**In The Matter Of: The transcript of**

*JOSEPH STALMA, ET AL v.*
*TOLEDO HOSPITAL*

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*JAY P. GOLDSMITH, M.D.*
*December 13, 2000*

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IN THE COURT OF COMMON PLEAS
LUCAS COUNTY, OHIO

JOSEPH STALMA, A MINOR, BY AND THROUGH HIS MOTHER AND NATURAL GUARDIAN, NORMA STALMA

VERSUS CASE NO. CI99-1762

TOLEDO HOSPITAL JUDGE LANZINGER

Deposition of JAY P. GOLDSMITH, M.D. taken at the Hilton Hotel, Kenner, Louisiana, on the 13th day of December, 2000.

APPEARANCES:
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REPORTED BY:

DIANA S. EZELL, CCR, RPR-RMR
CERTIFIED COURT REPORTER



JAY P. GOLDSMITH, M.D., 1516 Jefferson Highway, New Orleans, Louisiana, 70121, after being first duly sworn in the cause, testified as follows:

**BY MS. BAER:**

**Q:** Good afternoon.

**A:** Good afternoon.

**Q:** Doctor, as you know, my name is Lisa Baer, and I am legal counsel for the Toledo Hospital in the case brought by the Stalma family.

**A:** I do.

**Q:** Would you state your full name for the record?

**A:** Jay Paul Goldsmith.

**Q:** Professional address?

**A:** 1516 Jefferson Highway, New Orleans, Louisiana, 70121.

**Q:** Is that a group practice?

**A:** It's a multispecialty group practice called the Ochsner Clinic.

**Q:** What areas of practice are run in the Ochsner Clinic?

**A:** It's a group of 450 doctors, and all areas of practice from well baby care to



any kind of transplant you want are accomplished there.

**Q:** You are a neonatologist?

**A:** A neonatologist and a pediatrician. About 10 percent of my practice is general pediatrics now.

**Q:** Any particular area of interest and/or expertise in neonatology?

**A:** In neonatology my areas of interest have been in ventilation, use of the respirator in brain injury and now in ethics.

**Q:** Licenses in any other state than where we are presently?

**A:** Not at the current time. I have had licenses in other states previously when I was there either in training or working, and I have voluntarily relinquished those because of moving.

**Q:** Are you board certified?

**A:** Board certified in pediatrics in 1975 and in neonatology in 1981. No recertification required.

**Q:** You anticipated my next question.

**A:** I'm too old.

**Q:** Where do you have hospital

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privileges currently?
A: At Ochsner Foundation Hospital, East Jefferson General Hospital, Touro Hospital, Children's Hospital, and Tulane University Medical Center. I have courtesy privileges in probably 30 to 35 other hospitals for transport purposes. When we move children from one institution to another and we send a transport team, we have to cover them in that setting, but I don't actively practice, nor do I attend meetings or have anything else to do with those hospitals.
Q: Of the — and I probably missed one — of the five or six hospitals where you have active privileges, is there a particular hospital where you spend more time than the others?
A: I would say I spend 60 to 70 percent of my time at Ochsner; 20 to 30 percent of the time at East Jefferson; and 5 to 10 percent of my time at the others combined. Generally just occasional consultations, educational things that I do at Tulane for the residency program, those

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kinds of things.
Q: What percentage of your practice is spent in inpatient care as opposed to outpatient care?
A: Ninety percent is inpatient. Ten percent is outpatient.
Q: I assume that at Ochsner and East Jefferson your role is as an in-house neonatologist?
A: As a neonatologist. We don't, for example, keep neonatologists full time at East Jefferson. We are there on a consultative basis, but we have an ICU there that runs a census anywhere from 6 to 18 babies, but we are not there full time. We have a group of nurse practitioners who are there full time.
Q: So there is not a 24-hour in-house neonatologist at East Jefferson?
A: Correct. Nor is there at Ochsner. That has been surveyed in the United States recently, and about 20 percent of hospitals that have NICUs now have neonatologists in-house full time. The rest either have residents, practitioners or a combination.

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Q: What is the census on an average at Ochsner?
A: At Ochsner, 35.
Q: Are there residents at either Ochsner or at East Jefferson?
A: There are at Ochsner.
Q: Do you function in a supervisory capacity at all with the residents?
A: Yes. But I think in our setting we are more hands-on than most academic institutions.
Q: Any academic positions that you hold currently?
A: Yes. I'm professor of pediatrics and vice chairman at Tulane University. We have an integrated residency program with them, and their residents spend time at both places. I'm also a clinical professor of psychology at the University of New Orleans mainly because of projects we have been doing for many years with their graduate psychology students, PhD psychology students, on cortisol levels and different infantile states, prachtl states. When those graduate students come to Ochsner, they are under my

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supervision. I don't teach any active courses there.
Q: The roughly 10 percent of your practice of general pediatrics, on what types of issues or for what conditions do you typically see and treat children?
A: Well, as you know, all neonatologists are first general pediatricians, and when I first got here 25 years ago, I just decided to have a small practice; mainly friends, doctors' children, some graduates from the NICU.
The average general pediatrician would have 3,000 to 4,000 families or patients in his practice. I probably have a hundred. It's a very small practice.
Q: For general pediatric needs, infants up through age 16 to 18?
A: Correct.
Q: Did you conduct any literature search, Medline search, any research of any sort related to this case?
A: I didn't do any research, but there are some papers that I will refer to, and I pulled out a file just this morning to

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bring here that may or may not have relevant papers, but it's about fever in infants, and I know one or two papers that are in that file. I keep files. I have been keeping files for 30 years, and I will give you the references of papers that I think are appropriate here.

**Q:** Okay. Perhaps now would be a good time —

**MS. BAER:**

You have had a chance to look at these materials?

**MR. KULWICKI:**

I pulled the correspondence out, but that was it.

**MS. BAER:**

Off the record for a minute.

(Off the record.)

**BY MS. BAER:**

**Q:** I'm pulling out and showing you a page of the nursing records. Is this your writing? It appears to be the longhand nurse's notes for the 23rd to the 24th.

**A:** No, it's not. There's another copy of that that is maybe duplicative. I

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think it's tabbed here. I may have some writing on it, but for some reason I was sent duplicates of stuff and I don't know why. That is probably the most important page in the chart, so it's tabbed. There are only three depos, the parents and Buganski.

**Q:** Just for the record, it appears as though you received the obstetrical and prenatal records of Dr. Folley for Mrs. Stalma?

**A:** Correct.

**Q:** Mrs. Stalma's delivery records from Toledo Hospital?

**A:** That's correct.

**Q:** And I haven't looked for completeness sake but the newborn record for Toledo Hospital for Joey Stalma?

**A:** Correct.

**Q:** And the depositions that you have reviewed are Joseph Stalma, Norma Stalma and Dr. Buganski, correct?

**A:** Correct.

**Q:** There are a handful of pages, maybe a dozen or so pages, that appear to be —

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**A:** Those are some follow-up issues, which I don't think pertain, but hospitalization for otitis and tubes, PE tubes, an emergency room visit for a laceration and a psychological evaluation at two years of age.

**Q:** In this folder is this then a second copy of Joey Stalma's birth admission?

**A:** Correct. That's probably my working copy, which I put some tabs on it and also I thinned, which means the things that I don't think are pertinent or may not be pertinent in my judgment have been thinned.

**Q:** To your recall and to the best that you can gather, did you receive a complete copy of this admission at one time?

**A:** I did.

**Q:** So what I have here that was bound with a rubber band in this manila folder is what you feel are in some respect the pertinent records of this admission?

**A:** Correct.

**Q:** And you have got a few tabs that you have placed on what you feel are pertinent pages?

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**A:** Correct.

**Q:** Other than the tabs, are there any actual notations or markings in this working copy of the chart?

**A:** I don't remember putting any in, but there may be.

**Q:** Was this a full-term baby?

**A:** Yes.

**Q:** I'm showing you a consultation page from Joey Stalma's admission. Where it says "Second LP" and there is a square around it about halfway down the page, is that your writing?

**A:** Yes.

**Q:** Is this a second copy of Norma Stalma's labor and delivery record?

**A:** It is. Again, thinned by me.

**Q:** Other than these materials, is there anything else that you have reviewed for this case?

**A:** No, ma'am.

**Q:** Have you reviewed any other cases for Mr. Kulwicki or his law firm in the past?

**A:** Not in the past. There is another current case that I think came after this.

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Q: Is it for Mr. Kulwicki or for someone else in his office?
A: For Mr. Becker. Mr. Becker was, probably 10 years ago, an associate attorney on another case that I did out of Cleveland that came from another lawyer, and for some reason he got involved in it. I don't know what that relationship was.
Q: Is it a case that you were an expert witness for?
A: It is.
Q: On behalf of the plaintiff or defense?
A: It was on behalf of the plaintiff. It went to trial.
Q: Do you recall who the defense lawyer was in that case?
A: No. I recall the case very vividly because I flew to Cleveland. Well, I don't know if you want to hear this.
Q: Sure.
A: It was a case about a baby who was born and needed to be intubated at Cleveland Metro Health, I think. The tube was placed in the esophagus and x-rays showed it in the

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esophagus, and it was, and the baby died.
For some reason I was never deposed until Friday before the Monday when the case started. I remember the deposition. It was by phone. I said the tube was in the esophagus. That's all I'm going to say if I come there. If you can find any neonatologist at Case Western that says the tube is in the trachea, I promise I won't come. On Wednesday morning, I flew up and Mr. Becker met me at the airport and gave me a ticket to go home. He said, "They heard you were coming, they couldn't find a neonatologist to testify, here is your ticket to go home, thanks very much."
Q: You arrived in Cleveland but never made it to the courtroom.
A: They settled the case that morning and I was supposed to testify that afternoon. That is very vivid in my mind. That has never happened to me.
Q: I imagine that it would be. The current case that you are reviewing for Mr. Becker, what is at issue in that case?
A: I really don't remember.

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Q: Have you reviewed any x-rays?
A: No, ma'am.
Q: Have you issued any written reports of any fashion to Mr. Kulwicki or anyone in his office?
A: No.
Q: Did you make any handwritten notes to yourself in terms of your review?
A: No. Other than what you have seen on the charts.
Q: Before we move on, this brown folder that you have brought with you, as I understand, has some medical literature in it which may in one fashion or another relate to the issues that we are going to talk about today?
A: Correct.
Q: By my count, there are 10 separate pieces of information in this file. Have you had an opportunity to look at this information to tell me whether or not you feel all of these 10 pieces of information relate in some way or are there only particular articles that relate to this case?
A: I grabbed that on my way out of

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the office. I brought it basically for the first article because I knew it was in there, which post dates this, but it is what is called a practice guideline or practice parameter. There are hundreds in the last 10 to 15 years, literally hundreds of articles written about fever in babies zero to three months or zero to two months depending on how you define it. It's an ongoing question among pediatricians and problem. Some of those articles may be reflective of that.
The practice parameter that we are now practicing under is the 1993 Practice Parameter. There are some statements in there such as administration of antibiotics or whether or not a fever is real based on bundling and how you handle that that I think predated the publication of this, and I'm sure there are references that go back to those cases, but it was just as kind of a general reference.
Q: For the record, the first article is from Pediatrics, Volume 92, No. 1, July 1993, correct?
A: Correct.

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Q: Lead author is Larry Baraff?
A: Correct.
Q: As I understand the comment that you just made, do you feel that this, even though it was dated 1993 and we are dealing with a situation in 1991, do you feel that this is an applicable reference guide?
A: There are some things in there that are applicable. There are some things that were changing at that time that I would not hold a physician responsible for. And mostly different from this thing. For example, our biggest issue is a child with a fever coming to an office as an outpatient or emergency room and how you handle that, and that's what that deals with mostly, but there are things in there, general principles, that are pretty I think standard and would have applied two years previously.
Q: Would you do me the favor as we go through your testimony and your opinions in this case, if there is anything in your opinions that you feel are supported by this reference, would you let me know that?
A: Sure. I will reference other —

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if I can't give you the cites because I don't remember them, but I will reference other authors that we use to teach. This is a very common teaching point in the training program, and so we send the residents to the literature, and we literally find the same papers again and again and again and again because there are certain papers that are very important in terms of how you handle this in your office.
I was telling Mr. Kulwicki that in a day a general pediatrician sees 30 to 40 children five days a week, 200 to 300 kids a week, probably half of them have fevers, many of them are under three months of age. How does he pick out the one or the two or the three that need to be hospitalized? It's a very small fraction, but that's why we have pediatricians and why I believe that pediatricians are the appropriate people to take your child to and not a family doctor because we get repeated experience of that, and we have to be able to tell the difference.
Q: Let me ask you the next logical question. How would a pediatrician in an office setting who encounters multiple children under the age of three months with fever, how would that pediatrician make a determination to hospitalize or send a child to the emergency room as opposed to allowing the family to monitor or something of that nature?

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A: Well, that is the question and it does have applicability here and it goes back to a paper by McCarthy in 1982 in which she looks at the observation or observational states, and I think it's referenced in this, and I can give you the exact cite.
Q: Fine. Why don't you do that?
A: McCarthy, Observation Scales to Identify Serious Illness in Febrile Children, Pediatrics, 1982, pages 802 to 809.
Now, in general, what Dr. McCarthy was saying was that the way the baby interacts with either the examiner or the parent is the most important thing that you can tell in a baby that's ill, more important than the laboratory, more important even than the height of the fever, although there's some controversy about that. Many people believe the higher the fever, the more likely this is going to be a bacterial infection that needs treatment, but that the observation — and when we talk about that it's color, hydration, ability to get en face contact where you have face to face with the baby. He or she doesn't turn away, ability to cuddle and to soothe, and in general, I would call this a Gestalt, feeling that the baby has good tone and is interactive with his or her environment and is not disinterested, and a baby who is disinterested won't eat, won't interact, not soothable, irritable. That's a baby who is at a high risk of having a significant infection, and that's what the McCarthy scales try to quantify. We don't teach it as a quantification. It's hard to teach that as a qauntification. It's after many years of observing child after child after child, you can categorize him "That child is well, that child is mildly ill, that child is sick."

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Q: By looking at the child and interacting with the child?

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A: Correct.
Q: Do you agree that interaction or observation is more important than laboratory studies?
A: In very small babies, especially babies less than a month of age, yes, because the laboratory studies may be delayed in their response to a reaction to the action.
Now, there is another part of that and that's called the Rochester Guidelines. I think they are the Rochester Guidelines. If you are going to do laboratory studies on these small infants and it meets all of these criteria, then you have a certain safety net that you can send the child home to the parents to be observed, and those include a white count between 5 and 15,000, an absolute band count less than 1,500, a urinalysis that's clear, and a stool, if the baby has diarrhea, that does not have white cells in it, and there may be one or two others, but that's basically it.
The Rochester Scales did not include what we call an acute phase reactant. An acute phase reactant is a

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protein that responds to infection; c-reactive protein or CRP is one. There are a ton of them, but we are using those more and more now because we understand that those acute phase reactants are more important in very small babies, and Dr. Sol Adler years ago had one that he used for newborns called a mini sed rate, a sedimentation rate, but it was done literally in a hematocrit tube, and if it fell more than 10 millimeters in an hour, that was an indication that the baby had increased proteins in the blood which means almost like a fever; that this was a non-specific response to infection.
Q: You had made a comment earlier that there is perhaps some debate on whether or not how the child looks and what the interaction is like with the child is more important than the height of the fever.
A: There is some debate that the higher the fever, the more likely it is that it's bacterial. In other words, a fever of 104 is more important than fever of 101.
Q: What is your thought on that?
A: I probably don't make that much of

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a distinction.
Q: As you know, this case involves care that was rendered to this child nine years ago.
A: Correct.
Q: Is there anything that was different in 1991 in terms of monitoring or managing a newborn's fever as opposed to today or three or four years later?
A: Only as an outpatient, not as an inpatient. I don't think it — well, in terms of treatment as an outpatient, there is a big difference. We now are preaching in questionable cases for outpatients to give them a shot of a cephalosporin medicine intramuscularly, after doing a blood culture, follow up the blood culture, and get the baby back if we need to within 24 hours.
Q: That's current mode of teaching?
A: That's current mode of teaching. We didn't teach that in 1991. Secondly, I would say that acute phase reactants are probably more used today than they were in 1991 despite Dr. Adler's mini sed rate and some other people using things. I don't

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think they were used as actively as they are now because the neonatologists have been pushing them, or at least pushing them up till 1996, for the diagnosis of all kinds of beta strep infections. As you probably know, beta strep has fallen off dramatically. Two-thirds to three-quarters of the cases are gone because we have the new screening of the mothers and a protocol given to us by the CDC in 1996.
Q: From your review of this file, did Mrs. Stalma have a negative Group B strep screen at any point during her pregnancy?
A: She had a Group A strep positive culture once. I'm not aware if she had any Group B testing at all.
Q: Is that reflective of the difference in prenatal management back in 1991 as opposed to now?
A: It wasn't required in 1991. In fact, I reviewed that recently for a conference. In 1992 there were 19 published different approaches that I could find to managing Group B strep in mothers and babies. Everybody was all over the map.

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Q: On the second page — and I will hand it over to you. On the second page of this article from Pediatrics, the 1983 article that we have been talking about, under Definition of Fever, someone has underlined, "The panel concluded that 38 degrees Celsius, 100.4 degrees Fahrenheit, should be used as the lower limit of the definition of fever." Do you agree with that?

A: Yes, I do. That's a rectal temperature.

Q: How would rectal temperature equate or are you able to equate with axillary temperature?

A: That's a good question. Generally we think that a rectal temperature is going to be one to two degrees higher than an axillary temperature. However, we are not sure. So in our institution, we don't want nurses to routinely take rectal temperatures because bad things happen taking a lot of rectal temperatures. The thermometer can break. We have had one baby who had a perforated rectum from a temperature probe

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being put in. We have them take them all by axillary, but any temperature above 99 axillary gets repeated rectally, and if it meets the criteria of 100.4 Fahrenheit or 38 degrees centigrade, then it must be reported immediately to the pediatrician.

Q: Was that the way things were done in your institution in 1991?

A: Pretty much.

Q: Also underlined in the same article, it says "Fever may be result of overbundling of a small infant." Do you agree with that?

A: Yes.

Q: Also underlined, continuing on, "When this is suspected, the child may be unbundled and the temperature retaken in 15 to 20 minutes." Do you agree with that?

A: Yes. There is a nice study that looked at fever curve after unbundling and environmentally warm baby and they were all back to their standard temperatures, core temperatures, in 15 minutes. That's pretty good, pretty good evidence for that.

Q: Is that a time frame then, 15 to

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30 minutes, that you would expect to see a change as a result of an environmental factor in the child's temperature?

A: Yes. In other words, it should be back to a normal level, and if it's not, then you would assume it's not an environmentally induced fever, that it is a real fever.

Q: Once we are all done, I'm not going to take the time now, we will go through and make sure I have got the cites on these particular articles. I am going to give these back to you. As our discussion continues, if there is anything that I ought to have reference in terms of this literature, you let me know.

A: Let me just add that many of these probably in here, I think I looked at it a little while ago, are throwaways. They are kind of throwaway magazines that are sent to pediatricians about this very controversial issue, and so you may not be able to get them.

Q: Would you put out if I asked you to copy those for me?

A: I would be happy to send them to

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you.

Q: Since we are on the subject of throwaways, is the scale published by McCarthy something that would be a reliable source in terms of monitoring, managing, treating fever?

A: Well, if you said the McCarthy's observation scales to most pediatricians, they wouldn't know what you're talking about. What she did was try to quantify it and give it a scientific basis. What the importance of that paper was and what you will see in every paper probably in here, and I haven't reviewed them recently, is the importance of the Gestalt, of the observation of the baby, the examination of the baby, and different people use different things. How does that baby look to an experienced pediatrician? If that baby looks good, there's probably very little chance the baby is septic. If that baby doesn't look good, for whatever reason, a higher probability that the baby is septic, and so that exam becomes very important.

Unfortunately, in this case, the

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child wasn't examined, so we don't know, and that becomes a major issue, but the McCarthy scale kind of just quantified different parameters that she thought were important, such as suitability and ability to cuddle, interest in environment, ability to make eye contact, and she gave them point scores, and I don't remember what it was, but that wasn't what was important. Examination of the child and the state of the child is probably the most important thing to make a diagnosis.

**Q:** Do you in your clinical practice and assessment of newborns follow — and I'm not talking in terms of giving a point grading system, but follow and look for the same categories of findings that McCarthy outlines?

**A:** Probably not, because I don't even remember all the ones she outlined. It's not like an Apgar score where you have to give a score to five parameters. What it is is a general impression, and what I remember, you know, interaction with environment and ability to soothe and cuddle and interest in feeding and being able to make eye contact.

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Those kinds of things. So it's a general impression.

**Q:** You have mentioned a number of times what would be important in a pediatrician assessing the newborn. Do you think that likewise nursing personnel over the course of time and seeing baby after baby after baby can also develop the ability or can have the ability to do that type of assessment on a newborn?

**A:** Yes. I think that's probably one of the most important skills they bring. I'm very opposed to floating nurses, and because of malpractice issues we don't see nurses floated to OB any more because they can't read fetal monitor tracings, but we do see nurses floated all the time to the nursery to rest their feet and feed babies, and I think that's a real negative. If a nurse calls me and says, "Doctor, I don't know what is wrong but this baby does look right," to an experienced nurse, that's a flag. You go running in and see that baby.

**Q:** Would the flip be true to that that in their assessment they feel that the baby is interacting and that the baby looks okay, that that would be a reliable indicator to you on what's going on with the baby?

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**A:** Yes. Assuming, both sides of that coin, that they have adequate experience. Again, I don't want a nurse who is floating from another area or a nurse who has not had adequate experience, but whatever you consider adequate experience.

**Q:** Can you tell from your file when it was that you were first contacted in this case?

**A:** Yes. Because I wrote it. 5/16/00 was the first correspondence. I was probably contacted a week or two before that by phone.

**Q:** Do you have any recall of that particular phone conversation?

**A:** No, ma'am.

**Q:** Do you know who it was that you were called by?

**A:** I'm not sure whether it was Mr. Kulwicki or Mr. Becker.

**Q:** I'm assuming then subsequent to that phone conversation you received some materials by mail?

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**A:** Correct.

**Q:** Do you recall what it was that you were first sent?

**A:** I was first sent the charts.

**Q:** That being mother's labor and delivery record and the child's newborn record?

**A:** Correct.

**Q:** Were you also sent the prenatal care?

**A:** Yes.

**Q:** In the course of any of your discussions with anyone from Mr. Kulwicki's office or through correspondence, were you ever given any particular assignment or given any instructions as to what they wished for you to do in this case?

**A:** Yes. There was a work product document that they generated that laid out specific questions vis-a-vis issues that they thought might be important, some of which turned out, in my opinion, to be important and some of which I thought were, to use the medical terminology, red herrings or unimportant.

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Q: Was this by letter that there were issues outlined for you to review and pay attention to?
A: Yes, ma'am.
Q: And I take it then that you undertook to review the medical records, and perhaps subsequently depositions, to answer those questions?
A: Correct.
Q: Did you then have a discussion on each particular issue as to whether it was significant to this case or a red herring?
A: I did.
Q: What particular issues were you asked to look through that you felt were red herrings in this case?
A: The bilirubin issue. In my opinion, the child never even needed phototherapy. The bilirubin never rose to a significant level. The child was sensitized or the mother was sensitized to Rh disease and had numerous amniocenteses, which showed her level in the stage level 2 on the Liley curves, and I think the highest bilirubin the child had was eight. Obviously you don't

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know that when the baby is born and it has a positive Coombs. You don't know how high it's going to be, but the baby had a normal hematocrit at birth, which meant that there was very little hemolysis going on in the previous weeks, and you could anticipate there would be probably very little bilirubin breakdown in the subsequent days. I don't think it was wrong to put on the Bili light, but it obviously led to a cascade of events where they thought the light was causing the overheating, and in my opinion, the baby never even needed the light. I don't think bilirubin in was an issue.

There was a question regarding low Apgar scores. They were six and eight, and I felt the Apgar scores were normal for a baby of this gestation, and I felt that that was not an issue.

Q: Anything else?
A: I don't think so. Everything else was in one way or another related to the two major opinions that I eventually came up with.
Q: That begs the next question. What were the issues that you were asked to look

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at that you feel have any significance in this case?
A: My feeling is that had the child been examined between 3:00 and 6:00 p.m. on the 23rd, that the child would have demonstrated to a reasonably prudent pediatrician or neonatologist adequate changes in their personalities or observational states, as it has been called, to warrant a septic workup and the administration of antibiotics certainly by 6:00 p.m. on the 23rd. Had that been done, then that would mean that the child had received antibiotics 10 hours approximately, 9 to 10 hours, prior to the time that he eventually did get antibiotics, and I believe that his disability today, his handicap, would have been lessened because of a less intense or less severe infection. I can not say with probability that meningitis would have been prevented. Ninety-five plus percent of these cases start with a bacteremia and then go on to meningitis, and the child was demonstrating, even on the 23rd, signs of central nervous system

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irritability. I can't say that meningitis would have been prevented, but it is my opinion that a 10 hour earlier administration of antibiotics would have lessened the severity of the infection and thus the handicaps that the child now suffers.
Q: Are these two opinions — and as I understand them, the first being that if the child was examined between 3:00 and 6:00 p.m., the child would have demonstrated changes in his observational state to warrant a septic workup and antibiotic treatment by 6:00 p.m.
A: Correct.
Q: That's the first opinion?
A: Correct.
Q: The second opinion that if treatment had been initiated, antibiotic treatment, 10 hours earlier, the central nervous system damage to this child would have been lessened?
A: Correct.
Q: Do you have any other opinions in this case?
A: No. All the other opinions are

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corollaries based on those two.
Q: Okay. All right. Let me back up for just a moment. We talked a little bit earlier about any red herrings in this case. You have indicated that perhaps this child didn't even need to be under the phototherapy. Was it still within standard of care to institute phototherapy on this child when it was done?
A: Sure. In general, phototherapy is a fairly benign procedure, except if it prevents you from making a diagnosis of fever as it is in this case. In anticipation of a baby with a positive Coombs whose mother is Rh negative, why not? But, in general, we don't initiate phototherapy until the bilirubin is at least above 10, and in 1992, the bilirubin, I think February of 1992 Pediatrics, the entire change of bilirubin treatment came out, post dates this case, probably not relevant, but an article given what our new president today entitled "A Kinder Gentler Approach —
Q: This is Dr. Misell's article?
A: Misell's and Newman's. "A Kinder

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Gentler Approach to Bilirubin Management," which really changed phototherapy to now it is given at 15 or 20 in babies.
So to initiate phototherapy here at 3 wouldn't have been what I would do, but it's not below the standard, and you could make a good argument we are anticipating a problem in the future.
Q: Can bilirubin lights be an environmental source of temperature increase in a child?
A: They can, but it's probably over done in terms of using that as a reason. It's much more likely, for example, if the baby is under phototherapy inside of a isolet. The isolet, which is a plastic box, acts as a hot house effect and can warm the infant. The larger the infant, the more likely, but, for example, in this case there is some indication that there was an order to unwrap the baby in order to see if the temperature came down, but a baby under phototherapy wouldn't be wrapped, so I don't understand that. We would want as much skin exposed to the light as possible because

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that's the way the light works by breaking down the bilirubin to a phototherapy isomer that is not toxic and it can be excreted by the kidneys.
Q: Do you have any information one way or the other as to whether or not this baby had nothing on, a diaper on, a light blanket on, at any time during the phototherapy?
A: I don't know. If he had a light blanket on, he wasn't getting phototherapy. It's my understanding from the chart that the child was in an open bassinet, and for phototherapy to be operational on a near naked baby in an isolet in a reasonably kept room, it would be very unusual for that to cause environmental heating in my experience and opinion.
Q: If a child is under — and I think there is some testimony and information in this case that this baby was under double phototherapy, under two lights. If it is suspected that an increase in the child's temperature is due to the double phototherapy lights and both of those lights are turned

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off, over what period of time would you expect the child's temperature to decrease?
A: I think that this speaks to that. That's basically environmental overheating, the same as you would get from bundling, and the Pediatric 1993 article speaks to that from a paper that was done I think 10 years previously that it takes 15 minutes or so, at max 30 minutes.
Q: How about if, as is indicated in the notes in the order in this case, the child is under two phototherapy lights and one is turned off? Is there any way to determine the time frame that the temperature would drop?
A: That study has never been done. I can't tell you. Again, it also depends on the lights used, the actual type of light, how much heat they generate. They are not supposed to generate a lot of heat. The older the light gets it generates more heat. That's why we change them. Is it a white light? Is it a blue light? There's studies done on heat generated by certain types of lamps. We are really kind of glossing over

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this whole thing and not looking at it scientifically, but what makes this suspicious to me is, number one, the baby shouldn't be dressed; number two, he is in a bassinet, not in an isolet, and I wouldn't expect an elevation of temperature certainly with one phototherapy light, and it's very, very rare in my experience to have overheating from phototherapy in an open crib. Going from two to one, I don't know if it makes any difference at all. There is certainly no science that I know that has looked at it.

**Q:** Do you have any criticisms of any of the pediatricians — and, for your reference purpose, Dr. Gladdio and Dr. Buganski were the two pediatricians within the same practice who saw this child. Do you have any criticisms of any of their management or care of this child?

**A:** I have a problem with that. I think that there is some responsibility of the pediatrician in the afternoon in question. I have no problem from 2:00 o'clock on or 2:30 on in the morning when the

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pediatrician was called, and the care up to that seemed superb. I have some issues with what happened in the phone calls or lack of phone calls or the follow-up or the responsibility of the pediatrician who was told once that the baby has a fever, at least once, and another time that the baby has — I would have to go in and get the exact phrasing.

**Q:** By all means, reference the chart or anything that would assist you.

**A:** In that nursing page that is the one that has the tab on it.

**Q:** Are we looking at the nursing note for the 23rd to 24rd of March?

**A:** Correct. At 1430 it says, "Dr. Buganski notified of increased temp. Orders received." And then at 2100 hours, it says, "Dr. Buganski notified of above episode." The episode I'm assuming is the cyanotic episode which required oxygen. So at least twice during that day he was notified. I did not get from his deposition an indication that he called back between 1430 and 2100. I did not get that he queried the nurse at 2100

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about all the other things that had been happening in between. I understand just today, I did not know that, that he was not a defendant in this case, but I think that he has some responsibility. I can't give a percentage.

**Q:** Do you feel that Dr. Buganski had an obligation to call back at any point after 1430 to inquire about the child's condition, which seemed to be one of the things that you mentioned in looking through all of this?

**A:** Well, either that or he has to make an assumption that his orders, standing orders, that he will be called every time a temperature was above 99 will be followed. When he is called back at 2100 hours, I don't know the content of that conversation. The question is was he made aware of everything that occurred from 1430 to 2100, and that would have cut possibly the delay time in getting the child on antibiotics significantly.

**Q:** Do you have information which allows you to determine what Dr. Buganski was made aware of at the time of the 2100 phone

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call?

**A:** The only deposition I have read is Dr. Buganski's. I have not read the nurse's depositions.

**Q:** What information do you feel either should have been elicited by Dr. Buganski at 2100 or offered by the nurse at the time of that phone call?

**A:** Basically observation, the thing that we have been talking about for so long. "What is this baby like?" "What does this baby look like to you, Nurse?" Or Dr. **Buganski:** "This baby doesn't look good to me. He's having cyanotic episodes, he's not feeding well, he's spitting up." Spitting up is generally nothing in a baby, but if a baby is spitting up, especially more than an hour after he has been fed, that indicates, and he has some abdominal distension, that indicates an ileus. Well, there are multiple reasons for an ileus. That could be a brain problem, it could be an obstruction in the intestine, or it could be infection.

In general, studies show that the stomach should clear of food in 45 minutes or

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so after a baby has been fed. So more than an hour after a baby has been fed, he's still bringing up formula, that means he is refluxing formula that is not moving out of the stomach. That's a sign of ileus.

So you have got three things, none of which are good, that could be going on with this baby. I mean, some of the intestinal obstruction things, such meconium ileus, are relatively benign most of the time, but this child could be under narcotics from the mother and have an ileus on that basis, although at three days of age it's doubtful; could have a brain injury, could have infection. Those are things that you would like to know about, and what happens between 1430 and 2100 I think is, in that six and a half hour period, is very important, and the doctor needs to know about it. Either the nurse needs to tell him or he needs to ask.

**Q:** Fair enough. Let's look at that time frame, 1400 to 2100. One of the things you have mentioned that either should be elicited from the nurse or offered by the

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nurse is whether or not there is any cyanotic episodes. At any point in time did this child have a cyanotic episode?

**A:** 1835. "Mom states baby has arched back." Arching is a very unusual posture.

"Stiffened extremities" — that indicates to me, if not a seizure, then certainly central nervous system irritability — "while feeding." "Cyanosis around mouth and hands noted. Baby suctioned at bedside mouthful of formula and mucous." That depends on whether that is a wet burp or how far after the feeding that is. "Continues to have difficulty breathing and expiration." Well, to me, that's a grunt. What that means is the baby is making that sound where you close your epiglottis over your trachea and you make that sound to bear down to get a little extra "umf" in your breathing, and it's a common sign of babies who are either in respiratory distress or sepsis. It's a sound of um, um, um. (Indicating) And it's a very common sign in infection and nursery nurses know that.

**Q:** If this child, in fact, was

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grunting, having difficulty in expiration and was grunting, would you expect that to continue up to the point in time where treatment was instituted and became effective or is it something that would come and go?

**A:** It comes and goes. It can be continuous, but in babies like this, especially babies who are septic, it comes when the baby is somewhat a little stressed. He may be stressed by feeding, stressed by trying to nipple, stressed because of being handled, but then the grunting will come out, and then when he is quiet, he goes back, and he's not having problems with his lungs necessarily. He's having problems basically with his entire body responding to this infection.

**Q:** If the child subsequent to that time was fed, would you expect that a nurse would be able to pick up that grunting in the course of feeding the infant?

**A:** Possibly, yes, depending on if she's listening and how loud or soft it is. It may be quite soft, but sure, the next time he is stressed, I would expect more likely

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than not that you would see it again.

**Q:** Any other cyanotic episodes between 1835 and 2100?

**A:** "Baby returned to nursery. Color, cyanotic again." I don't know if that is a new episode or the same. "DeLee suctioned again. Passing phallitis and mucous." Then it says by 1845 the lungs are clear and the color improving with facial oxygen. 1850. The color is pink. 2100 hours. Then it says Dr. Buganski is notified.

**Q:** Was it appropriate to suction this baby?

**A:** Sure.

**Q:** At 1835?

**A:** Sure.

**Q:** Was it appropriate to take the baby back to the nursery?

**A:** Absolutely.

**Q:** Was it appropriate to give supplemental oxygen?

**A:** Yes.

**Q:** The next thing I have noted is —

**A:** We didn't go through the temperatures during this period of time. So

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from 1430 to 2100 a number of temperatures were taken. They were all taken, as far as I know, axillary. Again, using our rule of thumb, anything above 99 would be, I guess, presumed to be a fever unless the rectal temperature was taken. They are all pretty much above 99, some of them are 99.9, 100.6. Again, I would expect the nurse to tell that to the doctor since he has a rule, 99 he wants to know, and that's pretty consistent with ours, by the way. Dr. Buganski saying 99 temperature done axillary is probably somewhere over a hundred rectally. It might be as much as 101. It might be closer to 100. And I would want to know what the rectal temperature is. If she had called Dr. Buganski and said, "We are still getting temperatures above 99" and he says, "Take a rectal temperature" and it comes in above 100.4, you are immediately at the bedside and you do a septic workup.

**Q:** When is the first normal temperature after the temperature elevations at around 2:00 or 2:30?

**A:** Mine is a little cut off.

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**Q:** I have one that is not. If you want to go ahead and —

**A:** Okay. Again, these are all axillary. So for us, the 98.6 is probably okay and the 97.9 is probably okay at 2400. Recognizing that some babies respond to infections by becoming cold and having very low temperatures, there a bottom range as well.

**Q:** Is that more often seen in newborns that are septic is that they become hypothermic?

**A:** Correct. It's less commonly that they get hyperthermic or febrile, but it does happen, and so we have limits at both ends of what we consider to be the normal spectrum.

**Q:** What would you consider then a normal temperature on an infant of this age?

**A:** In general, 37 degrees centigrade, 98.6 plus or minus one degree.

**Q:** Axillary? I want to make sure we are clear.

**A:** Rectal.

**Q:** The other thing that you have noted in terms of observing the baby and what information should be conveyed in a phone conversation, you have talked about whether or not the baby is feeding well. Between 1400 and 2100, do you see any indication that the child wasn't feeding well?

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**A:** Well, they switched the baby to dextrose and water in the nursery, and again, I'm having trouble with my time.

**Q:** Mine has the times.

**A:** That's at 2200. So that's after Dr. Buganski had been called. Three-quarters of an ounce of dextrose water at 1830 is not great. Again, we are talking about a three-day-old. It's okay at day one. Might even accept it on day two. We are beginning to see here half an ounce to an ounce, three-quarters of an ounce. This baby is not a vigorous feeder at this point. That doesn't make a diagnosis. It just increases your index of suspicion, and they did change to a premie nipple which has larger holes and is easier. Instead of sucking the formula out, you are basically pouring the formula in and hoping that the baby swallows it.

**Q:** The nurses in this case have been

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deposed, and let me ask you to assume that at 1830 the three-quarter ounce dextrose water that was fed in the nurse was in response to this episode that this baby had to see how the baby did with taking fluid. Would that be appropriate?

**A:** I have never heard of nurses doing that. If the baby had a low sugar, chem-strip or dextrose stick, and you wanted to feed the baby to give it sugar, fine, but it's like running a stress test on the baby. That's just generally not done by our nurses. I don't know how to respond to that.

**Q:** Fair enough. Any other indication that the child between 1400 and 2100 was not feeding well? And let me preface that by saying, as I understand your opinions, you are looking at a decreased amount that the child is taking?

**A:** Correct.

**Q:** And a change in the nipple type that's used?

**A:** Correct. And I think in the mother's deposition as well she indicated the baby was not feeding well and she was having

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some difficulty at that feeding in her room. You have got some issues around feeding, you have got some issues around temperature, you have got some issues around state or observational state, and you have a cyanotic episode and a potentially CNS irritability episode and potentially abdominal distension, although it's not documented in the chart.

**Q:** Let me stop you for just a moment. Do you have any information as to whether or not the mother's perceived difficulty in getting the baby to eat was ever reported to any of the nursing staff?

**A:** I don't know.

**Q:** Abdominal distension is another thing that you mentioned. At any time before 2100, is there any indication in the chart that the baby's abdomen was distended?

**A:** Not in the chart.

**Q:** Do you have any information from any of the depositions that you have read that indicate that to be so?

**A:** Not that I have read. I was told by counsel that one of the nurses has testified that there was abdominal distension

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at 6:00 o'clock, approximately 6:00 o'clock.

**Q:** Do you know who the nurse was? Was it indicated to you?

**A:** No. And I may be misstating that, but that's my recollection.

**Q:** From the testimony that you read and from the chart itself, there doesn't appear to be any indication of abdominal distension up to 2100; is that correct?

**A:** Correct.

**Q:** Also you mentioned spitting up. Is there any indication of spitting up in this time frame?

**A:** Yes. Well, suctioned mouthful of formula and mucous and then DeLee is also a suction. It's not actually spitting up, that is out of the mouth onto the bed, but basically what you're saying is food that had been in the stomach has now come up, refluxed up, into the mouth. I use those fairly synonymously but technically you are right. It's not spitting it all the way out. It's only spitting it up to the mouth.

**Q:** Anything else in terms of observation that you would expect either the

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nurse to offer to the physician in the phone call or for the physician to elicit from the nurse other than what we have already talked about?

**A:** No.

**Q:** You are aware that on the morning of the 22nd and the morning of the 23rd Joey Stalma was seen by a pediatrician on both occasions, correct?

**A:** Yes.

**Q:** Do you have any information as to what those physicians were told or what they did in terms of reviewing the chart when they came to see the child?

**A:** Only what Dr. Buganski wrote in the chart on the 23rd and a brief — I don't think he had any independent recollection by what his customary things were to do in the nursery when he was deposed. He has a brief one line about the child is doing well. Let me get to the doctor's notes, and then he goes ahead and does a circumcision. He says, "Baby alert. Good cry." This is 0800 on the 23rd. "Bilirubin 7.0 last night." Above that he writes some things about the Coombs

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and phototherapy.

**Q:** For example, "Bilirubin 7.0 last night," do you know one way or the other whether that was from reviewing the earlier chart or from discussion with the nurse?

**A:** I don't know.

**Q:** Do you know whether or not there was any discussion between the nurse and Dr. Buganski as to the child's temperature?

**A:** I do not know. And then he went on to do a circumcision. 0855 is when the mother signs the consent, and I assume that he does it shortly thereafter. Most pediatricians don't spend all morning in the hospital. They want to get to their office. So sometime between 9:00 and 10:00 he has done the circumcision and has observed the child during that procedure.

**Q:** Now knowing the end of the story, would you have expected that in the course of that hour or two with the child that there would have been any sign or symptom that Dr. Buganski would have or should have picked up on?

**A:** Potentially not, especially if

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most of the exam occurred while the child was being circumcized on an infant restraint board, crying and appearing — when you are doing that much stress, the baby is going to generate cries and an adrenaline response which is not his usual state, so you may be fooled by that.

**Q:** Can you tell from the chart as to when exactly the circumcision was done?

**A:** No. As I said, the consent is signed at 0855. This is labeled at 0800. The pediatrician is not going to spend the day in the hospital. He wants to get back to his office because he has got patients to see. He does the circumcision because he signs it. In my opinion it has got to be done after 0855, after the consent is signed, and probably before 10:00 o'clock because he wants to be in his office seeing patients. That is an educated guess.

**Q:** Is this the consent form that you have seen in the chart?

**A:** Yes.

**Q:** It is your understanding that this is Dr. Buganski's signature? And I'm not

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trying to trick you by the question, but I have had this same question in my mind.

**A:** Yes. I think it is. Do you see it is signed by the mom and it's dated and timed at 0855?

**Q:** Yes.

**A:** Okay.

**Q:** Shortly after Joey's birth, a neonatologist by the name of Dr. Kripke saw Joey. Do you have any criticisms with any of his assessment or care?

**A:** No.

**Q:** Any criticisms of any of the neonatologists who were consulted at roughly 2:15 in the morning on the 24th?

**A:** No.

**Q:** By that I mean from that time forward?

**A:** None.

**Q:** Any criticisms of how this child was worked up for sepsis once he was sent over to the neonatal unit?

**A:** No. There is some controversy of whether they should have done the LP immediately. It makes no difference as far

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as I'm concerned. They waited because of the child's abdominal distension and did it that afternoon. I think that meets the standard.

**Q:** Do you think that the antibiotic coverage that was initially begun was appropriate?

**A:** Well, they were considering more of an intestinal problem and they started different antibiotics. I think it was appropriate.

**Q:** Does it appear, though, that once there was some laboratory studies back on this child, that the antibiotics were then changed?

**A:** They were changed to Ampicillin and Genomicin and then they were changed again to a higher dose when two days later they were still seeing some strep in the spinal tap that was done on the 26th. So they went I think from 200 milligrams per kilogram to 400 milligrams per kilogram per day which is the appropriate meningeal dose.

**Q:** Have you formulated opinions with regard to the appropriateness of the nursing care in this case?

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**A:** The only problem I have with the nursing care is from approximately noon or 2:00 o'clock on the 23rd until the notification to the physician at 2:00 o'clock in the morning on the 24th.

**Q:** I assume that in your opinion contact should have been made by the nurses to the physician at some point in time?

**A:** Yes.

**Q:** When is it that you feel that contact should have been made?

**A:** Between 3:00 and 6:00 p.m., and the contact at 2100 hours should have in one way or another — and I don't know who to lay this responsibility on — in one way or another should have conveyed the fact that this baby was not doing well from multiple points of view, you know, whether it be feeding or temperature control or observational state or having cyanotic episodes or abdominal distension. There was enough there to raise the flag that something is wrong with this baby, and again, I can't lay responsibility at that point because I don't know what went on in the conversation.

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Q: Fair enough. To make sure that I understand your criticisms, between 3:00 and 6:00 p.m. tell me anything in the chart that is a finding or something to you of significance that you feel that the physician should have been contacted about?
A: All the temperatures and the things that we just talked about. In other words, the doctor gave an order at 2:30 to undress the baby and to retake the temperature in an hour. There should have been some communication back to him that the temperature did not fall below 99 and at the same time to indicate to him the other problems that were going on with the baby.
Q: That's what I want to make sure I'm clear. By other problems, we have talked already about the episode at 1835.
A: Feeding, cyanosis, potentially abdominal distension — we will have to check that out in the nurse's deposition — and behavioral state. And, again, I'm not asking the nurse to give a McCarthy scale. What I'm saying is "this baby doesn't look right." That's all she has to say.

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Q: 1835 is 6:35?
A: Yes, ma'am.
Q: That's when this episode occurs. We have talked about this time frame of between 3:00 and 6:00 p.m. That episode occurs after that point in time.
A: Well, then I will amend my thing to say 3:00 and 6:35 p.m.
Q: If there is an elevated temperature sustained over a half hour period of time, is it appropriate for the nurse to contact either the attending pediatrician or the neonatologist?
A: Yes.
Q: Let's assume at 1430, when there is now a temperature of 99.9, assuming that a phone call had been made to Dr. Buganski, or to anyone for that matter, how in your opinion would that have changed the outcome of this case?
A: I think that should have brought the pediatrician or the neonatologist to the bedside for an exam, and that given the other things that were going on concurrently and what I believe to be the behavioral state of

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that child that at this point is not undergoing a circumcision, that someone would have said "This baby doesn't look right, we need to do a septic workup, stop the feeding and start an IV" and do the appropriate things. I think that diagnosis was capable of being made any time after 1430 in the afternoon is what I'm saying by a reasonably prudent physician/neonatologist and that something should have been seen wrong by a reasonably prudent nurse saying "This baby doesn't look right."
Q: In terms of what is documented in the chart by way of findings or red herrings or red flags, I guess I should call them — let's not confuse the two, red flags. At 1400 we have a temperature of 100.6, correct?
A: Correct.
Q: At 1430 we have a temperature of 99.9, correct?
A: Correct.
Q: If your time is cut off, let me show you. At 11:00 o'clock the child fed one and one half ounce.
A: Yes.

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Q: Which is the only documented feeding that we have before 1430, correct?
A: I think that's the last time you can say that this baby meets some reasonable criteria of doing adequately.
Q: Is it fair then that what we have in the chart by 1430 are two elevated temperatures in terms of any signs or symptoms that there's something brewing here or something going on?
MR. KULWICKI:
Let me have the court reporter read that back.
MS. BAER:
I can repeat it.
BY MS. BAER:
Q: Is it fair then that by 1430 what we have in the chart that evidences from your testimony any red flag or potential sign of a problem are two temperatures above 99 degrees?
A: Yes. And I can't read the time on when the feeding starts to decrease.
Q: Let me show you here. At 11:00 o'clock we have the child —
A: That's 1515. I'm sorry. What you

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would expect in a baby is for feedings to get better with time generally, but we go from one and a half ounce to one ounce to three-quarter ounce to one ounce to one ounce. The feeding is getting less, and they are doing more to get the baby to feed by changing to a premie nipple.

**Q:** But sticking to the 1430 time frame.

**A:** 1430 I would agree with you.

**Q:** In light of that fact, if a pediatrician had come in to see the child and decided to just have some continued observation of the child, would that be appropriate?

**A:** If he examined the child and he felt that the child did not look sick, whether that's because of his experience or whatever, but to come to the bedside and see the child himself would have met the standard.

**Q:** Assuming that someone did come to the bedside at roughly 1430, felt that the child looked okay. Now looking at what is documented in the chart, at what point in time at the outside do you feel that a septic

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workup should have been done on this child?

**A:** Well, then from 1430 to 2100 we have many more things happening, so I think certainly by 2100. That would be 9:00 o'clock at night that a septic workup should have been done.

**Q:** Would the first step in a septic workup be to get a cbc and differential?

**A:** It's not the first step. They are all done concurrently. It's part of the workup.

**Q:** Would you simultaneously draw for cultures?

**A:** Yes.

**Q:** And at what point in time would you start the child on antibiotics?

**A:** As soon as you drew the culture.

**Q:** In this case what would you have started this child on at the time cultures were drawn?

**A:** Personally I would have used Ampicillin and Genomicin, which are the standard penicillin and aminoglucoside therapy for neonatal sepsis. I don't think I would have been as oriented towards a GI

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cause and, therefore, using more antibiotic coverage for GI organisms, but that's an area I wouldn't have a strong opinion on.

**Q:** Assuming that a septic workup had been begun at 2100 — and by that I mean cbc and differential drawn, cultures drawn and the child started on antibiotics. Do you have an opinion, to a reasonable degree of medical probability, as to how this child's course would have been altered?

**A:** Well, the closer you get to the time that it was actually done, the less comfortable I feel in saying there would have been a difference.

**Q:** Can you say to a medical probability that if it was started at 2100, it would have changed this child's outcome?

**A:** In general, we have used — and I don't think with a lot of evidence. There's some evidence, but it's derived from a lot of different sources, but in general, we say that greater than a six-hour delay makes a difference in these kinds of cases, and at 2100 hours we are at seven hours. We are at the cusp of what would be considered a

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significant delay. There are neonatologists and there are infectious disease people who would say it would be a longer period of time, but it depends on the organism and on the person. An older child probably has a better defense mechanism than a younger child, and certain organisms are more aggressive than other organisms. So delays mean different things depending on the case.

But, in general, we have used a six-hour delay. So possibly 2100 hours a septic workup would have made a difference, possibly not. I can't say more likely than not. You are right at that six to seven hour period.

**Q:** Is it fair to say then that you can't quantify in any way in terms of saying "Joey Stalma would have this impairment or wouldn't have that impairment"?

**A:** No. I can't quantify. I can not quantify.

**Q:** Ultimately Joey was diagnosed with Group B strep meningitis, correct?

**A:** Septicemia and meningitis, correct.

**Q:** In your opinion, was that probably

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transmitted through the genital tract at birth?
A: Most likely, yes. It's a little late in terms of three days, but we consider early onset strep anything in the first week of life, and in general, the vast majority of those cases are transmitted from the genital tract, although there may be interventions which increase the risk. In other words, the baby can be colonized, that is the germ on the skin or in the GI tract, and not cause any problems, but certain things which invade the baby may cause the organism that is sitting on the skin to invade, and there were two procedures that were done that were invasive; one was the fetal scalp electrode that was done during monitoring, which may have been the point of invasion, and the second is the circumcision.
Now, many of these babies inhale their fluid at birth into their lungs and start off with a pneumonia. Since Joey did not start off with a pneumonia, I think it's unlikely that that was the point of entry. It is much more likely that the point of

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entry was either through the scalp electrode site or the circumcision site.
Q: Can you say to a probability which that was?
A: No.
Q: In any event, from your review of the mother's labor and delivery records, were there any contraindications to placing a fetal scalp electrode?
A: No. It was an induction and it's standard in that hospital for inductions to have fetal scalp electrodes or certainly fetal monitoring. Let me just say the mother had received, starting early on, because of her Rh problem she started receiving Celestone injections weekly, and I could not determine when they stopped, but they started in early February, and we know that steroids potentially increase the risk of infection to both the mother and the baby. So I don't think that was thought about after this baby was born but, you know, 20/20 hindsight is great vision. You look back and say "Why did this baby get beta strep and not another baby?" Twenty-five percent or so of moms are

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colonized with beta strep. Why this one? The mom had a number of amniocenteses, she was given Celestone on a weekly basis, we had a fetal scalp electrode. There are a number of issues here that placed this baby at a slightly high risk, but now I'm looking at that with a 20/20 hindsight.
Q: Is it fair to say that based on what was known at the time of Joey's birth the mom didn't have the risk factors or predisposing factors that would have put Joey at increased risk; for example, prolonged ruptured membranes? She didn't have any evidence of that, did she?
A: No. The risk factors that are named or used in the CDC 1996 treatise, she would not qualify under any of those. No beta strep bacteruria during pregnancy, no history of previous baby with beta strep, no prolonged rupture of membranes, the baby was not less than 37 weeks gestation. She doesn't meet any of those criteria.
Q: No evidence of chorioamnionitis?
A: No evidence of chorio. She never developed a fever after the delivery or

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before the delivery. She doesn't meet any of those criteria.
Q: Do you have an opinion to a medical probability as to when this infection became colonized?
A: Colonized probably at birth, in utero or at birth.
Q: Is it fair then that at whatever point antibiotic coverage was started on this child, it would have been for treatment, not for prevention?
A: Correct.
Q: Let's assume a septic workup had been begun and antibiotic treatment started at 1835, which was the time of this reported event with mom. Can you state to a medical probability as to whether or not, with those events occurring at that time, it would have made any difference in Joey's outcome?
A: I think it would have. At that point we are getting far enough away from the actual time that I think it begins to have some validity that there would have been a difference.
Q: Can you quantify that for me in

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any way?
A: No, ma'am, I can't.
Q: Maybe that was a poor question. By that I mean in terms of either percentages or particular deficits that Joey would or would not have sustained?
A: No, I can't.
Q: What is an average respiratory rate in a newborn?
A: Forty to 60.
Q: How about average pulse rate?
A: 120 to 160. In post mature babies it may get down as low as 100. As long as the blood pressure is maintained, it's not a problem.
Q: Do you have any criticisms of the fact that there weren't in the first couple of days any blood pressures taken on Joey?
A: There should be an initial blood pressure. It's standard to take an initial blood pressure. Once the initial blood pressure is found to be normal, it doesn't have to be taken again.
Q: Do you know if there was an initial blood pressure taken on him at the

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time of birth?
A: I didn't check, but I don't have a criticism.
Q: Okay. That's fair enough. We can curtail that. What is normal blood pressure for a term newborn?
A: It depends on gestational age.
Q: Thirty-eight to 40 weeks.
A: The graph by Versmold, which is published 1991, is going to give you somewhere between 60 systolic, 40 diastolic. I have a copy of that as an appendix to my textbook. I don't see that many normal blood pressures in term infants, but somewhere in that range.
Q: Can an increased serum bilirubin cause poor suck, cause the baby to have poor suck?
A: If it's quite high.
Q: Would you have a cut-off level at which you would expect to see that?
A: Above 15. Not at the levels that he had.
Q: How about irritability? Same question.

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A: No. In fact, again, above 15 they may be a little somnolent, a little more hypotonic than to normally expect.
Q: What are the signs and symptoms of sepsis in a newborn?
A: That's the problem. They can manifest to almost anything. Signs are very diffuse. They can be hyperthermic, normothermic or hypothermic. They can be irritable, they can be somnolent. High bilirubin, jaundice can be a sign, respiratory distress, grunting, poor feeding. Basically any time a baby doesn't look stone cold normal, sepsis has to be in the differential of why not, because sepsis is something that we can treat, and so we teach the residents always look for sepsis in every differential in a newborn that is not acting right, consider it.
Q: Do I understand that you feel probably that jaundice in this case wasn't related to the child's sepsis?
A: It was not. It was not a direct type of bilirubinemia and it wasn't that high.

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Q: This was primarily an indirect that he had, correct?
A: Primarily an indirect which the liver was processing well. In general, when you have sepsis, one of the early signs of sepsis is a direct bilirubin greater than two.
Q: Do you have an opinion to a medical probability as to what point in time central nervous system damage began on Joey?
A: I think it began when he began having some irritability.
Q: Can you time that for me?
A: Let me go back to the nurse's notes. I will just state that he had central nervous system irritability at 1835 on the 23rd; therefore, I think that the process was beginning at that time.
Q: In your experience, is there any difference in the presentation of sepsis from Group B strep in an early onset as opposed to a late onset?
A: Well, the late onset most commonly are Type 3's and they often come in with only fever or fever and minimal other symptoms.

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The early onset most commonly starts out with respiratory problems, and although can go to meningitis, as it did here, most commonly does not. There really is a different presentation based on the type, and the type is related to how it's acquired and also we differentiate early onset from late onset.

**Q:** Other than the possibility that there was grunting at 1835 with this episode that was described with Joey, did you see any other evidence of respiratory distress in Joey up to 2100 on the evening of the 23rd?

**A:** No. I did not. His lungs were clear, and I don't think he had the pneumonitis form of Type 1 Group B strep, the way it usually presents. It usually presents initially with pneumonitis.

The grunting is a very important sign. It's not a sign necessarily of respiratory problems. It's a sign of a child who is not well and using accessory muscles, plus closing his glottis to help him maintain his normal ventilation status.

**Q:** Do you have any information on Joey's current condition?

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**A:** Just verbally from counsel today.

**Q:** I assume then that you have not formulated any opinions in terms of the permanency of Joey's current condition?

**A:** I think it's permanent because it's a static encephalopathy and it was permanent — I have records up to about two years of age. I don't think it's going to get better or go away. I think there's some treatments which may prevent it from worsening, and some treatments in occupational and other things which may help him function better, but in general, these neonatal encephalopathies are static and permanent. I have no opinions on life expectancy. I have no opinions on the type of care he will need later in life. Those are all handled by other people other than myself.

**Q:** Just to make sure that I am clear. In your opinion, a septic workup and antibiotic treatment should have been started by 2100 on this child?

**A:** I said between 1430 and 1835 it should have been initially, somebody should have been called and it should have been started. If we miss that opportunity, then certainly by 2100. Obviously the closer that you get to the time antibiotics were actually started, the less strong is my opinion that it would have made a difference.

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**Q:** Assuming that a physician was made aware of the episode at 1835, the amount of feeding or how Joey fed at 1515, at 1830 and the temperatures between that time change, would it have been reasonable to start a septic workup by 2100?

**A:** The physician should have come to the bedside within 30 minutes and examined the child, and I believe that he would have seen at that time by 1900 that this child was not doing well and then another 30 minutes to start antibiotics. We are now to 1930. You're still an hour and a half away from 2100. I don't think it takes two and a half to three hours to get to the bedside and start treatment. In general, our response time from a call from the nursery needs to be 30 minutes or less, very similar to the ACOG Emergency Cesarean Section Rule of 1985.

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**Q:** What we are looking at is 1935 to have antibiotics started?

**A:** Correct.

**Q:** With a septic workup to have been started by 1900?

**A:** Correct. Or you could have started that over the phone and come to the bedside and examined him and cut that time down a little bit, but you understand we are dealing with hypothets here.

**Q:** Sure. I think that's all the questions that I have. The only other thing, is there any other particular literature cite that I ought to be aware of that would relate to this case other than what is in your folder, which we will have her put on the record quickly so you know I get what I need?

**A:** Not that I'm aware of.

**Q:** Okay. Thank you very much.

**MR. KULWICKI:**

Doctor, you have the right to review this transcript in the event it is transcribed or you can waive that right?

**THE WITNESS:**

I would like to review it if we

think we are going to go to trial.

**MR. KULWICKI:**

That's a good idea.

**THE WITNESS:**

Because I'm going to be asked about it I'm sure at trial.

**MR. KULWICKI:**

Lisa, could we have a waiver of the seven-day rule?

**MS. BAER:**

Sure. Do you want 30 days?

**MR. KULWICKI:**

That would be great.

**MS. BAER:**

Are you comfortable with that, Doctor, a 30-day time frame to have a chance to look through the transcript?

**THE WITNESS:**

Sure. When is the trial set for?

**MS. BAER:**

April.

**MR. KULWICKI:**

Are you going to order this?

**MS. BAER:**

Yes.



**MR. KULWICKI:**

I will order a copy.

(Off the record.)

**THE WITNESS:**

Practice Guideline for the Management of Infants and Children, 0 to 36 Months of Age, With Fever, Without Source. I will give you only the first author. Baraff, Pediatrics, Page 1, July 1993.

Hot Babies, Managing the Very Young Febrile Infant, Roberts, Contemporary Pediatrics, September 1987.

Managing the Febrile Infant, No Rules are Golden, Prober, Contemporary Pediatrics, June 1999.

The Febrile Infant and the Assumption of Risk, Radetsky. This actually is probably not published. This is probably something I got at a conference.

Evaluation and Management of Febrile Infants Younger Than 60 Days of Age, Powell, Pediatric Infectious Disease Journal, 1990, Page 153.

This is a drug throwaway on Claforan by the pharmaceutical company called



Hoechst. It's called Challenge to Pediatric Medicine: Is it Sepsis in this Febrile Infant?

Evaluation of the Necessity For Hospitalization of the Febrile Infant Less Than Three Months of Age, Wasserman, Pediatric Infectious Disease Journal, March 1990.

**Six Criteria:** Obviate Hospitalizing Febrile Infants, by Yasgur, Pediatric News, August 2000. That's a throwaway.

Another throwaway, Clues Offered in Diagnosing a Child with Fever of Unknown Origin by Rosenthal, Infectious Diseases in Children. Unfortunately I don't have a date.

Determining Which Child With Fever Is At Risk, Infectious Diseases in Children by Rosenthal, March 1998.

**MS. BAER:**

That's it. Thank you very much.

(End of Deposition.)



WITNESS CERTIFICATE

I have read or have had the foregoing testimony read to me and hereby certify that it is a true and correct transcription of my testimony with the exception of any attached corrections or changes.

JAY P. GOLDSMITH, M.D.

(Check One)

( ) NO CORRECTIONS

( ) CORRECTIONS; ERRATA SHEET(S) E

CERTIFICATE

I, DIANA S. EZELL, RPR-RMR, Certified Court Reporter, do hereby certify that the witness, after having been first duly sworn to testify to the truth, the whole truth, and nothing but the truth, did testify as hereinabove set forth;
That the testimony was reported by me in shorthand and transcribed under my personal direction and supervision, and is a true and correct transcript, to the best of my ability and understanding;
That I am not of counsel, not related to counsel or the parties hereto, and in no way interested in the outcome of this event.
That my certificate is in good standing.

DIANA S. EZELL, RPR-RMR #85142
CERTIFIED COURT REPORTER

## Lawyer's Notes

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