

play. They thus devised a miniature "space suit" attached to a pushcart air support system.

The basic design of the suit was already available from the Apollo lunar missions. The suit resembles the isolator garment worn by the astronauts during quarantine after their return to earth. The suit body is made from fabric similar to that used in life rafts. It has form-fitting rubber gloves and shoes and is topped by a clear plastic bubble for the head. Air exhaust vents are located in the pants legs. Two tubes are attached to the suit—one through which David crawls from his bubble environment into the suit and which then collapses and is stored on the pushcart, and another that provides filtered air from the pushcart to the suit. The pushcart also contains a seat on which David can ride.

So far David has made three test runs in the hospital wearing his new suit. His family, NASA representatives and the hospital staff directly responsible for his care have been present. He has ridden down corridors and up elevators, eager to see offices and bathrooms. He has poked his head into refrigerators and other patients' rooms for the first time, has run errands for his favorite nurses, has performed schoolwork for his teacher in a hospital classroom, has tossed and caught a ball and has roughhoused. He particularly likes the small gloves that allow him to manipulate objects and tools easily. Thanks to the suit, he has been able to hug his parents and sister for the first time in his life.

Future trips in his space suit may include the zoo, a fire station and NASA. He does not yet know the world outside the hospital or his home, let alone the vast spaces that have made development of his unique suit possible.

David's care has been supported since birth by grants from the National Institutes of Health, by the Texas Children's Hospital and by many individual donations. His \$20,000 space suit, contributed by the NASA Johnson Space Center, may also benefit other youngsters such as leukemia patients, who need short-term protection from germs. □

Wisconsin speed trap

The Wisconsin State Board of Medical Examiners recently declared a ban on the sale and use of amphetamines. The ban is designed to stop the drugs' usage as a dietary agent, but amphetamines may still be used in such special cases as brain and emotional disorders, and for research.

"We now have an abundance of evidence that amphetamines are worthless for weight control," Irving Ansfield, Milwaukee physician and board member, told SCIENCE NEWS. "They depress the appetite for only 10 days to two weeks, and then all you've got is chronic intoxication and a persistent increase in metabolic activity. It's physiologically ad-

dicting. To get to sleep you've got to start taking barbiturates—and they're even more dangerous."

The Wisconsin ban may have already catalyzed other extra-legal action. Three days after that announcement, physicians and pharmacists in Miami, Fla.—where an estimated 1 million doses were sold last year—declared amphetamines would no longer be available in that community. □

Second surgical opinions

Concerned over "intolerably high levels" of unneeded surgery, federal health officials have decided to reimburse Medicare patients for second medical opinions before surgery. Health, Education and Welfare Under Secretary Hale Champion told the House Oversight and Investigations Subcommittee on Nov. 1 that "there is too much" unnecessary surgery all over the United States.

He cited statistics showing that the nation's overall surgery rate increased by 25 percent between 1970 and 1975.

Champion testified that HEW's decision to pay for second, and in some cases third, medical opinions was part of a "major effort" to reduce surgical procedures. HEW has also asked the nation's 182 "professional standards review organizations"—groups of doctors who monitor hospital admissions—to move aggressively into reviewing surgical procedures. HEW strongly recommends that medical schools "cut back significantly" on the number of surgeons trained at public expense, since surgeons "expect a surgical approach to medical problems," and "excess surgeons lead to excess surgery." □

Pioneer 11: An 'inside' vote

Pioneer 11 scientists and project officials have voted "overwhelmingly" in favor of sending the Pioneer 11 spacecraft inside the rings of Saturn at its 1979 encounter with the planet, rather than targeting it for a possibly safer course outside the rings. The final decision, however, will be made late this month by NASA management including Noel Hinners, associate administrator for space sciences.

The vote resulted from feelings about "the uniqueness of the *in situ* particles and fields measurements" that would be possible during the "inside passage," although there is considerable feeling that the spacecraft may not survive the crossing through an additional ring that may lie inside the primary ring system (SN: 10/15/77, p. 249). The inbound half of an inside encounter, in other words, may be worth more than a complete encounter outside. Officials with Project Voyager, however, whose two spacecraft will pass outside the rings in 1980 and 1981, hope that NASA will decide to have Pioneer 11 go outside "to scout the way." □

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