

## Young Patient Suffers Cardiac Arrest and Brain Damage After Delayed Referral to Specialist

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### Introduction

Diagnostic errors — including delay in diagnosis, wrong diagnosis, and failure to diagnose — are the basis for many malpractice allegations against physicians. These cases are particularly troublesome when they involve short-term, sporadic, and/or nonspecific complaints. This interesting case from the Northwest illustrates a common conundrum that physicians face — how much workup is enough?

### Facts

The patient was a 12-year-old female who had an unremarkable medical history; however, she had a family history of a seizure disorder (an older brother had seizures as a child). In January of Year 1, the patient had what her mother described as a 3-4 minute tonic-clonic seizure. The mother called emergency medical services, and the patient was taken to a

local emergency department (ED). At the ED, the patient received a brain CT scan and cardiac monitoring, both of which produced normal results. As part of the patient's medical history, her mother indicated that the patient had experienced one similar event in the past.

The patient was discharged from the ED with an initial diagnosis of a seizure disorder. Following the ED visit, the patient's parents took her to a pediatric neurologist, Dr. N (who was not a MedPro insured).

After completing a thorough workup on the patient, the neurologist was unable to determine whether the patient was epileptic or whether she was suffering syncopal episodes that were decreasing blood flow to her brain, resulting in seizures. Dr. N requested that the patient return in 4 months for follow-up, which did not occur.

In July of Year 1, the patient had another seizure, and Dr. N saw her again. An EEG was ordered, and the results were unremarkable. Dr. N also ordered an ECG, which showed a slightly prolonged QT interval and mild bradycardia (the QT interval was 480 ms [432 ms is considered normal], and the pulse was 50). Dr. N did not think the ECG was abnormal enough to warrant immediate referral to a cardiologist; rather, he provided the patient's parents with a copy of the ECG and recommended that they consult a primary care physician, who could order a cardiology consult if he/she felt it was warranted.

The following month, the patient first saw Dr. R, a MedPro-insured pediatrician. After evaluating the patient, Dr. R concurred with Dr. N's "watchful waiting" approach. She asked that the patient return in a month, which she did. At that appointment, the patient indicated that she was feeling well and had not had any dizzy spells or seizures. Dr. R had a repeat ECG run in the office, which showed a QT interval of 474 ms and a pulse of 58. Because the patient's vitals seemed to be trending in a positive direction, Dr. R recommended immediate follow-up if the patient had any further symptoms; otherwise follow-up should occur in 1 year.

The patient did not follow up in 1 year as requested; she was seen almost 2 years later for an unrelated injury. At that appointment, nothing related to the seizure history was discussed. Her pulse was 60 at that appointment, and a repeat ECG was not performed.

In March of Year 5, the patient went into sudden cardiac arrest. CPR was administered at the scene, and the patient was successfully resuscitated. The following day, the patient was diagnosed with long QT syndrome. As a result of the cardiac arrest, the patient suffered significant neurological damage, resulting in permanent loss of much of her cognitive function. She was able to finish high school with much accommodation and assistance. However, her vocational prospects are extremely limited, and she requires assistance with daily activities.

A malpractice suit was filed against Dr. N and Dr. R alleging failure to refer the patient to a cardiologist, who presumably would have identified the risk of sudden cardiac arrest resulting from untreated long QT syndrome. The case against Dr. R was settled with a payment in the high range, with defense costs also in the high range. The case against Dr. N also was settled with a payment in the high

range. Dr. N was not insured by MedPro, so his defense costs are unknown.

## Discussion

For a plaintiff to prevail in any medical professional liability case, he/she must prove, among other things, that a defined standard of care exists, that the healthcare provider's performance fell below that standard, and that the failure to meet the standard of care caused damage. The problem, of course, is that unanimity of opinion regarding the standard of care does not always exist. Consider the case just described: Did this catastrophic event occur as a result of a failure of either physician to meet the applicable standard of care?

From the standpoint of medical causality, there does not appear to be any doubt about what occurred. The patient had a latent heart defect that, if detected, could have been treated with medication or mechanical intervention. Several factors contributed to the failure to identify the patient's developing condition (long QT syndrome). The first factor was patient/parental noncompliance. The patient was asked to return for follow-up no later than 1 year after her initial appointment with Dr. R, the pediatrician; however, that

follow-up did not occur. Unfortunately, Dr. R did not have an effective patient "tracking" mechanism in place. If she had, she would have known that the patient had failed to keep her appointment and could have contacted the patient/parents to find out why the patient had not returned. It is noteworthy that the patient also failed to keep her follow-up appointment with Dr. N, the neurologist, after initially seeing him.

Another contributing factor in the patient's delayed diagnosis was inadequate evaluation of her neurological status when she did return to see Dr. R. That appointment occurred 2 years after the initial visit, and its purpose was for an unrelated injury (an injury to the patient's foot). Dr. R did not assess the patient's neurological status during that appointment; although Dr. R had no independent recall of that visit, it is unlikely that she thoroughly reviewed the patient's record before treating the patient for the foot injury.

Further, it does not appear that Dr. N and Dr. R ever directly communicated regarding this patient. Dr. R would have been responsible for initiating this communication, as she was not the patient's doctor at the time of the referral from Dr. N. Although such a

conversation may not have resulted in a referral to a cardiologist, it is at least plausible that the doctors might have concluded that a referral was a logical next step.

A pressing question in this case was whether Dr. R should have immediately referred the patient to a cardiologist. Several pediatric experts reviewed the details of the case. Although a supportive expert was located (who was somewhat hesitant), several other experts could not support the care.

One expert was adamant that a triad of symptoms should have prompted an immediate referral to a cardiologist – (1) a presyncope diagnosis (i.e., syncopal episodes apparently occurring without a neurological origin, and likely relating to anoxia); (2) bradycardia; and (3) a prolonged (or borderline prolonged) QT interval. Neither MedPro nor Dr. N’s professional liability insurer could locate a cardiology expert who could support either physician’s care.

After investigation and analysis, MedPro and the other liability carrier concluded that this was a high-volatility case (i.e., a case that the defense could expect to win at trial; however, if lost, the damages could be economically catastrophic and possibly well in excess of the

insureds’ limits of liability). When determining how to handle the case, a number of considerations were weighed. First, although seizures in adolescent females are not uncommon, long QT syndrome is a rare condition (which might not be familiar to many physicians). Additionally, noncompliance with follow-up care was a major factor in the patient’s delayed diagnosis. However, given the patient’s young age, her significant and permanent injury, and weak support for the doctors’ actions, both doctors and their insurers felt it was best to settle the case, albeit by large payments.

## Summary Suggestions

The following suggestions might help healthcare providers prevent patient injuries resulting from diagnostic errors and miscommunication:

- Implement a tracking mechanism that will provide alerts for critical missed appointments. Follow-up appointments typically fall into two categories: low-priority and high-priority. Careful tracking of patients who have high-priority needs is a critical component of quality care and may help reduce adverse patient outcomes.

- When a patient presents for evaluation or treatment of a new condition, thoroughly review the patient’s record to ensure no outstanding issues or complaints require follow-up action.
- Be sure to emphasize to patients or their caregivers the importance of contacting the practice promptly if/when specified events occur.
- Request consultations or make referrals as appropriate. Some providers view consultations and referrals as an admission of failure or a sign of inadequacy. However, they actually are an indication that the provider has a realistic understanding of his/her scope of

expertise and is prioritizing the patient’s health and well-being.

- Although not every referral needs to be accompanied by direct contact, err on the side of caution in complex cases (e.g., conditions that have uncertain etiologies).

## Conclusion

Medical diagnosis is a complex process, which, unfortunately, does not lend itself to a simple “checklist” resolution. Efficient tracking and review processes, accompanied by thorough communication and appropriate referrals, will help make the process of diagnosis as efficient and efficacious as possible.