

raised the hackles of enthusiasts for other types of motors, who claimed the report doesn't give their favorites a fair shake.

One part of the report, for example, shows that cars powered by lead-acid batteries, the type used in ordinary autos for starting and lights, could maintain a steady 20 miles per hour for something like 50 to 75 miles before recharging. But lead-acid cars have apparently already done better than that. According to Robert Aronson of the Electric Fuel Propulsion Co., an electric car he designed recently traveled 2,000 miles on Interstate highways, keeping a minimum of 45 miles per hour up to 65, and traveling 60 to 100 miles between charges.

Steam cars are another maligned possibility, according to Robert Ayers of Resources for the Future. Although the panel did say that steam engines "potentially offer a satisfactory alternative to the present automobile," the panel's report rates them lower than internal combustion engines in power per unit of weight.

"I don't know where they got their statistics," said Ayers. "Out of old textbooks, maybe." He said that considering horsepower at the wheels, the steam engine is directly competitive with the internal combustion engine.

Where the panel's analysts goes wrong, says economics Prof. Lloyd Orr of Indiana University, an electric car enthusiast, is in deriving their figures from off-the-shelf items. For instance, one assumption is that the power plant should make up only one-quarter of the total vehicle weight; much higher proportions than that could be used, he said. In Aronson's car, the ratio is more like 50-50, according to the inventor.

Another big item is the estimate of how much power is needed to push a car. By streamlining, reducing rolling resistance and properly designing the car to handle batteries instead of an engine, electric cars could be a lot more efficient than the panel's charts show.

If the panel's views on unconventional systems are unduly pessimistic, its hopes for cleaning up the internal combustion engine are optimistic.

Present standards are being met by methods that won't be capable of being carried much farther, says the report. These include fine adjustments and injecting air into the exhaust gas to complete combustion. But more advanced methods, including large air injectors, afterburners and chemical cleaners, are being developed.

"Further substantial reductions in tailpipe emissions can be achieved with known control devices with adequate development work," said the report.

But the critics say pollution controls such as afterburners and catalytic clean-

ers will be too expensive and won't work after a short time. Further reduction of emissions will require fuel injection systems in the engine, complicating its operation and making it much more expensive and difficult to maintain, they say. ♦

HOSPITAL COSTS

Down the up escalator

If costs and inefficiencies continue to rise, a hospital room within a few years will cost \$100 a day. To ease the fiscal crunch, a Princeton University team suggests cost control by the states.

Prof. Herman M. Somers and his wife, Anne, authors of "Medicare and the Hospitals: Issues and Prospects," a Brookings Institute study in social economics published last week, say the need for planning hospitals as community service organizations has become more urgent than ever before. Medicare can serve as fulcrum and lever for financing medical care in a way that represents a better future.

"**Our hospitals** represent a random growth of uncoordinated institutions," the Somers' book says. "Agreement on the need for health planning is becoming almost universal. There is, however, no such agreement as to either means or ends." Brookings, though it creates the atmosphere in which such studies can be made and published, (SN: 9/2) never endorses the final product.

Due to the hospital's historic beginning as a community charity for the poor and hopelessly ill, the authors explain, the majority of the 5,700 non-Federal institutions with their 741,000 beds still operate on a "tripartite arrangement of trustees, administration and medical staff, with the formal lines of authority often in conflict with the realities."

This structure, they suggest, is an anachronism. Health insurance, public medical programs and new patterns of hospital use have made the large majority of admissions into paying patients.

"The dwindling proportion of indigent cases is now generally paid for, in part at least, by public funds," the authors point out, saying that when Title XIX of the Social Security Act (covering the indigent) becomes fully operational, possibly by 1975, free care will virtually disappear, and every patient will be able to have his own doctor. It is time the hospitals themselves caught up.

The authors cite instances of the cumbersome method of payment for Part A (the hospital portion of Medicare) and Part B (for the doctor's direct services) when a hospital pathologist is concerned. In that case the hospital will make two separate collections from Part A and Part B intermediaries. ♦

"**If the two** Medicare programs are ever combined into a single plan," they say, "this might help to bring about an amalgamation of Blue Cross and Blue Shield (private hospital and medical plans). Both seem highly desirable."

Here are some of the changes the Princeton couple foresees:

- Quality controls of hospitals will be strengthened. Full-time heads of departments will become the rule rather than the exception. More hospitals will be staffed by full-time physicians, salaried, or organized in groups contracting with the hospital.

- All medical staffs will be required to assume closer identity with, and accountability to, the hospital. Hospital standards will be raised and the competence of physicians, nurses and technicians will improve.

- The internship may be abolished, as has already been recommended by an American Medical Association commission. Greater use of electronic equipment for repetitive functions will reduce human error and allow more personal attention to patients.

- With the growing influence of Medicare, Medicaid and other public and private health insurance programs, traditional ward service and free clinic services will virtually disappear.

- Some hospitals have too many beds and too much equipment for the use that is made of them. There are too many quality gaps. Careful review of bed use, made by a medical staff committee, will save dollars as well as days. ♦

FAVORITE SPANKED

Hill scores NIH

The National Institutes of Health supports between 40 and 60 percent of the biomedical research in the United States. The most pampered child on Capitol Hill, it annually receives from Congress more money than it asks for. And in some views it's been getting more than it can intelligently spend.

Last week the child was publicly spanked. A scathing report by the House Intergovernmental Relations Subcommittee, headed by Representative L. H. Fountain (D-N.C.), paddled NIH for, among other things, failing to stimulate new centers of research excellence, subsidizing research of low quality, overpaying for indirect costs, and relying on the same senior scientists year after year for decisions on who gets the money.

All this tends to widen the gap between the rich and poor schools, said the subcommittee, accusing NIH of being lax, inefficient and unscientific in building a structure of biomedical knowledge. ♦