

their operative sites under a microscope: A small number of nerve fibers in each rat's spinal cord had not been severed and thus kept the rats from being totally paralyzed by spinal cord transection.

Guth and his co-workers then adopted an operative procedure somewhat different from that of Matinian and Andreasian to achieve greater assurance that they were severing rats' spinal cords. A fine wire probe was passed beneath each rat's spinal cord, each cord was cut down to the probe, and the probe was then lifted through the incision, thus ensuring that the cord had been completely transected. Ninety-two rats operated on in this manner were then injected with enzymes according to Matinian and Andreasian's protocols.

All 92 rats, Guth and his team report, remained totally paralyzed for the four- to six-month duration of the experiments, and autopsies gave no evidence that any of the enzyme treatments reduced scar formation, facilitated nerve regeneration or permitted recovery from paralysis. "The functional recovery reported by Matinian and Andreasian," they conclude, "probably resulted from incomplete transection of the spinal cord rather than from enzyme therapy." □

Mental health bill introduced

Imagine more local mental health centers, especially for persons in rural and inner city areas, more chronically mentally ill persons being reintegrated into the community through halfway houses, more preventive measures for mental health, a better guarding of the civil rights of mentally ill patients. . . .

These are some of the improvements in the nation's mental health care system envisioned in President Carter's Mental Health Systems Act. The President and First Lady Rosalynn Carter unveiled the proposed legislation at a press conference this week, and the President subsequently submitted it to Congress. It is based on the findings of the President's Commission on Mental Health (SN: 5/6/78, p. 293), of which Rosalynn Carter is honorary chairperson. This is the first time that a President has proposed major changes in the United States' mental health care system since President Kennedy's Community Mental Health Centers Act in 1963.

Actually many of the findings by President Carter's Commission on mental Health were upbeat — during the past 30 years the mentally ill in the United States have enjoyed a dramatic improvement in care, particularly in being removed from large state mental hospitals to community-based services. The mentally disturbed, however, still experience serious unmet needs, and it is these needs that the President's proposed act seeks to meet.

MAY 19, 1979

For instance, while the community mental health center concept started under President Kennedy has brought 700 such centers to three million mentally ill patients annually, many areas of the United States have been unable to meet the stringent qualifications of a CMHC and thus have little or no outpatient treatment available. President Carter's legislation would make the qualifications for community centers more flexible so that more communities could implement them. The proposed legislation would also give patients leaving mental hospitals places to live. Currently, half the patients released from large state mental hospitals are readmitted within a year of discharge because they receive no supportive services and have no place to reside.

Another innovation under the proposed

act would be to have states and localities award grants to develop preventive mental health programs, such as training parents, teachers and the police in how to deal with the chronically mentally ill. To promote protection of the rights of the mentally ill, the bill would fund demonstration projects to deliver advocacy services to them and to study existing advocacy programs to determine the appropriate role for the federal government in this area.

"I am very pleased that today we have a good bill," Rosalynn Carter announced at the press conference. "It is sound, it is durable." Whether it will be passed by Congress in this year of tight budgets is questionable, though, since it would cost around \$99 million the first year, and possibly more later. □

Weird world on the bottom of the sea

A miniaturized, solid-state television camera has focused in on the unusual animals thriving under 9,000 feet of sea in the Galapagos Rift. The photographic equipment included a videotape unit inside the research submarine *Alvin* and bright lights and a remote camera outside. The scientists inside *Alvin* followed the camera's view on a small television screen, which showed the surroundings more clearly than did the submarine's viewports. The camera's small size, 4 inches in diameter, allowed it to be placed on a movable arm. The scientists could bring the camera's lens to within 4 inches of the subject. Previously the only way to move the camera was to move the submarine.

The new setup also removed severe restrictions on the amount of underwater picture-taking. The scientists could load film from inside *Alvin*, instead of being limited to the film in the exterior camera.

Marine geologist Robert D. Ballard said the scientists were startled by the bright colors of the marine life and the clarity of the pictures they obtained. The submarine was equipped with quartz iodide lights to illuminate the ocean depths where no sunlight penetrates. "It was like taking a TV studio to the bottom of the sea," says Emory Kristof of the National Geographic Society. The scientists obtained close-ups of giant tubeworms (SN: 4/7/79, p. 231), fish, crabs, foot-long clams and sea spiders. □

Close-up of giant tube worms, which live inside flexible tubes they build as they grow. See entire colony (lower right) and sea spider that spans about a foot.



Al Giddings/NGS



Al Giddings/NGS



Emory Kristof/NGS