

Living on:the edge of science

By Katie Liesener

TRANSPLANT SURGEON HAS HIGH HOPES FOR CHILDREN'S FUTURES

IN THE LOBBY OF CHILDREN'S Hospital Boston, children gravitate toward the active contents of a large clear box. Inside, colored balls fly through a mechanical maze of chutes and loops, funnels and catapults, triggering bells and wood block hammers as they go. The children press palms and noses to the glass, entranced by what they cannot touch.

In an operating room two floors above them, Dr. Craig Lillehei's eye is pressed to the powerful lens of a magnifying loop, trained on the workings of a human body in miniature, blood vessels and airways shrunk to doll-house dimensions.

"What a magical machine the human body is—the connections and the colors and the functions. It's just overwhelming," he said.

His gloved hands are steeped in that small cavity. Surrounding him are a team of doctors, technicians, nurses and assistants, each anticipating and reacting to the familiar rhythms of the surgery. Lillehei coordinates his work with phoned-in updates from a staff member who is accompanying the donor lungs, liver or kidney miles away. They are trying to synchronize the arrival of the new organ with the removal of the old. The clock is ticking.

When the organ arrives, Lillehei makes the connections, releases the clamps and watches blood flow return. Every face turns to the oxygen and blood pressure monitors. If the child's body takes over, a new future has just been grafted onto a sickly past.

"If you do a heart bypass in someone who's 80, they may get a few more good years out of it; if you fix a baby, they have a whole lifetime ahead of them," Lillehei said. "And my goodness, then pay attention to every detail, because that person's life for many years in the future is depending on the kind of attention you pay to that problem."

