ment" (see sidebar). The report said surgical technique contributed to 2 deaths (Ulimaumie and Maguire).

Mortality rates

Mortality rates for high-risk or open cases were considerably higher in 1994 (29.6%) than in the program's previous 6 years, when they ranged from 5.4% in 1993 to 16.3% in 1989 and averaged 10.1%.

Duncan said Odim's limited experience as primary surgeon would be a "problem" in a setting like Winnipeg. "I'm not sure Odim got enough experience in Boston," he said. In testimony last month, Blanchard said he did not contact physicians in Boston to seek their impressions of Odim's skills. Duncan said it is standard to watch a surgeon operate before hiring.

On the stand, Odim conceded some criticism of his skills was valid but said the real stumbling block was the hostility of the people around him. "It didn't make any difference what my preference was. It was 'We've always done it this way, the way Kim Duncan did it.' " This led to team bickering.

Williams and Roy concluded that Odim may have been judged unfairly by some colleagues, and compound-

Twelve deaths in Winnipeg

The circumstances surrounding the deaths of the 12 children are highly complex and cannot be fully documented here. What follows are synopses concerning 4 of the deaths, which the Pediatric Death Review Committee of the College of Physicians and Surgeons of Manitoba concluded were "possibly preventable with improved medical management." The report said surgical technique contributed to 2 deaths (Ulimaumie and Maguire). All the deaths occurred in 1994.

Jessica Ulimaumie

The Mar. 24 surgery to patch 7-month-old Jessica's large ventricular septal defect (VSD) leaked and had to be redone. Bypass times totalled nearly 12 hours. She could not be weaned and was put on extra-corporeal membrane oxygenation (ECMO) extended bypass. By Mar. 27 she had lost nearly 5 times her blood volume and Odim decided to take her off ECMO and give her blood products in a "last ditch effort to halt the bleeding." During decannulation, the superior vena cava cannula line was left unclamped. Her heart stopped and the girl died. "I expected the line to be clamped but I didn't make an announcement," Odim testified. "In retrospect, I'm in charge. If a clamp is not put on I should have recognized that."

Vinay Goyal

This 4-year-old boy died Apr. 18 during surgery to repair a large VSD. Two anesthetists testified they were shocked by the force Odim used to inject a saline solution into the child's heart to detect the leaks, and because he dribbled adrenaline directly on the boy's heart. Odim said he used an adrenaline drip. During decannulation, a surgical bleed was repaired and the boy's blood pressure dropped. Staff tried to transfuse through the aortic cannula but Odim had removed it without their knowledge. The boy couldn't be transfused rapidly enough through IV lines and died. Odim attributed the difficulties to miscommunication and said he was "quite apologetic" to staff members.

Marietess Capili

This 33-month-old girl had a single ventricle and a variety of related problems. On Sept. 14 she underwent 2 operations to create bidirectional cava pulmonary hookups. After the operation her head became increasingly puffy and discoloured — "like a purple grape" said anesthetist Jo Swartz — and this indicated a blocked venous return. Swartz suspected superior vena cava syndrome, but Odim discovered that the adrenaline supply had been moved to the left external jugular line and thought this had induced the blockage. The girl was taken to the pediatric ICU for hyperventilation vasodilator therapy. Her pressure continued to be high and she had a cardiac arrest. An autopsy determined that a suture had narrowed the superior vena cava, and blood could not drain properly from the child's head.

Jesse Maguire

This newborn boy had a rare interrupted aortic arch and a VSD. During Nov. 27 surgery to repair the arch and patch the VSD, Jesse underwent deep hypothermic circulatory arrest (DHCA) for 104 minutes. During rewarming, his aortic cannula was accidently dislodged and bypass was interrupted — a "catastrophic event," according to the perfusionist. Odim said he removed it deliberately as part of rewarming. During the 5 minutes it took the doctors to re-insert the cannula, the repair was torn. Jesse underwent DHCA again — this time for 67 minutes — and the tears were patched, but his heart wasn't strong enough and the 2-day-old baby died.