

cost," and the Secretary of Health, Education, and Welfare is authorized to experiment with methods of reimbursing those organizations that participate in Medicare and Medicaid programs to offer incentives for cost reduction. Under the new bill, HEW is also required to study the possibilities of implementing a generic drug law and to evaluate proposals for creating a Federal Formulary Committee to review drug costs and quality and write a list of approved products. HEW is already launched on such a study; its recommendations are expected before January 1969.

SURGERY

Three Girls Survive Liver Transplants

"Now we are three."

While world attention focused on heart transplants, the second of five baby girls making history with long-lasting liver transplants died in Denver at the University of Colorado's General Hospital.

Paula Kay Hansen, slightly over two years old, whose parents had brought her from their home in Fort Worth, Tex., for replacement of a defective liver Aug. 1, is the latest to succumb to the immunity problem—her body rejected and attacked the foreign tissue. Carol Lynne MacCourt, of Salt Lake City, died the day she was 16 months old after surviving her transplant two months. The longevity record is held by Julie Rodriguez, whose transplant was made July 23.

Dr. Carl G. Groth of Sweden, a Public Health Service international fellow in surgery, who assisted Dr. Thomas E. Starzl and half a dozen other surgeons and pediatricians with the transplants, says they are encouraged by the babies' survival records and plan to do further transplants as they are needed and as livers can be obtained.

The three still living—all two years old or less—are Julie Rodriguez of Pueblo, Colo., Kerri Lynn Brown of Long Beach, Calif., and Candy Barbaree of Orlando, Fla.

Before the present series of transplants, the longest life of a transplanted liver was in a 47-year-old merchant mariner named William Grigsby who lived 34 days before rejecting the organ.

In 1963, a Peter Bent Brigham Hospital team led by surgeon-in-chief Francis D. Moore of Boston had removed the cancerous liver of 58-year-old Joseph J. Bingel, a Dorchester, Mass., construction worker, and transplanted the liver of a patrolman named Edward C. Callahan, who had died from a pistol shot in the brain. But 11 days later, Joseph Bingel died.

Liver transplants have been attempted

in France and England, Dr. Groth says, but all patients have eventually rejected the foreign tissue or died of infection.

Dr. Groth will not compare the difficulty or importance of liver transplants with those of the kidney or heart, for example. "If you need a kidney, that is most important," he says. "There is no point in such comparisons."

But surgeons know that the liver is extremely complex. At three and a half pounds it is the body's biggest organ. It secretes bile for digestion, it breaks down protein into simpler compounds, stores blood sugar and fat, maintains chemical levels within the blood and cleanses the blood of foreign matter.

Auxiliary livers have sometimes been used in so-called "piggy-back surgery" in which the recipient's liver is undisturbed but aided in function by a second organ inserted in his abdomen.

The critical factors in achieving the long-term survival of the liver replacements in Denver has been a combination of antilymphocyte globulin (ALG) and immunosuppressive drug therapy. ALG is an extract of antilymphocyte antibodies. Lymphocytes are one type of white blood cells believed to be the specific agent that carries the body's immunologic assault against foreign tissue. Antilymphocyte serum is obtained

SST

Concorde Rolls Out

The Western World at last has a supersonic transport. Just one. It won't fly until at least the end of February, and it won't carry passengers until three years after that, but the idea has become a reality. The first commercial travelers to really get a look at the curvature of the earth will be those flying the Concorde, the Anglo-French SST whose prototype was rolled out of its hangar at Toulouse, France, last week for its first public display.

Sixteen airlines have so far ordered 74 Concorde (nine U.S. airlines account for 38 of them), and more sales will certainly follow. The U.S. Boeing supersonic transport will be almost 400 miles per hour faster, however, and up to 170 passengers bigger, and Concorde officials realistically acknowledge that the two planes are destined for different markets.

If SST proponents on both sides of the Atlantic are even partly right in their optimism, the Concorde should give enough of a boost to air travel to convert presently less-traveled routes into high-density ones. In 1974 or 1975 the U.S. plane will begin passenger service, and within two or three years it should have sewed up most of the Concorde's former business on high-density routes, simply because its 300-passenger capacity will make it more profitable on

from animals immunized against human lymphocytes.

Imuran and prednisone are two immunosuppressive drugs used, but by cutting off the immunosuppressive system, they lay the patient open to infection. He may not reject the transplanted organ but will die from pneumonia or some other disease.

Meanwhile, in Capetown, South Africa, Louis Washkansky was given a good chance for long-term survival with the heart of a woman beating in his chest. Also surviving is a 10-year-old African boy who received one of the same woman's kidneys as a transplant.

The American Medical Association's review of medicine for 1967 points out that although the "transplantation of internal organs is still a highly experimental procedure, kidney transplants have an increasing record of extending life usefully."

According to the journal *TRANSPLANTATION*, nearly 1,200 kidney transplants have been performed around the world. Among the patients receiving them, 55 percent survived one year or longer if donor and recipient were related. Among transplants done since Jan. 1, 1965, the year-or-longer survival rate has been 65 percent when donor and recipient are related.

such runs. When and if that happens, the Concorde will shift to less-traveled paths.

The American plane may actually be so efficient, according to W. J. Jakimiuk, president of Sud Aviation Corp., New York, the Concorde's French partner, that it will be priced out of the lesser-density routes. "One may forecast," he says, "that on such routes there will be no SST competition for Concorde, because the high productivity of the Boeing 2707 will make that aircraft very inflexible on any route where an airline's traffic potential does not exceed 100,000 passengers per year."

The Concorde will carry fewer passengers than many airliners now in operation, but it will cost passengers more to fly on it.

"Why should anybody fly subsonic if it costs no more to go supersonic?" asks the Concorde's deputy technical director, Dr. William J. Strang. "Regrettably," he says, "we conclude that a different fare will be used to protect the subsonic fleets."

The Concorde that go into commercial service will be nine feet longer than the 184.5-foot prototype. The Boeing aircraft has already grown 47 feet from its original conception, and its prototype has barely been started.

At first, Boeing had planned for its

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