular hypertrophy on EKGs when they are interpreted by someone who is used to interpreting adult EKGs.
. Who interpreted this EKG?
. This person whose name I can't read, Neya Sheba.
. Is she -- what's her competence or ability to read pediatric EKGs?

MR. AVENI: Objection.

MR. JACKSON: Do you know? You can answer.

A. No idea.
Q. And the reason I asked you that, I assumed you didn't know based on the fact you really didn't know who this was. Did you call her then to find out?
A. No.
Q. Okay. Well, you just said that this can often be misinterpreted by someone who is not used to dealing with children's EKGs.
A. Yes.
Q. How would you know whether or not she had the ability to deal with a child's EKG?
A. I wouldn't know whether she did or didn't.
Q. Well, did you then assume that her reading of the EKG was accurate, and that is it did show a pulmonary disease pattern and right ventricular hypertrophy?
A. No. I believed that she had read it as an adult cardiologist reading a pediatric EKG.
Q. Why would you do that? Under age it's got 15 months over on the left, upper left-hand portion. Do you see where that is written in, doctor?
A. Yes.
Q. So that the person reading this would have known

that this was a child?

MR. JACKSON: You are assuming that.

MR. KAMPINSKI: Yes. Well, I am assuming it, and I guess I want to know why the doctor would assume anything to the contrary.

. It appears to me that these were, that this was a computerized reading of an EKG. Computerized readings will often come up with these kind of readings on an EKG, which are not meaningful in light of the fact that the person is a child.

. Well, I want to make sure I understand your testimony, doctor. You just read me a name, Neya Sheba it looks like.

. Uh-huh.

. Who presumably is the person who read these.

. Uh-huh.

. Now you are telling me that you presume it was a computerized reading?

. This looks like a computerized reading to me which this doctor signed. Now, I really, I don't know. If you want to know that, you are going to have to ask the physician who did it.

. That's fair, doctor. If you don't know, I assume you didn't know then either?

. I don't understand your question.
. At the time you got the EKG, I mean, you get an EKG, you find -- these are abnormal readings, are they not, pulmonary disease pattern, right ventricular hypertrophy, correct, those are abnormalities?
. Everything listed here is an abnormality.
. Let's deal with one at a time. Those two can have adverse consequences to a Down syndrome child, can they not?
. They might or they might not.
. Right, so that the answer to my question is they can have adverse consequences to a child, cannot they, if they exist?
. If they exist, they might have adverse consequences.
. And can they be evidence of septal defects?
. Not classically, no.
. Well, what does classically a septal defect look like on an EKG?
. It has an abnormal superior factor.
. And have you seen nonclassical find ngs on EKGs that --
. Actually, let me correct myself, I'm talking about AV canal. You are talking VSD or ASD.

Yes.

I'm sorry. There is no classical finding for VSD or ASD on EKG.

Well, does it show as a pulmonary disease pattern, or can it?

It would be possible.

Well, I mean, what happens when you have a VSD and ASD that is not surgically corrected, what occurs to that child?

It depends.

Or what can occur?

Well, a lot of different things. It depends.

I'm sorry. I'm listening. Go ahead.

It depends on the location, on the size --

Let's say a large one.

-- and so on. A large VSD?

Yes.

It depends on the age. Most of those are ultimately corrected. They cause loud heart murmurs and --

Is it your testimony that most VSDs and ASDs cause heart murmurs?

Most VSDs cause heart murmurs, ASDs are less likely.

And there is a great potential for severe defects

to exist in the absence of a murmur in children with Down syndrome?

. There is a potential for a different kind of defect to exist.

. Different than ventricular septal or atrioventricular septal de ects?

. No. I'm sorry. A ventricular septal defect and an atrioventricular septal defect are two different things.

. Yes.

. An atrioventricular defect, also called an AV canal, is a third thing.

. Okay. What was Kaitlin Stevens ultimately diagnosed with?

. My understanding is she has an AV canal.

. And can you have an AV canal without murmurs?

. Yes.

. Is that common in infants with Down syndrome?

. Reasonably.

. Okay. So that the absence of murmur would not tell you that there is an absence of an AV canal?

. Correct.

. Okay. And what would you anticipate on an EKG if you had an AV canal?

. And abnormal superior factor.

Q. How about pulmonary disease?
A. NO.
Q. How about right ventricular hypertrophy?
A. NO.
Q. How about ST elevation due to early repolarization?
A. NO.
Q. How about non-specific ST abnormality?
A. NO.
Q. And the last, and I have been reading off the EKG --
A. Yes.
Q. -- the last one, abnormal ECG, do you read that as something different than what was set forth above?
A. I read that as consistent with what was set forth above. I do not read what was set forth above as diagnostic of an AV canal defect.
Q. All right. What would you expect to see, then, if you had an AV canal defect?
A. In that list?
Q. Yes.
A. Abnormal superior factor.
Q. In the absence of that, you would not be concerned with an AV canal?

Yes.

Okay. Are any of the symptoms that I or that are set forth on the EXG consistent with ventricular septal or atrioventricular septal defects?

They might be.

Which ones?

Well, sinus tachycardia, abnormal ECG, possibly right ventricular hypertrophy.

Okay. What did you do to follow up on the findings of this EKG when you received the EKG?

I was pleased for Xaitlin, because I had been quite concerned that she -- not quite, I hadn't been quite concerned, I had been -- one always worries, and I was pleased that no abnormal superior factor was noted on the EKG.

Did she develop the AV canal, then, after this EKG?

No. It's a congenital defect.

I see. Are you suggesting, then, that the EKG was not taken appropriately or not performed appropriately?

MR. AVENI: Objection.

All I can say is that that was not noted on the readings of the EXG that we have just been through.

The EKG that you have, that is the original, to your knowledge?

Yes.

Is that the entire EKG?

It appears to be.

Can you determine from that strip, doctor, how long the EKG was that was taken and whether or not they sent you the whole thing or just a strip?

MR. JACKSON: You mean the period of time reflected on this, is that what you are asking?

MR. KAMPINSKI: Yes.

MR. JACKSON: Do you have a longer strip? You are apparently looking at something there that is either a copy of this or more.

MR. KAMPINSKI: No. I'll be happy to answer your questions, Mr. Jackson. I don't have in front of me a longer copy than you have.

MR. JACKSON: Do you have a copy of what is here?

MR. KAMPINSKI: I think so. Although, I never got it from her so I don't

know.

MR. JACKSON: I assume you want to compare it, then?

MR. KAMPINSKI: Yes, that would be a good idea.

. I c n't tell you how long they ran it. I can try to calculate from the rate to how long it took them.

. Okay.

MR. AVENI: Note an objection.

MR. JACKSON: Don't guess, doctor. If you can give him --

. If you can give me some idea, please?

. I think I'd just as soon not.

. Doctor, when we talk about an AV canal defect, that's a hole in the wall between the top and the bottom of the heart?

. Yes.

. I mean, roughly speaking?

. Yes.

. And is that surgically treatable?

. Surgical options are available, yes.

. Okay. Are there studies that have compared surgical and medical options?

. I couldn't -- I'm sure there have been. I have

not -- I couldn't quote you any.
. Well, I mean, you deal with these children. If not surgically repaired, what typically happens when a child has an AV canal defect?
. They can have, they may have a shortened life expectancy, somewhat.
. As a result of what, irreversible lung damage?
. Yes.
. And they die a fairly brutal death, don't they, as a result of that?

MR. JACKSON: Objection. And I said go ahead and answer.

MR. AVENI: Objection.

. I wouldn't say that they do, no.
. Well, how do they die, then?
. Well, they die, when they die, they die of either respiratory or cardiac failure, in general.
. Maybe I misspoke. Is the course leading to their death fairly difficult both for them as well as their parents? Is this an elongated period of time causing this type of death?

MR. JACKSON: Objection.

MR. AVENI: Objection.

MR. JACKSON: You may answer, if you can.

A. It's not really a question I can answer.
Q. Why not? Have you watched these children die from that disease process?
A. I have watched them both live and die with that disease process.

Q. Okay. And what would it be for a child who had AV canal defect?
A. Repaired or unrepaired?
Q. Unrepaired.
A. Probably into the 30s, late 30s.
Q. All right. And the reason for the shortened life expectancy is what, doctor?
A. Problems with heart failure, respiratory failure.
Q. All right. Is there a window of time where these children have or where this defect has to be caught in order to conduct surgical repair?
A. Frequently there is.
Q. And what is that time frame?
A. Usually within the first few months of life.
Q. Okay. And why is that?
A. Because otherwise they, the pulmonary artery pressure rises irreversibly.
Q. In order to diagnose this, what do you have to do as a physician?
A. It can be the abnormal superior factor is diagnostic of it. As you say, you often don't hear a murmur.
Q. So you are telling me an EKG, then, is required in order to make this diagnosis?
A. That's probably the simplest thing that is

required.

Q. Okay. How about an echocardiogram?

A. Those are also nice.

Q. I mean, is that also diagnostic?

A. It would be diagnostic, yes.

Q. It would be more diagnostic than an EXG?

A. I don't really know.

Q. Any other tests?

A. Well, you could do a cardiac catheterization.

Q. Well, you wouldn't necessarily do that unless you had a suspicion that it existed, though, would you?

A. You asked me, we sort of went from --

Q. You are right. That's a fair response. And let me rephrase the question. If in fact you were -- well, what percentage of Down syndrome children have such a defect?

A. 30 to 50 percent have a cardiac defect of which perhaps one-third, maybe a little less, have an AV canal, 10 to 15 percent.

Q. Okay. And as a physician, if you had to deal, then, with a Down syndrome child, this is something that you would want to test for to make sure that the child didn't have this problem, correct?

MR. AVENI: Objection. YOU may answer.

Well, now in 1992 yes.

Well, how about when Kaitlin Stevens was born? The recommendations for work-up on following children with Down syndrome have been changing over the past ten years, 15 years.

We are talking about 1989.

So you are asking me what I would expect of myself or what I would expect of someone else. What the standard of care is for working up a Down syndrome child in 1989 knowing that, you know, 15 percent of these children can have AV canal defects.

In a tertiary care hospital like Rainbow we would get an EKG.

Well, you are -- excuse me, doctor, but the child doesn't know if she is in a tertiary care or secondary care or where she is, so, I mean, in terms of trying to find a problem, if you can't sufficiently deal with the problem, you generically, not you specifically, if you don't know what you are doing, then you send her to a specialist, right; and assuming you continue to deal with the child, presumably you have to deal

with her correctly, don't you?

.. I guess what I'm trying to say is I'm not sure, I can't tell you what the standard of care really was in 1989 for people not in a tertiary care center.

. Well, what was it for people in a tertiary care center in 1989?

.. We would get an EKG.

. How about an echo?

.. No, not an echo.

. Okay. Anything else other than an EKG, then?

.. NO.

. Would you follow up on an bnormal EXG, then, with other testing?

. If it showed this abnormal superior factor.

. Okay. You would do what, echo, catheterization?

. Yes, refer them to a cardiologist for further work-up.

. Okay. Well, I mean, wouldn't you agree, doctor, that any physician having, dealing with a Down syndrome child in 1989 was required within the first year of that child's life to do an EKG?

MR. JACKSON: Objection. You may answer.

I actually -- I don't know. I can't speak to

what community standard of care was.
Q. Because you weren't a family practitioner?
A. Community physician, no.
Q. You did a residency or worked in a family practice setting?
A. Uh-huh, yes.
Q. And did you deal with Down syndrome children at that time?
A. I don't remember any.
Q. Okay. Is one of the reasons you were concerned about Kaitlin and that you recommended an EKG is because one had not been done?
A. Her mother didn't remember one having been done, yes, so I recommended she get one.
Q. Did you have any discussions with Dr. Sundaresh to see if one had been done?
A. NO.
Q. Did you request his records or did they bring you his records?
A. NO.
Q. Did you see Kaitlin on more than one occasion or was it only one time?
A. Only this one time.
Q. Okay. So you were happy for Kaitlin, then, when you received this EKG?

A. Yes.
Q. Despite the fact that even the abnormalities that were reported on there could have been diagnostic of some other disease process?
MR. JACKSON: Objection. You may answer.
A. Correct?
Q. Could have been suggestive of another disease process.
A. What did you do to follow up on those?
Q. I couldn't think of anything that would be suggestive of that I wouldn't have heard a murmur.
I'm sorry?
That I wouldn't have heard a murmur.
I see. Well, I thought we or I thought you had indicated that you would not necessarily expect to hear a murmur if there was a ventricular septal defect?
No. I must have misspoken myself. It's the AV canal that you don't hear the murmur with.
All right. So is it your testimony that it is not particularly common to have a ventricular septal defect without a murmur in Down syndrome children, is that your testimony?

. That is my testimony.
. What do you consider as an authoritative text as it relates to Down syndrome children, doctor?
. Actually, it's hard, because things are, the field is changing rapidly, and I don't think I would put my authoritative faith in any text.
. Well, what texts do you keep in your office as it relates to Down syndrome children?
. I keep multiple texts, and I keep a continuous and up-to-date file of articles on children, on Down syndrome.
. What are they, what are the texts?
. I have an edition of Nelson's Textbook of Pediatrics; I have an edition of Smith's Recognizable patterns of Human Formation; I have a book called A Difference in the Family; I have, you know, several neural anatomy books; I have books on pediatric orthopedics; I have some books called the whole pediatrician catalog, which are, actually list sort of pearls of, about different things; I have some pediatric dermatology books; I have some books on care of the chronically ill child; I have that intensive care book that I wrote the chapter for; I have, I have some books on physical medicine and rehabilitation.

Is that helpful.

Any on cardiology, fetal cardiology?

No, uh-uh.

Why not?

Well, frankly, as I said, there are no books that I would consider authoritative.

None, there are no authoritative cardiology books?

MR. JACKSON: She said no books that she would consider authoritative, didn't she?

What I said, by the time a book is published, it's already out of date.

Are there any people, physicians that you consider authoritative as it relates to fetal cardiology?

MR. JACKSON: What do you mean by authoritative people? Can you explain?

Well, people who you would consider experts in the area of fetal cardiology.

Of fetal cardiology?

Yes.

I don't know anybody who does fetal cardiology.

I know they are out there. I don't know them.

How about pediatric cardiology?

There are four cardiologists here at Rainbow, Dr. Liebman, Dr. Butto, Dr. Zahka, Dr. Levine. How about nationally known pediatric cardiologists, would you consider any of them having any specific expertise as it relates to Down syndrome children?

I don't know any nationally known pediatric cardiologists.

MR. JACKSON: Maybe you could give us a name and she could comment on it for you. Do you have a name in mind?

MR. KAMPINSKI: Well, I'm just curious as to her knowledge.

MR. JACKSON: If you have a name in mind, why don't you ask her to comment on it for you.

Are there any papers that specifically deal with Down syndrome children that you consider authoritative, doctor?

There are many, many papers that deal with Down syndrome children. I wouldn't consider any of them authoritative alone.

When did you find out that Kaitlin had a heart defect?

I actually don't remember. Dr. Zahka called me.

. I'm sorry. Doctor --
. Zahka called me. I can't figure back right now, but I could figure back to when it was. It was right before he and I, a couple weeks before he and I and some other physicians gave a presentation on Down syndrome to a parent group.
. Where was that presentation?
. Where was it; in the Rainbow amphitheater.
. This year, last year?
. Last year.
. '91?
. '91.
. Was that videotaped, was it transcribed?
. I have no idea.
. And who sponsored the presentation?
. The Upside of Down syndrome.
. I'm sorry, the Upside of Down syndrome?
. Yes.
. Is that a group?
. Down syndrome family group.
. And where are they located?
. They don't have a headquarters, per se headquarters. If you need numbers of where they can be reached, we can probably get them for you.
. Are they in the phone book?

MR. JACKSON: Doctor, you said 1991. Did you mean '90 or '91? Are you talking about the date she learned about this?

MR. KAMPINSKI: That's what I thought I asked her.

A. It was when Ken Zahka called me before we gave this talk, and I honestly don't know. I think it was just last year, but I could be wrong.

Q. What records would you have that would tell us that?

A. The talk, when we gave the talk?

Q. Yes.

A. I would have to go back through old appointment books.

Q. Well, there is nothing in her chart that reflects you talked to him. Would you have written a memo to the chart?

A. NO.

Q. There is one phone message in your record.

A. Yes.

Q. Do all phone messages get in the chart or some of them or none of them or how does that work?

A. Some of them.

Q. By looking at one, that doesn't tell us whether

there may have been others?
A. Right.
Q. And, to your knowledge, none have been removed?
A. Right.
Q. Who was your secretary in 1990?
A. Annie Pickens.
Q. Pickens?
A. Yes.
Q. Is she still your secretary?
A. NO.
Q. How long was she your secretary?
A. Five years.
Q. And when did she stop being your secretary?
A. In February.
Q. Of this year?
A. Of this year.
Q. And why was that?
A. She accepted a position in pathology.
Q. I'm sorry. In --
A. Pathology, the department of pathology.
Q. Who is she a secretary for now?
A. Some lucky guy. I don't know.
Q. Okay. When you first met with Kaitlin, did you meet with her parents as well?
A. Yes. At least her mother. I don't remember if

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. What is that?
. D-e-r-e-k.
. What is that?
. I would bet that it's the name of a sib.
. Okay.
. Then you can read all that stuff my secretary wrote.

MR. JACKSON: What is a sib, doctor, so the record is clear?

THE WITNESS: Brother. A sibling, brother.

. When you say, all the stuff your secretary wrote, that's under --
. Kaitlin Stevens.
. -- in the ID card imprint area?
. Yes.
. Where did you see her?
. At Park East.
. Go ahead.
. On the first line it says, two half sibs, 16, 14. In other words, she has two either half brothers or half sisters, one is 16 and one is 14. Then it says, dad 40 and underneath it mom 32.

Go down to the next line, it says, G2 P2,

which means gravida 2, para 2, two pregnancies, two living children.

Next line it says, Booth, which would be the hospital she delivered at, seven pounds, two ounces. Then it says, alphafetaprotein up, or arrow going up, increased.

Next line says, had a twin, expired at five weeks. Then it says, poor weight gain with an arrow. I always think of that as yield. Had FTT, failure to thrive, nursing.

Next line says, fed Q two hours, fed every two hours, slept through night.

. Let me stop you for a second. What significance is the poor weight gain and the failure to thrive?

. The significance varies, actually, with kids with Down syndrome.

. What can be the significance to you as a physician?

. Poor suck, poor motor coordination, decreased tone, you know, need for more teaching about feeding to the mother.

. Okay.

. Significant underlying problems might cause it.

. Such as a heart defect?

Like a big VSD might, but you would hear a murmur. So, in general, when this happens in kids with Down syndrome, what is happening is it's their poor motor tone, poor motor coordination, and low tone. Some kids aspirate.

I didn't see any history of aspiration, consistent with aspiration in her.

Is it your personal experience that you base the statement that you wouldn't have a VSD without murmur?

With a VSD, you often don't get the murmur very early on until the pulmonary artery pressure drops, and then, you know, so there may be no shunting across the --

Well, when would you anticipate pulmonary artery pressure to drop?

About two to four weeks of age.

Okay. I'm sorry. Go ahead.

Okay. No heart/stomach problems.

And how did you determine there were no heart problems?

This is history.

I see. In other words, this is everything you are receiving from the parent?

Yes. Shots UTD, that means up-to-date. Play

group at MRDD, it's the County Board of Mental Retardation Development Disability.

Next line says, eats, then the next line says, devel on Denver, that means her development is recorded on the Denver form. Then it says, saw Dr. Owens. Yielded high weight, down below, three to four months old.

Then the next line says arrow, hearing test two weeks R8&C. The next line says, starting to stand.

Then you *go* over to the physical exam, which says, hip popping on left, that's L with a circle around it. Then it says increased P2, soft one to two/6 M with a circle around it, that's murmur.

Then it says no HS megaly, that means no hepatospleenomegaly.

Then it says, pale, mottled, question mark, gray. Then it says schedule EKG.

Q. All right. Was that the only handwritten page that you had, then, of the first meeting?

A. The only one that I wrote on, yes.

Q. Okay. When it says, schedule EKG, does that provide you with a clue as to whether you would have asked the question as to whether there had

been a previous EKG?

. I think I must have asked, yes.

. This doesn't tell us, though, whether she had had one, I mean, the fact that you say schedule EKG, or does it tell you she had not had one?

. What it tells me is her mother doesn't remember that she had one.

. In your written report, doctor, you refer to, when I say written, I shouldn't have said that, typewritten, and that's something you dictated after your meeting, apparently?

. Yes.

. Okay. When did you dictate that, can you tell?

. Sometime between 7/19 and 8/10.

. Because it wasn't transcribed until August 10th?

. Right.

. You put down there in the last sentence, I would suggest that a baseline EKG be obtained. That indicates to me that at least you believe that there hadn't been one before that time?

. Yes.

. Okay. All right. You copy, then, Dr. Sundaresh, so you knew that he had been the treating pediatrician?

Yes.

Q. Do you know Dr. Sundaresh?
A. I never met him.
Q. Did you speak to him?
A. I don't believe I have ever spoken to him.

- - - -

(Telephone interruption.)

- - - -

Q. She had the EKG done at Booth.
A. Uh-huh.
Q. Was that as a result of any of your input, I mean, did you arrange for her to have it done there as opposed to anywhere else?
A. No.
Q. Do you know how it was that she had it at Booth?
A. I assumed it was geographically closer to her and it was also where her pediatrician -- I don't know if he admits there, but that was where the child was born, *so* I assume it's --
Q. You didn't have a problem with her having it there or anywhere or did you; did it matter to you?
A. I would have preferred it was done at Rainbow.
Q. Why is that?
A. Because then it would have been looked at by a pediatric cardiologist.

Q. Well, okay. When you got this, then, did you call her and say, I want you to have one done by a pediatric cardiologist?

A. No. I looked at it and it looked okay.

Q. I'll try to reconcile what you are telling me and your concern you stated earlier with this being done by a computer and/or someone who may have not been conversant in pediatric cardiology and may have read it as an adult's, so if that was a concern of yours, what, if anything, did you do regarding that concern?

MR. AVENI: Objection.

A. Again, when I looked at the reading of the EKG, that long list of things that were typed there.

Q. Yes.

A. None of them said abnormal superior axis or abnormal superior factor, and that was what, the red flag I was looking for. Without that red flag, you know, I was -- without that red flag and a physical exam that was not significant for a loud murmur -- she had a very soft murmur.

Q. You did note a loud second heart sound?

A. Yes.

Q. And short diastolic murmur?

A. Yes.

. That's not significant?
. Well, I think one of the concerns about the, a loud second heart sound is it's reflective of pulmonary hypertension.
. Which would have been an indication of a defect?
. Could have been an indication of a defect.
. Well, didn't the EKG say -- I'm sorry. What did it say, let's see. Pulmonary disease?
. Uh-huh.
. Is that something different than pulmonary hypertension?
. Yes.
. What is pulmonary disease as opposed to pulmonary hypertension?
. Pulmonary disease would be asthma, emphysema, pneumonia.
. Could it be inclusive of pulmonary hypertension?
. It could be, but in a child you wouldn't expect to see it without seeing, without a comment on the axis.
. What is endocardial cushion defect?
. An AV canal.
. So that's just another term for it?
. Just another term.
. And a left axis deviation is what?

. Again, it has to do with the, that's a way that you can calculate the direction of electric impulses through the heart.
. Uh-huh.
. Okay.
. So what's a left axis deviation?
. If you calculate the electrical impulses going through the heart, there is a little table that you look at and you see what, which ones go up and which ones go down. I can't do it without the book.
. Did you do it when you got this EKG?
. NO.
. Is there a left axis deviation in the EKG that you have in your record?
. In this EKG?
. Yes, ma'am.
. As it turns out, there, after I heard that she was sick, I went back and looked again at the EKG and calculated the axis, and there is an abnormal superior axis on this EKG.
. What does that tell you?
. That's consistent with an AV canal.
. Why didn't you do that when you got the EKG, doctor?

A. Well, because I read the reading and saw no sign that the axis was abnormal.

Q. What should the cardiologist, then, or the person or the machine or whoever did this have reported on this EKG, then, to have alerted you as a physician that there was an AV canal defect on this EKG?

MR. AVENI: Objection.

MR. JACKSON: Objection. You may answer.

Q. In your opinion.

A. I would have expected in that list of things for there to say that the axis was significantly abnormal.

Q. Which it is?

A. Which it is. And I would have expected it to say, you know, abnormal superior axis or abnormal superior factor. If it had not said that, if it would have said axis is markedly abnormal, then I would have gone back to see what the problem was at the time.

Q. Do you have an opinion, doctor, at that point in time that you received the EKG what, if anything, could have been done surgically with respect to correcting the defect?

MR. JACKSON: Objection.

MR. AVENI: Objection.

MR. JACKSON: You may answer if you have an opinion.

I think that when you put it all together, with the loud **P2**, that you already had pulmonary hypertension at this point. And when you put it together with her age, that she was already past, past the point where she could have been corrected.

The loud **P2** being?

The second heart sound.

Okay.

Loud second heart sound.

Okay. And at what point would that have been, at the time that the EKG was done?

MR. JACKSON: Excuse me. At what point would have?

MR. KAMPINSKI: That she was not surgically repairable.

MR. JACKSON: The question asked at the point she saw the EKG?

MR. KAMPINSKI: Yes. But obviously -- maybe it's not so obvious.

I assume that would be true in your opinion at

the time the EKG was done as well because that's what the EKG reflected.

MR. JACKSON: I see your question. No, I don't see what it is.

Well, you didn't get the EKG until sometime after it was done?

. Yes.

. You said within two weeks

. Something like that, yes.

. But I assume the answer to the question I just asked you, that is if she was surgically repairable in your opinion, your answer is no, and that would have been true at the time of the EKG?

. Yes.

. Okay. Do you have an opinion as to whether or not she would have been surgically repairable during the first year of her life?

MR. JACKSON: Objection. You may answer if you have an opinion.

. Most of these kids are repairable early in the first year of life, although some are not, and I don't know what her anatomy is.

. Okay. And the distinctions between repairable and not repairable are what? What is there about

the anatomy of the child that makes one repairable or not?

A. I couldn't tell.

Q. That would be surgical?

since Dr. Zahka has come to town is that he, in his mind the standard of care is every child with Down syndrome sees a pediatric cardiologist within the first couple of months of life, and he used this as another argument for his, for that feeling.

Q. Why is that, precisely because of a situation like this?

A. Because he believes that's the only way to guarantee that no child with a heart defect is not diagnosed at a time when they can be fixed.

Q. So you are saying he brought the standard of care with him when he came to town?

A. Yes, very much, very much.

Q. So that wasn't the standard of care before he came?

A. No.

Q. When did he come?

A. He must have come -- I don't even remember. Like a year ago.

Q. Uh-huh. What is his relationship to you, I mean in terms of the department?

A. He's the division chief of pediatric cardiology. I am a member in another division. I refer patients to him, he refers patients to me. I

don't work for him, neither does he work for me.
Who was the division chief of cardiology before him?
Before him, cardiology has been in somewhat of an uproar, I think when I first got here it was Mark Jacobstein, then I think they didn't have one or maybe Uri Benchcar was acting. Then people were sort of leaving and coming back, and I think he -- I think the position was pretty much empty for a while before he got here.
Doctor, are there other signposts or indicators that would lead you to suspect, once again you generically, a physician to suspect the existence of congenital heart disease; any type of blood test anything of that nature?
Could you be more specific?
Hematocrit, hemoglobin.
Hematocrit might or might not, the presence or absence of cyanosis, if a child was actively cyanotic, then you would think of either primary heart or primary lung disease, presence or absence of pulses.
Well, if you had a high hemoglobin and hematocrit, would that have suggested some right to left shunting and congenital heart disease?

A. Kids who have right to left shunting ultimately develop polycythemia, high hemoglobin and hematocrit, whether you would be seeing it in, I mean, it certainly wouldn't be the presenting complaint.
Q. No, no. I understand that.
A. Yes.
Q. But if you had a finding of high hematocrit and high hemoglobin, would that be an indication to you as a physician that there could be a congenital heart defect?
A. In general, the heart defect would have presented before the, you know --
Q. Well, if it's congenital, obviously it's going to be there?
A. No, but presented means --
Q. Symptomologically?
A. You would have found the heart defect before things got to the point where they had polycythemia, in general. But you are indeed correct, that in patients with large right to left shunting you can get polycythemia.
Q. Did you have any communications with Mrs. Stevens after you received the EKG?
A. She and I played, I think, phone tag for quite a

while.
Q. Because those phone messages aren't in your chart.
A. Right.
Q. Well, how long is qu te a while?
A. I don't know. There were -- I don't know.
Q. Did she have an answering machine?
A. Did she?
Q. Yes.
A. I don't remember.
Q. Did you leave her any messages?
A. If I had reached an answering machine or a person I would have left a message.
Q. When did you finally speak to her?
A. I don't remember.
Q. Did you have anything in your chart that would reflect when you spoke to her?
A. No.
Q. What did you tell her when you got ahold of her?
A. That the EKG looked okay.
Q. You didn't tell her you weren't good at reading **EKGs** and you were going to send them to cardiology?
MR. JACKSON: Objection. You don't have to answer that. That's argumentative.

Right.
Well, did you tell her that?
MR. JACKSON: Tell her what?
You were not good at reading EKGs and you were going to send them to the cardiology department, did you or didn't you?
MR. JACKSON: Go ahead you can answer.
I said that before I had revi wed, th t's what I told her early on before I got an EKG that had a reading on it. When this one came back --
So this --
That doesn't reflect when this EKG came back with a reading.
So you would have told her that when?
Right after we got the EKG before I saw it.
Now you have me totally confused, doctor. You saw Kaitlin Stevens on July 19th with her mother.
Yes.
Did you tell her anything about your ability to read EKGs on that visit?
I don't think so. I don't know
Okay. When you received the EKG, are you saying you received it without some interpretation of it

initially?

. What I'm saying is it takes things a long time to get through University Hospitals mail, and when I talked to Mrs. Stevens and had not yet seen the **EKG**, but believed that it was in the mail to me someplace.

. Uh-huh.

. That's what I told her.

. Okay. What did you tell her?

. That I might have to have cardiology look at it.

. And the reason?

. That I wasn't a great **EKG** reader.

. Okay. So that when you got this **EKG**, you didn't do that because you were satisfied with the interpretation on it?

. Yes.

. Why were you ordering an **EKG** at 15 months of age if, in fact, it would be too late to find such a defect -- I'm sorry, to treat such a defect?

. I hoped to reassure all of us that it wasn't there, that there was nothing the matter. If we did find it, it was always possible that it could be treated, unlikely, but possible. And, otherwise, there were other kinds of things that you needed to be, you know, thinking about, if

indeed she had this, like taking antibiotics before she had her teeth worked on is an example. But I think that the real, sort of bottom line reason, was because I hoped to close that question in people's minds forever.

. Would it be within the standard of care of a pediatrician dealing with a Down syndrome child to refer the child to a pediatric cardiologist in 1989?

MR. JACKSON: Objection.

. If you know.

MR. JACKSON: What were the circumstances?

.. Yes.

. Just a Down syndrome child.

In 1989 it was not the standard practice.

. How do you know?

. Because I remember what I was told in those days.

. In 1989 you were here?

. Yes. Dr. Zahka wasn't here yet.

. But -- oh, I see what you are saying. So nobody in this town referred children to pediatric cardiologists when they had Down syndrome children despite knowing that 30 to 50 percent of them had congenital heart defects?

I'm not saying that nobody did. I'm sorry.

MR. JACKSON: That's all right. That was going to be my objection. You answered his question.

. Well, wait. You know, doctor, the information in the medical community that 30 to 50 percent of these children have heart defects is not something new, is it?

. Actually it's been, even the epidemiology of people, among persons with Down syndrome we have learned a lot more about over the, you know, last few years.

. My question, though, was a very specific one, and that is whether or not it was common medical knowledge or should be common medical knowledge that by 1989 that 30 to 50 percent, according to you --

. Yes.

. __ had heart defects?

. Probably it was common knowledge that they had an increased incidence of heart defects.

. Okay. And knowing that --

. Yes.

. -- then isn't the standard of care to check to determine if a Down syndrome child has a heart

defect?

MR. JACKSON: Objection. She answered that question already.

MR. KAMPINSKI: I don't think so.

MR. JACKSON: You can go ahead.

A If you didn't hear a murmur, it was not at that point the standard of care to send the child on. Actually --

Q Well, when was it determined by the medical field that you could have this problem without murmurs; since 1989, is that your testimony?

A No. It was discovered before.

Q Oh. When?

A I have no idea.

Q 1970s?

A I have no idea.

Q '60s?

MR. JACKSON: You don't have to answer that, keep answering it.

MR. KAMPINSKI: I'm trying to put it in a framework.

Q. Are we talking about in the last two years, ten years, 20 years?

MR. JACKSON: I think she said she couldn't answer your question.

Well, if the medical literature prior to 1989 did indicate that you could have this defect without murmur, then that would be something that physicians ought to know about dealing with a Down syndrome child, would you agree with that, doctor?

I don't know how much it was in the literature. I know that at that point referral to a pediatric cardiologist for all children with Down syndrome was not recommended.

Okay. And you don't know what the standard of care would be as to doing the EKG at that time by a pediatrician, correct?

By a pediatrician in general practice, yes.

All right. Would you agree with me that a pediatric or a pediatrician in general practice is required to make appropriate referrals of children having Down syndrome if he doesn't feel comfortable or know the literature or have the sufficient knowledge to determine what tests to do?

MR. JACKSON: Objection. You may answer,

Would you agree with that?

Every physician should refer if they need to.

Q. Are you familiar with Down syndrome preventative medicine checklist?
A. Yes.
Q. What is that, doctor?
A. It's a checklist that comes out about every -- it's actually, a lot of it is sort of written paragraph form, it comes out every couple of years, with recommendations for the, you know, for screening on persons with Down syndrome. I was involved in writing the most recent one just in press.
Q. now -- you say it's still in press?
A. Yes. It hasn't come out yet, the '91 one.
Q. Okay.
A. Along with a, there is a whole group of us that did.
Q. When was the one before that?
A. '89.
Q. And before that?
A. '87.
Q. Were you involved in the '89 one?
A. No.
Q. How about the '87 one?
A. No.
Q. And did that indicate that EKGs or

echocardiograms should be taken very early on with Down syndrome children?

MR. JACKSON: Objection. If you have a form, show it to her.

MR. KAMPINSKI: I'm just asking her a question, Mr. Jackson.

MR. JACKSON: Go ahead. If you know, without looking at it.

Without looking at it, I believe that in '87 an exam and an EKG were suggested. I believe, though -- unfortunately, you have it, I believe, and I believe in '89 it was an EKG and an echo, but I wouldn't, you know, that's just my recollection.

I think it's important to know that one of the things we have really been trying to do is to make those recommendations more based on scientific evidence so that more people will pay attention to them.

Who puts out these?

It's the National Down syndrome Congress. Either that's it or the National Down syndrome Association. I can't remember. It's one of those two.

What is the course of a Down syndrome child with

untreated AV canal defect? I mean, what symptoms do they have, what limitations in their activities would they experience?

Basically, they'll have, they may have shortness of breath, decreased exercise tolerance.

And this is as opposed to children who have treated, who have been surgically treated, correct?

Well, you know, it's hard to say. Assuming that the child survives the surgery and doesn't have any other major complications secondary to the surgery, as far as we know, the kids who have been corrected don't have these problems, the children --

Okay.

Now, the, *you* know, in the long run, of course, as with most kinds of congenital heart disease with people with or without Down syndrome we don't know what is going to happen, we are only now starting to find out what happens to them as adults.

What typically would be the onset of the symptomatology?

For?

For untreated AV defect.

I would expect decreased exercise tolerance and shortness of breath.

And what age would you expect that to Occur?

I imagine it can vary.

Is it your opinion that Kaitlin will have a decreased life expectancy as a result of the untreated AV disease?

Persons with Down syndrome who have an untreated AV canal often have a decreased life expectancy.

And will you expect that she'll suffer symptoms that go along with that?

I'll expect that she will have some symptomatology going along with that, yes.

Such as shortness of breath?

Possibly, or decreased exercise tolerance.

Okay. Anything else?

Same people have involvement of other organ systems, and I don't know, you know, at what, to what degree or extent that might happen to her.

Do you know why that happens?

I believe it has to do with the polycythemia, the decreased oxygen tension in the blood.

That's all due to the defect, then?

Well, it's due to the shunting, yes.

Well, the shunting is due to the defect,

correct?

. Right.

. What is a PDA?

. It's a patent ductus arteriosus. It is a connection which goes from the pulmonary artery to the aorta thereby bypassing the lungs and alveoli, and it closes at birth, it should close at birth. If it doesn't close at birth, then it's called a patent ductus arteriosus.

. Did Kaitlin have that?

. Not to my knowledge.

. Have you reviewed any of her records at the hospital prior to today?

. Uh-uh, no,

. Did you tell the parents that Kaitlin did or did not have a heart murmur? This would have been on your initial visit.

. She had a very soft heart murmur.

. Did you tell the mother that or did you tell her that she did not have one?

. If I hear a murmur, I will always tell people that there is a murmur there.

. How is it that Dr. Zahka became involved with Kaitlin, or did he?

. I don't know. I mean, I don't know how he became

involved.

Q. Would the standard of care for a physician such as yourself in 1990, when you saw Kaitlin when you heard -- I'm sorry, how did you refer to it, soft murmur?

A. Uh-huh.

Q. -- have been to do an echocardiogram?

A. It would have been to get an EKG.

Q. Not to do an echocardiogram?

A. NO.

Q. You said that Dr. Zahka said that the parents were upset as were you?

Uh-huh.

You were upset, why?

Oh, because it's always upsetting to hear that a kid has something awful the matter with them.

MR. KAMPINSKI: That's all I have. Oh, no, it's not all I have. I do -- if you are agreeable to this, I would like the court reporter to take possession of the doctor's original record, make a copy, and attach it to the deposition.

MR. JACKSON: We will make a copy before we leave today. You can be here and supervise it.

MR. KAMPINSKI: Okay.

MR. AVENI: No questions.

MR. KAMPINSKI: Okay.

JOANNE C. MORTIMER, M.D.

C E R T I F I C A T E

The State of Ohio,) SS:
County of Cuyahoga.)

I, Dawn M. Fade, a Notary Public within and for the State of Ohio, authorized to administer oaths and to take and certify depositions, do hereby certify that the above-named JOANNE C. MORTIMER, M.D., was by me, before the giving of her deposition, first duly sworn to testify the truth, the whole truth, and nothing but the truth; that the deposition as above-set forth was reduced to writing by me by means of stenotypy, and was later transcribed into typewriting under my direction; that this is a true record of the testimony given by the witness, and was subscribed by said witness in my presence; that said deposition was taken at the aforementioned time, date and place, pursuant to notice or stipulations of counsel; that I am not a relative or employee or attorney of any of the parties, or a relative or employee of such attorney or financially interested in this action.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office, at Cleveland, Ohio, th s _____ day of _____, A.D. 19 ___.

_____

Dawn M. Fade, Notary Public, State of Ohio 1750 Midland Building, Cleveland, Ohio 44115
My commission expires October 20, 1992

CHARLES KAMPINSKI CO., **L.P.A.**

ATTORNEYS AT LAW

1530 STANDARD BUILDING
1370 ONTARIO **STREET**
CLEVELAND. OHIO **44**113

PHONE
(216) 781-4110
FAX
(216) 781-4178

July **24, 1991**

Dr. Joanne Mortimer
Rainbow Babies and Childrens's Hospital
2074 Abinqton Road
Cleveland, Ohio **44106**

RE: Kaitlin Stevens
Our File No. **4-472**

Dear Dr. Mortimer:

Please be advised that I represent Kaitlin Stevens. Enclosed please find a medical authorization allowing the release of her medical records to me signed by her father Douglas Stevens. Please forward any and all medical records to me at this time.

Thank you for your anticipated cooperation.

Very truly yours,

Christopher M. Mellino

CMM: vjb
Enclosure

AUTHORIZATION FOR MEDICAL RECORDS AND REPORTS

7-23-91
Date

I, the undersigned, authorize any physician or nurse who has attended me, or any hospital at which I have been confined, to furnish to **CHARLES KAMPINSKI CO., L.P.A.**, any and all information which may be requested regarding my physical condition and treatment rendered therefor and, if necessary, to allow them or any physician appointed by them to examine any x-ray pictures taken of me or records regarding my physical condition or treatment.

Douglas M. Stevens
SIGNATURE

Victoria Butler
WITNESS

Intake **Form**

PATIENT NAME Kaitlin Stevens BIRTHDATE 3/31/89

ADDRESS 4435 Royalton Rd H. Tel # (216) 237-8244
No. Royalton, OH 44133

PARENTS NAME Kimberly - Douglas W. Tel #

Referred by: Friend / Chrstopher Euse's mother Phone

Address:

Reason for Referral Down Syndrome

Medical Problems

Medications

Parental Concerns

School

Other Professionals Involved Dr. Lindwall

Medical Records at Chart #

Galbreith Co. Chart #

Insurance Equicor / Douglas Stevens SS# 286-44-7929

BCMH? Medicaid/BCMH #

Appt. Scheduled 04/11/ Time 1:30

PATIENT REGISTRATION

RAINBOW AMBULATORY PRACTICE
Pediatric Associates
Rainbow Babies & Childrens Hospital
2101 **Adelbert Road**
Cleveland. Ohio 44106

Office Use Only:

APPOINTMENT DATE AND TIME	
09/19/90 - 1:30	
HOSPITAL NUMBER	DATE FORM COMPLETED / MAILED
1483-545	
PHYSICIAN	CLINIC / TEAM
Joanne Mortimer	Down Syn Clin

LAST NAME (PLEASE PRINT)	FIRST NAME	MIDDLE INITIAL			
Stevens	Kaitlin				
STREET ADDRESS			HOME PHONE (AREA CODE AND NUMBER)		SOCIAL SECURITY NO.
4435 Royalton Rd					
CITY	STATE	ZIP CODE	SEX	RACE	BIRTH DATE
No. Royalton	Oh	44133	F		3/31/89
			Kimberly		
CITY	STATE	ZIP CODE	Was the patient born at or ever admitted to University Hospitals? ☐Yes		
			Under what name (X-Ray. Lab etc.)		
			(if different from above) _____ ☐No		

Responsible Party Information:

☐MR. ☐MRS ☐MS.	LAST NAME	FIRST NAME	MIDDLE INITIAL	LEGAL GUARDIAN'S NAME (If Different)
	e	Douglas		
STREET ADDRESS		CITY	STATE	ZIP CODE
	286-44-7929		Father	
NAME OF EMPLOYER (COMPANY NAME)		OCCUPATION	BUSINESS PHONE (AREA CODE & NO.)	
Goldbreith Co				
		RELATIONSHIP TO PATIENT		
ADDRESS, IF DIFFERENT FROM RESPONSIBLE PARTY			HOME PHONE (AREA CODE & NO.)	

1

PRIMARY

POLICY HOLDERS NAME		CASE NAME	
Douglas Stevens			
NAME OF INSURANCE COMPANY		CASE NUMBER	RECIPIENT NUMBER (e.g., 02, 03, 041
Equicor			
POLICY GROUP NUMBER AND / OR SS#	EFFECTIVE DATE	COUNTY	
286-44-7929			

SECONDAR

POLICY HOLDER'S NAME		CASE NAME	
NAME OF INSURANCE COMPANY		CASE NUMBER	RECIPIENT NUMBER (e.g., 02. 03. 041
POLICY GROUP NUMBER AND / OR SS#	EFFECTIVE DATE	COUNTY	

GENERAL RELIEF

ETC.

POLICY HOLDERS NAME		CASE NAME	
NAME OF INSURANCE COMPANY		CASE NUMBER	RECIPIENT NUMBER (e.g., 02, 03, 04)
POLICY GROUP NUMBER AND / OR SS#	EFFECTIVE DATE	COUNTY	

1

SP 2425 6 87

University Hospitals
of Cleveland

07/05/90

KAITLIN STEVENS
4435 ROYALTON RD.
N. ROYALTON, OH
44133

DEAR KAITLIN STEVENS,

ACCORDING TO OUR RECORDS, YOU HAVE AN APPOINTMENT SCHEDULED WITH JOANNE C MORTIMER, MD ON THURSDAY , 7/19/90 AT 01:15 PM . IF YOU CANNOT KEEP THIS APPOINTMENT, PLEASE CALL (216) 844-1517 TO RESCHEDULE.

PLEASE DISREGARD THIS REMINDER IF OTHER ARRANGEMENTS HAVE BEEN MADE. THANK YOU.

UNIVERSITY HOSPITALS OF CLEVELAND
BIRTH DEF PE
3619 PARK EAST DRIVE
BEACHWOOD, OHIO
44122

RAINBOW AMBULATORY PRACTICE

RAINBOW BABIES *AND* CHILDRENS HOSPITAL
CLEVELAND, OHIO

Patient Notes

KAITLIN STEVENS
3/31/99
1483-545
7/19/99

I.D. CARD IMPRINT

2 half sibs 16, 14 dad 40
mom 32

G2P2

Born 7# 2oz ↑ hypertension
had a murmur expired at 5 wks

Poor wt gain → FTT - nursing
fed q 2 h, slept through night

ō heart, stomach problems
sms UTD

Playing at MRDD
cuts
Down in Down

Saw Dr. Vining → Ht - wt
3-4 mos old
→ Henry for 2 wks RBCH

starting to stand

- nip ____ (L)
- ↑ B2, 3rd 1-2/6 m
ō HSM
- pale, mottled
? gm

Schedule EKG.

5-2142-6

DOWN SYNDROME CLINIC
PATIENT: KAITLIN STEVENS
DATE OF VISIT: 7/19/90

Kaitlin is a 15 month old white female with Down's Syndrome. She was born at Booth Hospital weighing 7 lbs. 2 ozs. to a gravida II, para 2 . She has a brother named Derrick and two half-siblings who are aged 16 and 14. According to her mother, there was an increased alphafetaprotein on testing during the pregnancy. She also had a twin who expired at 5 weeks gestation.

Initially, she had poor weight gain and failure to thrive. Her mother was feeding her every two hour's and she was sleeping through the night. She was seen by Dr. Owens and the failure to thrive gradually resolved. She has no heart or GI problems. Her shots are up-to-date. She is currently in a play group at MRDD. From a developmental standpoint, she is doing well for a child with Down's Syndrome of her age. She sat without support at 9½ months. She is feeding herself with her fingers since the age of 1 and she transfers from hand-to-hand. She does not yet creep or crawl.

She is to have her hearing tested in two week's at RB&C.

On physical exam, her height is 70 cm., which is at the 25th percentile for age for a child with Down's Syndrome and her weight is approximately 7 kg. which is between the 10th and the 25th percentile for a child with Down's Syndrome of her age. She has a loud P_2 with a soft grade 1/11 systolic murmur. She has no hepatospleenomegaly. Her skin does appear pale and motiled with a slight grayish tinge. Her iungs are clear. She has what feels like ligamentous topping "popping" on the left but no evidence during my exam of dislocated hip.

Assessment: Kaitlin appears to be doing well. She does need to have her thyroid checked yearly (it was last checked by Dr. Owens when she was about 3-4 months of age). She also needs to have her hearing followed on a yearly basis but this also has been scheduled. I would also suggest that a baseline EKG be obtained and I have asked Mrs. Stevens to contact my office to try to arrange this at the same time as her hearing screen.

Joanne C. Mortimer, M.D.

cc: Dr. H. Sundaresh .

Transcribed 8/10/90

7/25/90
Jan AM
11

Name: STEVENS, KATHRYN ID: 012565-8
Age: 15 Ht: Wt: Med: 012565-8
Sex: Race:
Loc: Room:

25mm/s
5mm/mV
40Hz
Pgm 105C /104

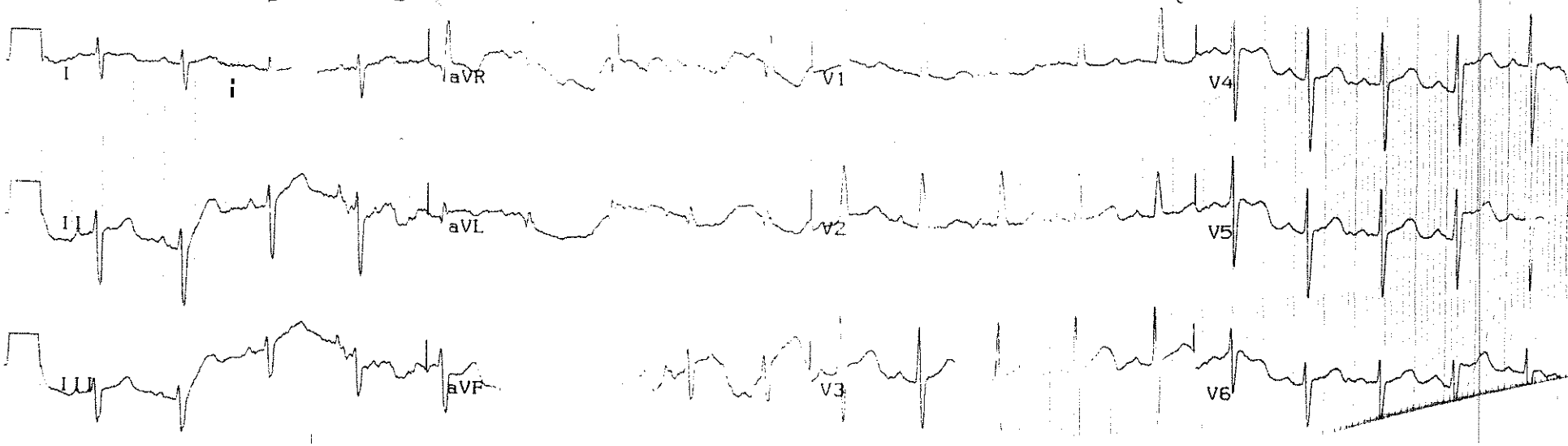
Reviewed by:
Referred by: Saundra

7-JUL-90 08:28 BOOTH MEMORIAL HOSPITAL

Vent. rate	115 BPM
PR interval	132 ms
QRS duration	84 ms
QT/QTc	292/403 ms
P-R-T axes	54 250 74

*** POOR DATA QUALITY, INTERPRETATION MAY BE ADVERSELY AFFECTED
SINUS TACHYCARDIA
PULMONARY DISEASE PATTERN
RIGHT VENTRICULAR HYPERTROPHY
ST ELEVATION, PROBABLY DUE TO EARLY REPOLARIZATION
NONSPECIFIC ST ABNORMALITY
ABNORMAL ECG

Mary Shelton



28

UNIVERSITY HOSPITALS OF CLEVELAND

Rainbow Babies and Childrens Hospital
Pediatric Audiology

STEVENS, Kaitlin 1483-545

DOB: 3/31/83 7/30/90

CLINICAL SUMMARY

☐ Inpatient ☒ Outpatient

Cynthia Joseph, M.A., CCC-A
Audiologist

CJ:rah

cc: Joanne Mortimer, M.D.
Dr. H. Sundaresh
Cuy Cty Board of Mental Retardation
Attn: Bonnie Miller
Hospital Chart

AUDIOLOGY AND SPEECH-LANGUAGE PATHOLOGY

28

UNIVERSITY HOSPITALS OF CLEVELAND

Rainbow Babies and Childrens Hospital
Pediatric Audiology

CLINICAL SUMMARY

☐ Inpatien ☑ Outpatient

STEVENS, Kaitlin 1483-545

DOB: 3/31/89 7/30/90

HISTORY

Kaitlin Stevens was referred for children's audiological evaluation by Joanne Mortimer, M.D. Today's teats were ordered to rule aut hearing loss secondary to Down's Syndrome. Kaitlin was accompanied today by her mother who reports a personal impression of uncertainty regarding her hearing sensitivity, in that auditory responses are inconsistent, There is a history of otitis media which has been treated with ,antibiotics. Presently, Kaitlin is enrolled in *a* play group through the Cuyahoga County Board of Mental Retardation.

RESULTS

Visual reinforcement audiometry procedures were implemented with good test reliability. Minimal response levels ***were*** obtained to warble **tone** and narrow hand noise stimuli presented in the sound field, under headphones, and via bone conduction at age appropriate levels. Specifically, responses ranged from 20-35 dB HL for 250-4000 Hz, with ***no*** evidence of conductive overlay. Speech awareness thresholds were also obtained at normal levels of 15 and 5 dB HL for the right and left ears respectively, and 10 dB HL when stimulating in the sound field.

Objective immittance testing revealed normal Type A tympanograms bilaterally in conjunction with normal **middle** ear pressure and tympanic membrane compliance. Acoustic stapedial reflexes **were** present at normal screening **levels** of 90 dB SPL for **both** ears under ipsilateral stimulation for all frequencies **tested.**

IMPRESSION

Normal peripheral hearing sensitivity with normal middle **ear** function bilaterally.

RECOMMENDATIONS

These findings **were** fully discussed with **the** mother, and the following recommendation was made: Return for children's audiological reevaluation in six months to monitor (reminder postcard filed).

IMPORTANT MESSAGE)

FOR Joanne

DATE 10/22/90 TIME _____ A.M. P.M.

M Kim Stevens

Of _____

PHONE 237-8244
AREA CODE NUMBER EXTENSION

TELEPHONED		PLEASECAU	
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNEDYOURCAU		SPECIAL ATTENTION	

MESSAGE re: Kaitlin Steven
7/19/90 > saw you
You suggested an EKG
She had the results
sent to you. Still
waiting for your call
regarding the results.
also charges of 175.00 her

SIGNED _____

LITHO IN U.S.A.

TOPS FORM 3002P

was. paid part about ½.
She feels that 175.00
for less than ½ hr
was too steep. So then
something that you can
do.

You should have her
chart with EKG attached
to it.

4

Rainbow Babies and Childrens Hospital

August 10, 1990

Dr. Hurikadale Sundaresh
1863 Torbenson Dr.
Cleveland, OH 44112

Dear Dr. Sundaresh:

I saw your patient, Kaitlin Stevens, in Down's Syndrome Clinic on July 19, 1990. I am enclosing a copy of my clinic notes for your records. I would suggest to you that we check the thyroid function and a CBC at some point within the next few month's. I am pleased that she is getting her hearing checked. I would strongly suggest that we do an EKG on her for baseline purposes.

Thank you very much for allowing me to see this patient.

Sincerely,

Joanne C. Mortimer, M.D.
Director, Birth Defects Center

JM/ajp

enclosure

28A

UNIVERSITY HOSPITALS OF CLEVELAND
Rainbow Babies and Childrens Hospital
Pediatric Audiology

AUDIOLOGIC RECORD

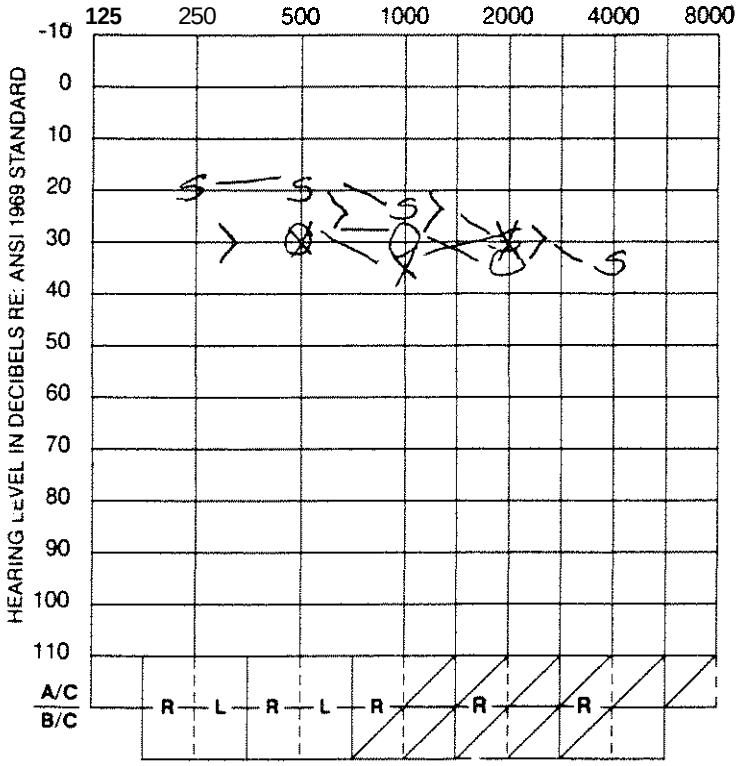
☐ Innatient ☒ Outpatient

NAME Kaitlin Stevens

DATE 7/30/90 EXAMINER Joseph

1483545
DOB 3/31/89

AUDIOGRAM
FREQUENCY IN Hz



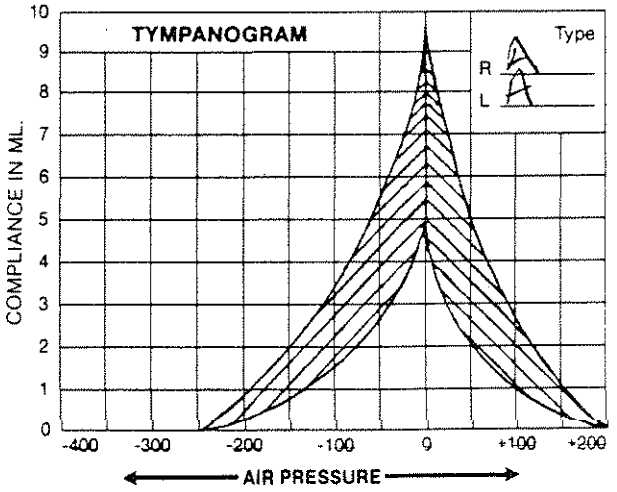
KEY

Reliability: GOOD
Audiometer: GSI 16
Technique: VRA
PB Test:

MODALITY		LEFT	RIGHT
AIR CONDUCTION	UNMASKED	X	O
	MASKED	□	△
BONE CONDUCTION	UNMASKED	<	>
	MASKED	[	]
AIR CONDUCTION SOUND FIELD		$	

ABBREVIATIONS
AC - Air Conduction
BC - Bone Conduction
CNT - Could Not Test
DNT - Did Not Test
EM - Effective Masking re: 0 dB HL
FA - Fletcher Average
HL - Hearing Level
MLV - Monitored Live Voice
NL - Normal
NR - No Response
PB% - Discrimination Score
PTA - Pure Tone Average
SAT - Speech Awareness Threshold
SF - Sound Field Presentation
SL - Sensation Level
SPL - Sound Pressure Level
SRT - Speech Reception Threshold
VIB - Vibrotactile Response

IMMITTANCE PROCEDURES



SPEECH AUDIOMETRY

TAPE ☐ MLV ☒	PTA	SRT	SAT	dB PB%	dB PB%
R			15		
opposite ear masking					
L			5		
opposite ear masking					
sound field			10		

ACOUSTIC REFLEX TESTS

Stimulus	RIGHT				LEFT		
Probe	L	R			L	R	
DECAY +/-			90	500 Hz	90		DECAY +/-
			↓	1000 Hz	↓		
				2000 Hz			
				4000 Hz			

REMARKS

SUMMARY:

DIFFERENTIAL IMMITTANCE MEASURES

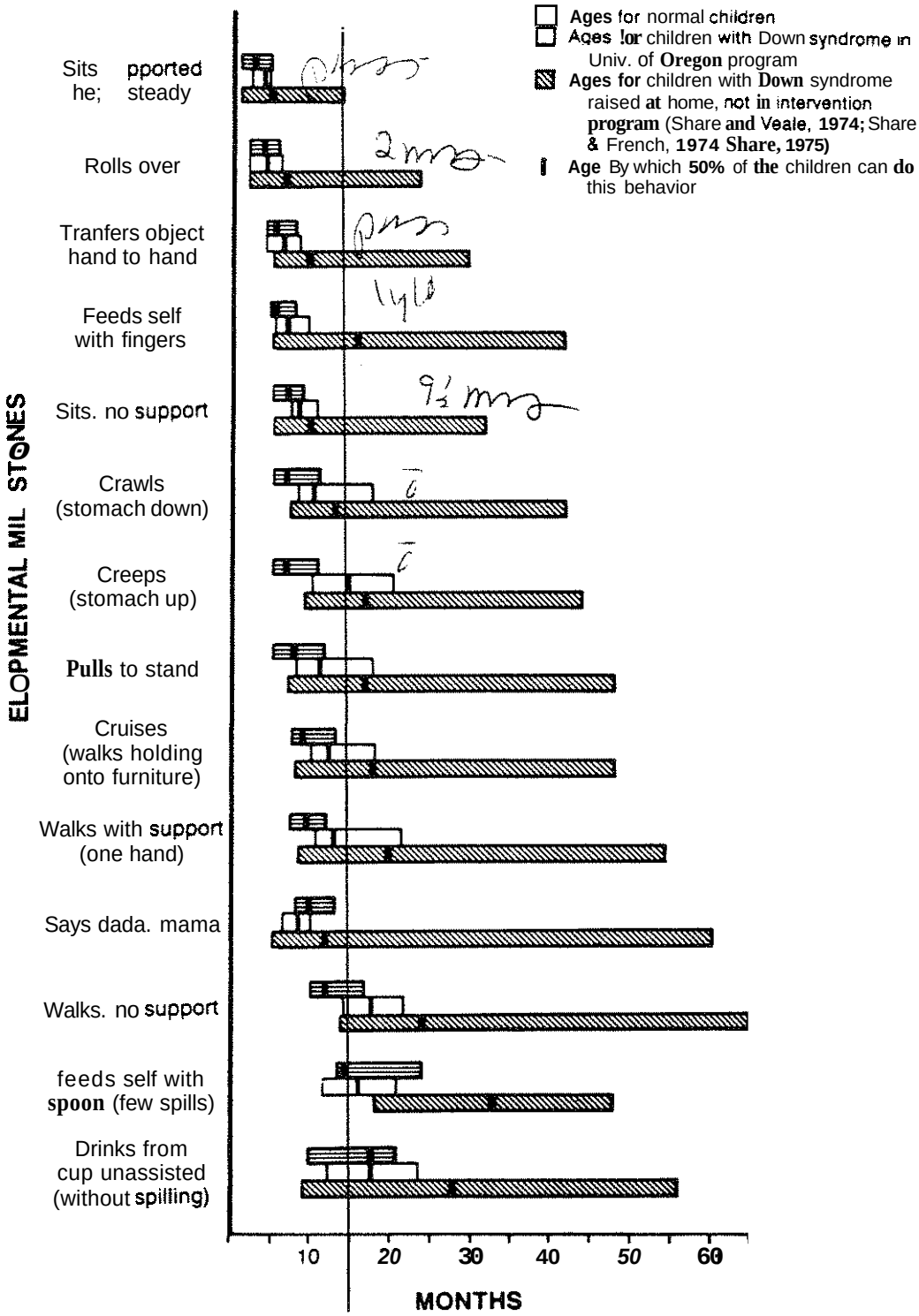
Probe Ear	R	L
Peak Pressure in da Pa	-10	-75
Static Compliance in ml (NL: .30 to 1.75)	.3	.3
Equivalent Canal Vol in ml	.3	.3

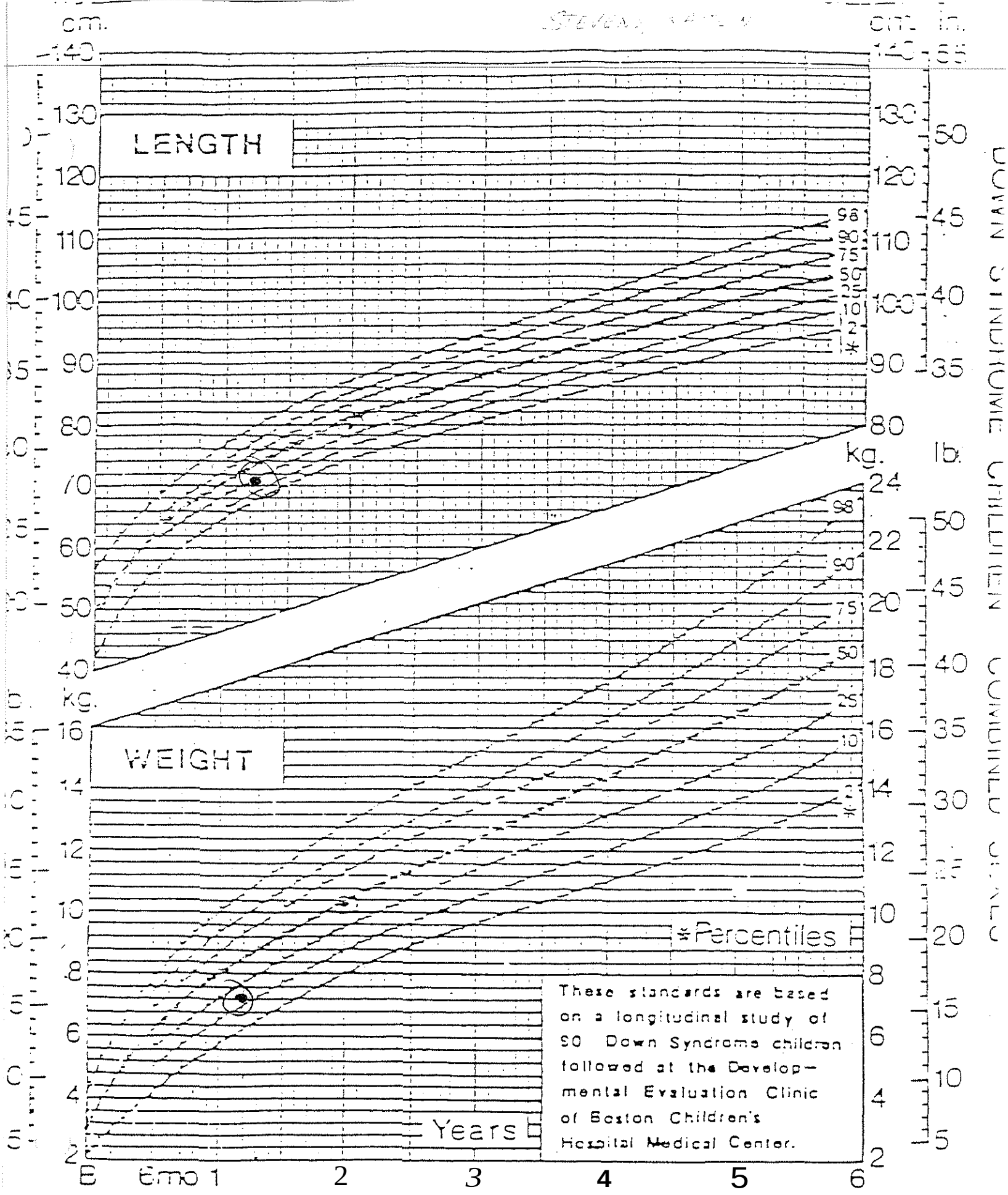
SP-1810

AUDIOLOGY AND SPEECH-LANGUAGE PATHOLOGY

AUDIOLOGY AND SPEECH-LANGUAGE PATHOLOGY

Figure 3. Developmental Milestones




cm.
in.
LENGTH
98
90
75
50
25
10
2
*
kg.
lb.
WEIGHT
Years
*Percentiles
These standards are based on a longitudinal study of 50 Down Syndrome children followed at the Developmental Evaluation Clinic of Boston Children's Hospital Medical Center.
DOWN SYNDROME CHILDREN GROWING GRACE