the incidence lower than among patients who had undergone cardiac surgery? Hackett's team offered three explanations. First, surgical units were noisier, brighter, more crowded, and had "more rush and turmoil." Second, surgical patients were "apt to be more obtunded and uncomfortable." Third, the residents who staffed the CCU undermedicated their patients for pain, anxiety, and sleep, inadvertently protecting their patients from the deliriogenic effects of those medicines. Delirium had many causes, but Hackett's team did not think that it was an inevitable part of intensive care.[1]

Since the 1960s, nurses and doctors have worked to make intensive care more tolerable for patients. They have implemented changes to improve sleep, minimize stressful interruptions, and orient patients to time and date. Reade and Finfer also credit better ventilators and drugs, especially shorter-acting sedatives and analgesics. Yet delirium remains prevalent — seen in up to 89% of critically ill patients — and puzzling. Reade and Finfer speculate about γ-aminobutyric acid (GABA), acetylcholine, dopamine, and the neurotoxic effects of unspecified inflammatory cytokines but admit that the pathophysiology of delirium "remains largely uncharacterized." When patients become delirious, doctors cast a wide net to catch the likely cause, including withdrawal syndromes, hypoxia, hypoperfusion, hypoglycemia, hyperthermia, hypothermia, infections, poisoning, and many other possibilities. Although no one worries about deliriogenic personalities anymore, no simple answers or solutions have emerged. Continuing work is needed to understand the problem and minimize its consequences.

Disclosure forms provided by the author are available with the full text of this article at NEJM.org.

From the Department of Global Health and Social Medicine, Harvard Medical School, Boston; and the Department of the History of Science, Harvard University, Cambridge, MA.

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DOI: 10.1056/NEJMp1400062

INTERACTIVE PERSPECTIVE

Health Care Spending by High-Income Countries, 1980–2011

An interactive graphic is available at NEJM.org

This interactive graphic shows the per capita levels of health care spending, over time, by both public and private sectors in the United States and in the countries of the Organization for Economic Cooperation and Development. It documents the changing levels of spending for inpatient care, outpatient care, prescription medicines, and public health services in various countries; the amounts spent on health administration and insurance; and out-of-pocket spending by patients in each country.