

## Managed care may be choking clinical research

Over the past 5 years, medical research institutions in Massachusetts, northern California, northern New York, and Minneapolis have become less competitive for federal grants than centers in most other areas of the United States. One reason, two new studies suggest, is the growing adoption of managed care.

With medical costs soaring faster than the rate of inflation, insurers have increasingly been taking an active role in managing patients' medical care. Many insurers require not only that a physician receive their authorization before prescribing unusual or costly treatments, but even that general medical services be covered only when provided by hospitals or laboratories that charge the lowest fees.

The move has hit teaching hospitals and medical research institutions especially hard. In the past, they have charged a premium for their services, using some of the extra revenues to subsidize clinical research, which involves patients.

A new study by Ernest Moy and his colleagues at the Association of American Medical Colleges in Washington, D.C., now finds that the greater the penetration of managed care into a region, the less successfully its medical schools compete for National Institutes of Health research grants. NIH, located in Bethesda, Md., provides roughly 80 percent of federal financing for health research.

Overall, from 1986 to 1990, the 115 medical schools examined fared about the same, receiving steadily more money. Schools in regions where less than 40 percent of the community was insured under managed care saw a continued increase in NIH funding through 1995.

However, 9 of the 13 medical schools in areas where managed care now accounts for more than 40 percent of medical services experienced a sharp drop in such grants. Indeed, the relative slowdown in NIH grant increases for medical schools in these regions represented a loss of \$98 million in 1995, Moy's team concludes in the July 16 *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION* (JAMA).

In the same issue, Eric G. Campbell and his colleagues at Boston's Massachusetts General Hospital document a related trend. Medical schools where managed care's cost-reining changes were least prevalent published 13 percent more peer-reviewed research papers over a 3-year period than did their counterparts in areas with more managed care and 17 percent more than colleagues in regions with the most managed care.

Moreover, they found that investigators who conduct clinical research in the most cost-conscious medical centers were most likely to report tension among researchers, lack of cooperation from col-

leagues, and competition for resources—features that earlier studies showed could jeopardize research quality and productivity. In contrast, laboratory scientists in the same medical schools whose research did not involve patients experienced no extra pressure or shortfall in publishing relative to peers in regions with less managed care.

The result, Moy says, would seem to suggest that physicians bent on a clinical research career may encounter less frustration if they work in a market with less

managed care—such as Omaha, Neb., or Charlottesville, Va. Unfortunately, he adds, "managed care is growing everywhere. You can't avoid it."

Kenneth I. Shine, head of the National Academy of Sciences' Institute of Medicine, offers a scheme for raising \$4 billion to \$8 billion annually to offset managed care's erosion of the clinical research infrastructure. His commentary in *JAMA* advocates a 1 percent tax on health care charges—a levy analogous to the federal gasoline tax or airport ticket tax—to be distributed to research institutions on the basis of a peer review.  
—J. Raloff

## Rover spectrometer connects with Yogi

After a 5-day delay, the roving field geologist Sojourner has finally obtained a spectrum of Yogi, a meter-wide Martian rock. Sojourner and its mother ship, Mars Pathfinder, landed on Mars July 4; the rover drove onto Martian soil 2 days later (SN: 7/12/97, p. 20).

Yogi has a higher concentration of magnesium than its rough-hewn neighbor Barnacle Bill, which Sojourner examined last week. The magnesium content suggests that Yogi has undergone far fewer cycles of heating and cooling than Barnacle Bill, says James P. Greenwood of the University of Tennessee, Knoxville.

At a press briefing at NASA's Jet Propulsion Laboratory (JPL) in Pasadena, Calif., Greenwood noted that the composition of Yogi resembles that of basalts on Earth. Such rocks line Earth's oceans.

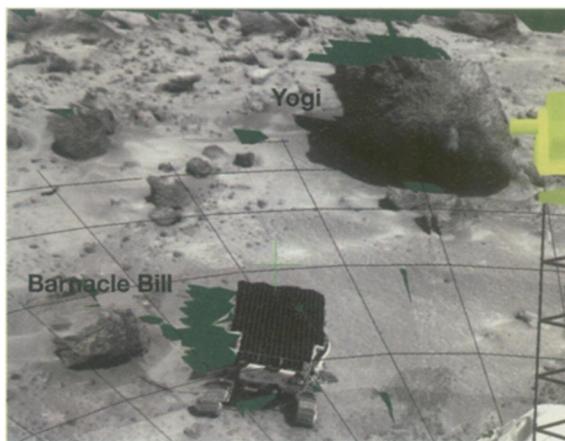
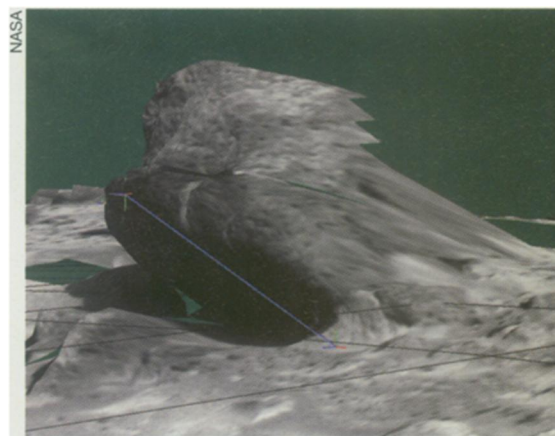
Sojourner's spectrometer also found that three soil samples from different parts of the landing site have similar compositions and resemble soil sampled by the two Viking landers in 1976. This suggests that global winds on Mars have distributed the surface soil evenly, says spectrometer investigator Rudolph Rieder of the Max Planck Institute for Chemistry in Mainz, Germany.

Recording and transmitting Yogi's spectrum has proven something of a bear. On July 9, the rover overshot its target, and its front wheels climbed onto the rock before halting. Then, on July 10, 11, and 13, Pathfinder's computer reset in the middle of receiving commands, abruptly terminating the downlink with Earth.

Observations with the Hubble Space Telescope reveal that the amount of dust in the

atmosphere around the landing site changed dramatically in less than 2 weeks. Images taken June 27 show a cloudy, dustfree environment with a dust storm confined to a canyon 1,000 kilometers to the south. New pictures, taken July 9 through 11, show that the storm abated and that some of the dust may have migrated to the Pathfinder area. This dovetails with Pathfinder's observations that its surroundings are dusty, similar to conditions encountered by the Viking craft.

A color panorama is expected to be available on the Internet shortly, and a high-resolution image taken with 12 color filters is scheduled to be completed within 2 weeks.  
—R. Cowen



*Computer-generated stereo image shows that Yogi (top) has an overhang, which may have contributed to the rover's parking mishap. Lower image depicts the region around Mars Pathfinder. Green denotes gaps in the data.*