Monitoring during phenytoin infusion
(13HDC00756, 1 July 2015)

District health board ~ Emergency department ~ Public hospital ~ Paediatrics ~ Phenytoin ~ Monitoring ~ Right 4(1)

A two-and-a-half-year-old child suffered four epileptic seizures and was taken by her mother to the Emergency Department (ED) at a public hospital. The child was assessed by a registered nurse (RN) and by a paediatric emergency specialist. The paediatric emergency specialist noted that the child had not responded to her usual anti-epileptic medication and recommended that, if she had further seizures, the child be given phenytoin, a different type of anti-epileptic medication. The child's care was then transferred to the paediatric team.

The child suffered further seizures, and a paediatric registrar prescribed intravenous (IV) phenytoin. The paediatric registrar and the RN inserted an IV line in the child's left hand. They flushed the line and checked for patency and commenced the phenytoin infusion. During the infusion, the RN handed care of the child over to another RN.

The paediatric registrar did not give specific instructions about how the child should be monitored during the infusion. The child did not receive one-on-one monitoring, and there is no record that she was monitored during the infusion or that the IV site was checked.

Following completion of the infusion, the child was transferred to the paediatric ward. She suffered a further seizure, and nursing staff on the ward checked the IV site, which was purplish with swelling in the arm. Nursing staff alerted the on-call registrar, who ordered a further half-dose of phenytoin to be given via an IV line in the child's right elbow. The child was monitored during the infusion and during the night. Nursing staff noticed a blister on the child's hand, and, following assessment by the on-call registrar, the child was transferred to another public hospital for treatment of this injury.

It was held that a combination of factors led to the child receiving inadequate monitoring during the phenytoin infusion in the ED. The paediatric registrar did not give specific instructions about monitoring, and the district health board's policies did not specify that children receiving IV phenytoin infusions should have cardiac and blood pressure monitoring and be observed for signs of respiratory depression. There were also staff failures to follow policies that were in place. In addition, it was held that the care provided to the child suffered because of staffing issues. These factors demonstrated a systemic failure by the district health board to provide services to the child with reasonable care and skill and, accordingly, the district health board breached Right 4(1).