[redacted]

[redacted] DC Board of Medicine
717 14th St., NW, 10th Floor
Washington, DC 20005

Re: [redacted]

Dear [redacted]:

I am writing in response to your letter dated September 2, 2010 requesting further information on the [redacted] medical malpractice case. I am a Board Certified Neonatologist and was one of the clinicians who participated in [redacted] care at the [redacted]

[redacted] was a 34-week preterm infant born on February 1, 2008 and although he was stable from a cardiopulmonary standpoint, he required nasogastric feeds and thermal support in an incubator. On the fifth day one of my partners noted that [redacted] had a heart murmur. A chest x-ray, electrocardiogram and four extremity blood pressures were obtained. The studies were interpreted as normal. The radiologist who reviewed the chest x-ray interpreted the heart size as normal. The cardiologist who reviewed the EKG interpreted it as normal. I saw [redacted] from the fifth to eighth day of the hospitalization. I reviewed his chest x-ray, electrocardiogram and blood pressures and agreed that they were normal. The character and radiation of the murmur was compatible with the diagnosis of peripheral pulmonic stenosis which I documented in the medical record. Peripheral pulmonic stenosis is benign, does not require echocardiography and can be followed on an outpatient basis. If a patient developed symptoms or the quality of the murmur changed an echocardiogram would be obtained at a later time. [redacted] pattern of feedings improved and weight gain was established. His temperature stabilized in an open crib. I discharged [redacted] home on the ninth day of life (February 10, 2008) with a scheduled home nursing visit and a follow-up appointment with a Pediatrician at the [redacted] When I dictated the discharge summary, I probably misspoke saying the baby had an echocardiogram rather than an electrocardiogram. When I authenticated the transcription I did not catch that documentation error.

There was no clear indication to order an echocardiogram. Our standard practice at [redacted] is that all infants with heart murmurs are screened for congenital heart disease with a chest x-ray, electrocardiogram, 4 limb blood pressures and a check of their pulse oximetry. All [redacted] tests were interpreted as normal by myself and a second board

certified neonatologist who had originally ordered the tests. [redacted] had eight days of continuous pulse oximetry in the NICU and his clinical course was one of progressive improvement to the point where standard discharge criteria were met [redacted] initial symptoms were all attributable to the preterm birth. He did not have symptoms of hypoxia, tachypnea, lethargy, or persistent poor feeding, all of which are associated with hypoplastic left heart. After nine days of observation in the NICU I felt that the chances of [redacted] presenting with an obstructive cardiac lesion like hypoplastic left heart were extremely small.

The medial record reflects that [redacted] was seen by a Home Health Nurse on February 11, 2008. The nurse noted that "baby looked fine, examined fine, eating well, good suck breast feeding." [redacted] parents did not keep the Pediatric follow-up appointment which I had scheduled for them on February 13. However, they brought [redacted] to the emergency department at the [redacted] on February 14, 2008, four days after hospital discharge with a complaint of several hours of lethargy and poor feeding. Shortly after arrival, [redacted] suffered a cardiopulmonary arrest and expired.

Postmortem examination revealed a hypoplastic left heart and an abnormal bifid pulmonic valve. This finding is significant because it explains why I confused [redacted] murmur with benign peripheral pulmonic stenosis.

I have enclosed a paper published in Pediatrics (2008;121;751-757) entitled Epidemiologic Features of the Presentation of Critical Congenital Heart Disease: Implications for Screening. It makes several points germane to this case.

1. The incidence of potentially preventable significant physiologic compromise as a result of congenital heart disease in the general population is estimated to be 1 per 15,000 to 1 per 26,000 live births. This child would fit into this group.
2. The vast majority of these infants present in the first 3 days of life. This is documented in Figure 2 on page 755 of the paper. It is notable that *all* of infants with Class IV congenital heart disease, which includes hypoplastic left heart, presented in the first 5 days of life. Despite having that type of heart disease, Deandre had a highly atypical late presentation.
3. In the discussion section of the paper it is noted that there is no broadly accepted standard for screening a population of infants for congenital heart disease. It is a challenging problem in light of the fact that 50%-75% of all newborns have an audible murmur. The vast majority of these murmurs are benign.

Based on the data presented in this paper it is apparent that I was confronted with an infant who had a rare delayed presentation of an uncommon cardiac condition. The [redacted] case was investigated by both the [redacted] Department of Health Services and the [redacted] Medical Board. Both agencies closed their cases without issuing a sanction, reprimand or a demand for corrective action.

Although I feel that my treatment of [redacted] was conscientious, I was frustrated that I was unable to diagnose his congenital heart disease prior to discharge. The above article makes it clear that it is not uncommon to miss the diagnosis of this type of heart disease in

the immediate newborn period. In 2009 I undertook a project in my role as the [redacted]. I organized a review of the literature pertaining to the screening of populations of newborn infants for unsuspected congenital heart disease. Based upon the work of Meberg, et. al. (J. Pediatr 2008;152:761-5) and other related literature, I worked with the Pediatric Cardiology group to implement a pilot program for oximetry screening of all newborn infants at the [redacted]. Attached to this letter are both the Meberg article and the cardiac disease screening algorithm I developed. Screening began in January 2010. Over 2000 babies have been screen to date, and 2 cases of heart disease have been identified. Based on the encouraging results at the pilot site, (good sensitivity and low rate of false positive studies), I am now moving forward with implementation of this screening program at 13 additional hospitals where I am responsible for the neonatal care. When fully implemented in 2011, I anticipate that 33,000 newborns per year will be screened for congenital heart disease. No disease screening program is 100% effective, but I believe that the work I have lead will significantly reduce the likelihood that a newborn baby will be discharged from one of our hospitals with undiagnosed congenital heart disease.

I was saddened when I learned of [redacted] demise and felt compassion for his parent's grief. Over the course of 20 years I've found the practice of neonatology both challenging and rewarding. It can also be humbling.

Sincerely yours,

[redacted]

Enclosures: Pediatrics (2008;121;751-757)
J Pediatr (2008;152:761-5)
Congenital Heart Disease Screening Algorithm