

December 10, 2002

Detective Sargent Michael Davis  
Homicide Squad  
Toronto Police Service  
40 College St.  
Toronto, Ontario  
M5G 2J3

Dear Sargeant Davis:

As per our telephone conversation of July 3, 2002, I have reviewed the materials provided to me to determine if, in my opinion, the Registered nurses who cared for Lisa Shore at The Hospital for Sick Children in Toronto during the long night shift October 21-22, 1998 between 19:30-07:30 (Ruth Doerksen and Anagaile Soriano) provided care that met the professional standards in place at that time, as outlined by the College of Nurses of Ontario.

An overview of the case is as follows: On Tuesday October 20, 1998 Lisa Shore began to experience extreme pain in her right leg. The following day at 3:15 p.m. the child's mother Mrs. Sharon Shore contacted the Hospital for Sick Children Pain Management Centre and spoke to Registered Nurse Lori Palozzi. Ms. Palozzi provided some instructions intended to assist with Lisa's pain and suggested to Mrs. Shore that Lisa could be brought to the hospital Emergency Department and assessed by someone in the Pain Service. At 4:50 p.m Mrs. Shore was contacted by telephone by Registered Nurse Jennifer Stinson from the Hospital Pain Management Centre. Ms. Stinson advised Mrs. Shore that if she needed to bring Lisa to the hospital, she was to have the Anesthesia pain physician on call paged upon her arrival. At approximately 8:30 p.m. due to continued pain in her leg, the parents decided to take Lisa to the hospital. On Wednesday, October 21, 1998 at 9:50 p.m. 10 year old Lisa Shore was brought to The Hospital for Sick Children by her parents for management of severe pain in her right leg below the knee, resulting from her chronic pain syndrome (reflex sympathetic dystrophy). Shortly after arrival in the Emergency Department, Dr. Markus Schily, the Pain Management doctor on call was contacted.

At 10:20 p.m. Lisa's blood pressure was recorded as 110 over 60 and her pain level by self report was recorded as 8 out of 10. At this time, Lisa took her prescribed dose of gabapentin, an anti-convulsant drug that can be used for the relief of chronic pain. Dr. Schily met with the family in the Emergency Department to discuss the effectiveness of previous pain management treatments and concurred with his colleagues that Lisa be admitted to hospital for pain management. He consulted with his colleagues in anesthesia and decided to treat Lisa Shore with a PCA pump with morphine. Dr. Shily set up the PCA machine himself and hand wrote his orders in the Emergency Department. Included in his *hand written orders* was the following notation: "See KIDCOM orders." He then entered a series of orders into the hospital computer (KIDCOM) system at 11:47 and 11:48 p.m. to be accessed and activated by the ward nurses following the admission of the patient.

At 11:50 a.m. the Emergency Nursing Record indicates that an IV was started for the administration of Morphine. Lisa's pulse was documented as 88 (Normal range = 60-100 with an average of 85) and respiratory rate 16/ minute (Normal range = 16-20).

Dr. Schily's orders were extensive and explicit:

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PCA  
Morphine 1  
mg/ml in NS  
IV; Loading  
dose (X1): 0  
ml

- Bolus dose: 1.5 ml
- Lockout period 6 minutes
- Infusion rate: 0 ml/hr
- Total dose limit: 20 ml over 2 hrs
- Patient on PCA device. No CNS depressants or narcotics to be given unless approved by anesthesia pain service
- Acetaminophen 0 mg PO Q4H PRN
- Self inflating bag, mask, oxygen & suction at bedside. Naloxone available
- Sedation scale, pain scale, HR, BP, RR Q1H X4 hours on admission
- Sedation scale, pain scale, HR, BP, RR Q1H X4 hours. If dose or infusion rate increased, then sedation scale & RR Q1H, and pain scale, HR, BP Q4H
- Contact anesthesia pain service if sedation score 3, Resp rate below 11/min, inadequate analgesia, or pump malfunction
- To arouse, turn off pump and call anesthesia pain service Apnea monitor
- Oximetry
- Sedation scale:
  - 0-Alert
  - 1-Occasionally drowsy; easy to arouse
  - 2-Frequently drowsy; easy to arouse
  - 3-Somnolent; difficult to arouse
  - S-Normal sleep; easy to arouse

Even if the nurses caring for Lisa Shore did not check for a doctor's admitting orders, they would have been expected to follow the PCA protocol as outlined in the hospital's *Patient-Controlled Analgesia Nursing Resource Material* (revised 07/98). The nursing responsibilities for the care of a child using a PCA device are very specific and similar to Dr. Schily's KIDCOM orders:

- self inflating bag, mask, oxygen & suction at bedside, crash cart and Narcan available on unit
- Verify doctors' orders; check accuracy and clarity of KIDCOM/order sheet and appropriateness of dose
- Monitor patient according to PCA orders and nursing procedure
  - a) Record baseline HR, RR, BP, Sedation Scale, and Pain Score on admission to

ward, when initiating therapy, or if drug dose or infusion rate increased;  
Then Q1H for 4 hours.

Then:

- RR, Sedation Scale Q1H

-HR, BP, Pain Score Q4H

d) Apnea and pulse Oximetry monitors may be ordered at the discretion of the Pain Service ( "If this is ordered and you are unable to obtain the equipment, please notify the pain service." ) [p. 22 Tips for Looking After a Patient With a Graseby Patient Controlled Analgesia (PCA) Pump dated September 1997]

e) Notify Pain Service of any significant changes or if analgesia inadequate

- Document pain assessment/pain score and effectiveness of the pain medication in the progress notes
- Monitor potential side effects: constipation, nausea & vomiting, urinary retention, pruritus, respiratory depression and institute appropriate intervention
- For respiratory depression:
  - a) turn off PCA pump
  - b) give oxygen, stimulate patient to breathe
  - c) call Code - Stat Call Anesthesia

According to the computer records, Lisa Shore was admitted to Ward 5A at 1:37 a.m. on October 22, 1998. Ward 5A is a ward on which nursing staff had experience in treating children in pain and in particular had experience in the care of children connected to PCA devices. Two nurses met Lisa Shore and her mother on arrival to the ward, neither of whom was familiar to Mrs. Shore from Lisa's previous admissions to that unit. From my review of the medical record it is unclear to me which of these two nurses had a specific duty of care to this patient as they both appeared to be involved in the care of Lisa Shore at different times throughout the night. During a mediation meeting on September 29<sup>th</sup>, 1999 between the Shores and representatives of The Hospital For Sick Children, the Shores were informed by Doctor Jean Reeder (Chief of Nursing at The Hospital) that Lisa's nurse had 14-15 years experience as a Registered Nurse (Ruth Doerksen). This did not fit with Mrs. Shore's idea of who was Lisa's nurse, whom she described as "very young in appearance." At this point Mr. Patrick Hawkins (counsel for The Hospital) told the family that Lisa's nurse's name was Anagaile Soriano.

At this time (1:45 a.m.) Flow Sheet #1 for General Care indicates that Lisa's vital signs were recorded (T 36.1; P 72; R 16; BP 90/60) and IV sites were assessed. The *only* nurses notes recorded in the Progress Notes of October 22, 1998 were recorded at 1:50 a.m. immediately following Lisa's admission to Ward 5A. They indicated that the child was not in obvious pain with transfer from stretcher to bed and settled quickly to sleep once in bed. Mrs. Sharon Shore remained at the hospital in the room with her daughter, sleeping on a couch next to the child's bed while her husband went home.

At 2:05 a.m. on October 22<sup>nd</sup>, 1998 nurse Ruth Doerksen signed onto the KIDCOM system, and inputted her assessment of Lisa Shore which included a general description of the child,

medications, vital signs and physical findings. However, nurse Doerksen *did not check for nor activate Dr. Shily's admission order.*

A note on the Nursing Flow Sheet at 02:50 a.m. by nurse Soriano stated "chest clear good air entry, took away morphine PCA pump." This was an appropriate action in view of the fact that the child's respiration rate had fallen to less than 11/minute. However, there is no indication that at this time the child was stimulated to breathe, that oxygen was administered, or a physician contacted, in contravention of both the written orders and the hospital protocol. The next comment by nurse Soriano in the medical record was at 03:20 a.m. - that the patient was "asleep".

At approximately 4:00 a.m. Dr. Schily was paged at home by an RN on Ward 5A regarding Lisa Shore. According to Dr. Schily, the nurse told him that Lisa's respiratory rate was 10 or 11 breathes per minute. This was in accordance with his order to be contacted if the respiratory rate fell below 11/minute. This led Dr. Schily to believe that the nurse had in fact read his orders as entered in the KIDCOM system. In view of this low respiratory rate, Dr. Schily stated that he told the nurse to turn off the PCA pump. He was advised that the child *had not been using the pump.* Dr. Schily stated that he went on to ask the nurse if aside from the respiratory rate whether Lisa was all right, and was told that Lisa's vital signs were "ok". If in fact this was what was said, it is not a correct response as neither the BP nor temperature were taken. Assessment of vital signs includes measurement of temperature, pulse, respiration rate, and blood pressure. A change in the vital signs can indicate a change in physiological function and may signal the need for medical and or nursing intervention (Kerr and Sirotnik, 1997, P.595).

Dr. Schily then went on to ask this nurse if Lisa was arousable and she responded in the affirmative. I am unable to find any documentation of sedation scores in the Progress Notes or on the patient Flow Sheet. The only reference to Lisa's level of sedation is a comment recorded at 04:05 on the Flow Sheet that states: "very drowsy, pain service aware of decreased RR and sedation". It appears that this note was written by nurse Soriano. A further note on the Flow Sheet at 04:15, when Lisa's pulse rate was recorded as 134 /min and respiratory rate of 10/min indicates that the HOB (head of bed) was elevated. It thus appears that nurse Soriano *recognized the need to intervene* in view of the apparent respiratory depression but again there was no indication that the child was stimulated to breathe or that oxygen was administered at this time (thus an insufficient response to the problem at hand).

According to Dr. Schily, at this time he gave the nurse he was speaking to the option of having him return to the hospital to attend to Lisa Shore himself and was told that there was no need for this. Dr. Schily stated that he then gave the nurse further instructions with regard to Lisa Shore's care which included:

1. Check all the monitoring
2. Check respiration and oxygen saturation level

3. Check other vital signs
4. Contact him if there was any doubt about the child's condition and he would return to hospital.

**There is no record of this in the medical record, either in the Dr.'s orders (as a verbal telephone order) within the nurse's progress note, or on the Flow Sheet.**

Lisa's heart (pulse) rate which should have been assessed hourly for 4 hours following her admission to the ward was charted at the following times:

01:45 (72 BPM on admission to ward)  
03:20 (120 BPM - late by 35 minutes)  
04:00 (130 BPM prior to call to Dr. Schily)  
04:15 (134 BPM; following call to Dr. Schily)  
05:00 (126 BPM)  
06:00 (126 BPM)

Lisa's respiratory rate which should have been assessed hourly for 4 hours following her admission to the ward was charted at the following times:

01:45 (16/min)  
02:30 (14/min)  
02:45 (12/min)  
02:50 (8, 10 /min) [respiratory depression; no contact with MD]  
03:20  
04:00 (12/min)  
04:05 (14, 12/min)  
04:15 (10/min) [Dr. Schily contacted]  
04:20 (16, 12/min)  
05:00 (16 /min)  
06:00 (14/min) [apnea monitor turned off by Ruth Doerksen?]

The frequency of this documentation indicates an awareness on the part of nursing staff of the importance of monitoring this child in view of the well known potential for respiratory depression related to the administration of Morphine.

Lisa's blood pressure (one of the vital signs) was *only* documented in the record at 01:45 (on admission to ward as 90/60). Aside from the orders to monitor vital signs every hour for 4 hours, a nurse using sound clinical judgement would have taken the BP when the child's heart rate was elevated and/or when the respiratory rate was depressed (at 02:50 a.m. and 04:15 a.m.).

There is no indication on the Nursing Flow Sheet that Lisa's oxygen saturation level was ever monitored or recorded, although Registered Nurse Pauline Matthews who cared for Lisa Shore in the Emergency Department prior to admission to the ward indicated that *she* had placed a saturation monitor (oximeter monitor) on Lisa's finger.

There is no indication in the medical record that Lisa's sedation score was assessed according to

the Dr. Schily's orders or the *PCA Nursing Resource Manual* which indicates that there was to be a baseline recording on admission to the ward, and then Q1H for 4 hours. Dr. Schily claims that he specifically asked the nurse about Lisa's level of sedation during their telephone conversation at 04:00 and the nurse reported that Lisa was arousable. However, a note on the Nursing Flow Sheet indicates that at 04:05 hours Dr. Schily was made aware that the child's respiration rate was down and that the child was "very drowsy".

Lisa was checked on by nurse Doerksen at 05:00 a.m. The record indicates that at this time Lisa's temperature was taken orally (35.7 p.o.). Pulse rate was recorded as 126 beats/min and respiratory rate 16/min. The IV site was checked and the amount of fluid absorbed was recorded. A note indicates that the patient was "asleep".

At 06:00 the same nurse again checked on Lisa Shore. Pulse rate was recorded again as 126 beats/min and respiration rate 14/min. Again a note indicates that the child was "asleep". This was the last time that Lisa Shore was assessed by a nurse during her life, as at 07:15 the Flow Sheet indicates that upon entering room with physicians, a code was called as the child not breathing.

Subsequent to the death of Lisa Shore, an inquest was held. Dr. Melanio Catre, a senior resident of orthopedic surgery, testified at the inquest into the death of Lisa Shore on November 9, 1999. Dr. Catre stated under oath that during the attempt to resuscitate Lisa Shore, he observed that "there were patches attached to her chest with leads to the patches. These leads were attached to a machine known as a corometric monitor." He went on to state that to the best of his recollection, when he removed the leads that were attached to the child's chest, no sound came from the monitor's alarm. Dr. Catre observed that the corometric monitor was "not turned on at all". There is no indication in Lisa Shore's chart that a corometric monitor was used to monitor her during the night prior to her death.

Ms. Mary Douglas R.N. - a Nursing Educator at the Hospital for Sick Children at the time of Lisa Shore's death - also testified at the inquest into the death of Lisa Shore (January 17, 2000). Ms. Douglas testified that when she arrived at work on the morning of October 22, 1998 she heard a call to Ward 5A and went to room 47 where Lisa Shore was located. Ms. Douglas found a distraught nurse Ruth Doerksen who was questioning her own actions with respect to the heart monitor and its alarm settings. Ms. Douglas then went to room 47 and examined the corometric monitor that was sitting on a table near the door to the room. She found that "*the apnea monitor had been turned off and the heart rate alarm was set to 50 to 160 or 180*" (as nurse Doerksen had just indicated to her).

The normal range of heart rate for a child 10-16 years is between 60-100 beats/minute with an average of 85. It is my opinion that the setting of the upper alarm rate to 160 was inappropriate, given the age of this child. I am puzzled by the fact that a monitor was present in the patient's room the morning of October 22, 1998 but was not in use and why the apnea alarm was disabled.

### Conclusion:

A Registered Nurse is accountable to the public and is responsible for ensuring that his or her practice meets legislative requirements and the standards of the profession. The CNA *Code of Ethics for Registered Nurses* (1997) clearly states that nurses "act in a manner consistent with their professional responsibilities and standards of practice" (p.19). It goes on to further state that nurses have "professional responsibilities and accountabilities toward safeguarding the quality of nursing care clients receive. These responsibilities vary but are all oriented to the expected outcome of safe, competent and ethical nursing practice."(p.19) With reference to the *Professional Standards of Practice for Registered Nurses* as set out by the College of Nurses of Ontario, each nurse "carries out interventions according to appropriate policies, research-based procedures, and service standards" and "documents according to the College of Nurses of Ontario's Nursing Documentation Standards (1996)" (p.9). In my opinion, the level of documentation carried out by the nurses caring for Lisa Shore did not meet the standards as set out in the *Nursing Documentation Standards* of the College of Nurses of Ontario (1996). While the amount of time that a nurse can spend documenting in the medical record may be limited by workload and priorities for patient care, it would have been important to have more fully documented the information reported to Dr. Schily over the telephone at 04:00 a.m. as well as his response.

While clinical judgement applies to every aspect of patient care, there is an expectation that nurses will follow protocols and guidelines that are in place to ensure the safety of their patients. Based upon a review of the materials provided to me, it is my opinion that the nursing care provided to Lisa Shore at the Hospital for Sick Children in Toronto fell below the standard of care expected from reasonable and prudent Registered Nurses. It appears that in this situation the nursing staff did not use the appropriate technology to provide safe care nor monitor and respond appropriately to the changes in the health status of this child. A reasonable and prudent nurse would have, as part of her professional responsibility, accessed the physician's orders (both handwritten in the chart and computer system orders) upon Lisa Shore's arrival to the ward. Had the nurses **accessed and followed the orders** of Dr. Schily or the hospital policy for the care and management of a child with a PCA Pump, Lisa would have been connected to an apnea and heart monitor and a pulse oximeter with alarms set at appropriate limits. With this combination of safety measures in place, one or both of the alarms would have sounded when Lisa's respiration and pulse rate fell sometime after 06:00 a.m. and timely resuscitative interventions could have taken place. Nurse Doerksen's action of turning off Lisa Shore's apnea monitor that morning was a major mistake for which no possible explanation is offered. Had the nurse or nurses who had a duty of care to Lisa Shore carried out interventions according to appropriate policies and procedure (thus meeting the expected standard of care), I believe that the tragic outcome to this child and her family could have been avoided.

Respectfully submitted,

Carla Shapiro RN, MN