Lewis Blackman, a healthy, gifted 15-year-old. He underwent elective surgery for pectus excavatum—a crease in the chest cavity.

Thursday, November 2

Lewis and his family arrive at the hospital at 6 a.m. for the 7:30 operation.

The surgery lasted 2.5 hours—longer than the family expected.

The lead surgeon emerges from the OR and says "I had to reposition the metal bar in Lewis' chest four times to get it right. All in all, Lewis did fine."

Lewis wakes in the recovery room. He tells doctors that his pain is about a "three" on a 1-10 scale.

Lewis is given Toradol (ketorolac tromethamine), a powerful painkiller to ease his chest pain.

Friday, November 3

Lewis is taken to Room 749 in the Children's Cancer Ward. There's no room in the surgery ward.

The nurse tells Lewis and his mother, Helen, that the pain is gas. "There's nothing I can do for gas pain," she says.

The surgeon that operated on Lewis leaves the hospital for the weekend.

Saturday, November 4

At 9 a.m. another surgeon checks on Lewis and writes in medical record, "No evidence of infection. Clear lungs. May sit up and consider getting out of bed."

Another nurse suggests a bath. She and Helen put Lewis in the tub and sponge him off.

On Saturday night, Lewis begins to run a slight fever, his feet are cold to the touch, he is still on Toradol by intravenous line.

Sunday, November 5

At 6:30 a.m., a half-hour after another Toradol injection, Lewis gasps—he has horrible pain in his upper abdomen.

Nurses insist Helen walk Lewis. Lewis says his pain is getting worse. Over Lewis' feeble protests, mother and son walk around the ward.

Lewis' belly grows hard and distended, his temperature drops, his skin grows pale and he drips with a constant cold sweat. His eyes are sunken. He's exhausted, in great pain.

Helen calls the nurse a number of times. "She seems convinced that Lewis is simply lazy and not walking enough to dissipate his 'gas pain. '" Helen writes in her diary.

During Sunday, Helen repeatedly asks for a doctor.

At 6:26 p.m., Helen's insistence is such that a nurse writes in Lewis' record: "Parent requesting upper level MD."

At 8:00 p.m., the chief resident comes to Lewis' room to check him, writes in the record: "probable ileus," orders a suppository, and notes that Lewis' heart rate is in the 80s. The nurse notes from the same time record Lewis' heart rate is 126 and that the MD has been made aware of Lewis' sweating.

Monday, November 6

The MD says the sweating and lowered temperature—97.7 degrees are "side effects" of the medicine because Lewis is so young.

That night, Lewis' heart rate is 142 beats per minute and his temperature is 95 degrees. At 4 a.m., his heart rate is 140 and his temperature is 96.6.

An aide takes Lewis’ vital signs. She can’t find any blood pressure.

From 8:30 to about 10:15 a.m., Lewis' record reflects that others try and fail to detect a blood pressure.

Residents and nurses believe the blood pressure devices are broken. They try various devices, according to Lewis' medical record.

Doctors record Lewis' death at 1:23 p.m. Monday - 31 hours after Lewis first said he was having horrible stomach pains.

Nurses' notes record Lewis' vital signs. At 8:30 a.m., nurses' notes record his temperature at 96.7. At 9:15 a.m. they record his heart rate as 120.

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About noon, two technicians arrive to take a sample of Lewis’ blood for tests. They get just a small sample. "Lewis is deathly pale," Helen wrote. "As they take his blood, his speech becomes slurred. He is trying to say something I can't understand. He says it again, very carefully and with great difficulty: 'It's ... going ... black.'"

Helen calls for help. She thinks Lewis has had a seizure.

A cardiac code is called. The code team works for 1 hour.

Where did the system fail Lewis and his family?

Use the following questions to guide your analysis of this event. Record your answers and thoughts in the space provided.

1. Where were the system failures in Lewis’s care process related to organization, environment, technology, work tasks, health care providers?

2. Where in the process of care did incidents (errors, near misses, adverse events, and harm) occur?

3. Were their opportunities in the process of care to repair physical damage? Repair relational damage? Repair emotional damage?

4. What are the key learning points and how do we learn from this incident to proactively prevent similar incidents from occurring in the future?

5. What can we learn from this case in designing strategies and/or tools to engage patients and families?

1. System failures: Organization
   - Nurses and doctors note in Lewis’s record that he is not producing urine.
   - Lewis is taken to surgery. Nurses and doctors note in Lewis’s record that he is not producing urine.
   - The nurse tells Lewis and his mother that the kidney in his abdomen is not moving.
   - Helen calls the nurse a number of times. She seems concerned that the temperature is not rising.
   - Helen visits him in the hospital. She asks the nurse if she has been in contact with any infectious diseases.

2. Incidents: Errors
   - Lewis’s heart rate is 142 beats per minute. Helen calls the nurse a number of times. She is concerned that the temperature is not rising.
   - The nurse tells Helen that Lewis has a fever of 96.8 degrees Fahrenheit. Helen is concerned that the temperature is not rising.

3. Opportunities: To repair physical damage
   - Lewis’s heart rate is 142 beats per minute. Helen is concerned that the temperature is not rising.
   - The nurse tells Helen that Lewis has a fever of 96.8 degrees Fahrenheit. Helen is concerned that the temperature is not rising.

4. Key learning points for preventing similar events:
   - Nurses and doctors note in Lewis’s record that he is not producing urine.
   - Lewis is taken to surgery. Nurses and doctors note in Lewis’s record that he is not producing urine.
   - The nurse tells Lewis and his mother that the kidney in his abdomen is not moving.

5. Strategies and/or tools to engage patients and families:
   - Nurses and doctors note in Lewis’s record that he is not producing urine.
   - Lewis is taken to surgery. Nurses and doctors note in Lewis’s record that he is not producing urine.
   - The nurse tells Lewis and his mother that the kidney in his abdomen is not moving.

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