

# **MACHINE M.D.**

## **A LONG TIME COMING**



**NATHAN CORTEZ**

**SMU LAW**

# **Hearts in France Analyzed in U.S. In a Satellite Test**

Special to The New York Times

**WASHINGTON, July 5 —** A computer in Washington studied human hearts beating in France and relayed the analyses back to the bedsides almost instantly today via communications satellite.

The feat demonstrated a system developed by the Public Health Service for analyzing electrocardiogram signals at long range and within seconds.

The intent is to make the heart specialist's knowledge of the electrocardiogram available to patients remote from the nearest expert.

In the test today, electrocardiograms were taken on volunteers at a scientific meeting in Tours, France. These were transmitted via telephone and communications satellite to the United States, where they were relayed by RCA Communications, Inc., to Washington.

The computer analyzed the heart data in 15 seconds and printed an interpretation that was sent back to France by the same route. The interpretation was being received in Tours, about 30 seconds after the end of the transmission from that point.

An electrocardiogram is a recording of the electrical activity of a person's heart. To an expert, it contains important clues to the condition of the heart.

The satellite test showed that, in principle, long distance electrocardiogram analysis could be made available almost anywhere on earth, said Dr. Cesar Caceres, chief of the Public Health Service unit involved.

The New York Times

Published: July 6, 1967

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The **NEW ENGLAND**  
**JOURNAL** of **MEDICINE**

**1970**

**SPECIAL ARTICLE**

**MEDICINE AND THE COMPUTER**  
**The Promise and Problems of Change**

WILLIAM B. SCHWARTZ, M.D.\*

**Might the Computer Be Used to Appraise the Physician?**

If the computer comes to play a major part in diagnosis and treatment, the computer system itself can readily be used to evaluate physician performance. Special programs could collect information on the frequency with which consultations are requested, and the numbers and types of questions asked,



1978

COMPUTERS IN HEALTH CARE

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HEARINGS  
BEFORE THE  
SUBCOMMITTEE ON  
DOMESTIC AND INTERNATIONAL SCIENTIFIC  
PLANNING, ANALYSIS AND COOPERATION  
OF THE  
COMMITTEE ON  
SCIENCE AND TECHNOLOGY  
U.S. HOUSE OF REPRESENTATIVES

NINETY-FIFTH CONGRESS  
SECOND SESSION

MAY 9, 10, AND 11, 1978

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Committee on Science and Technology



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HEALTH INFORMATION SYSTEMS

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HEARINGS  
BEFORE THE  
SUBCOMMITTEE ON  
SCIENCE, RESEARCH AND TECHNOLOGY  
AND THE  
SUBCOMMITTEE ON NATURAL RESOURCES,  
AGRICULTURE RESEARCH AND ENVIRONMENT  
OF THE  
COMMITTEE ON  
SCIENCE AND TECHNOLOGY  
U.S. HOUSE OF REPRESENTATIVES

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Q: Safe and effective?

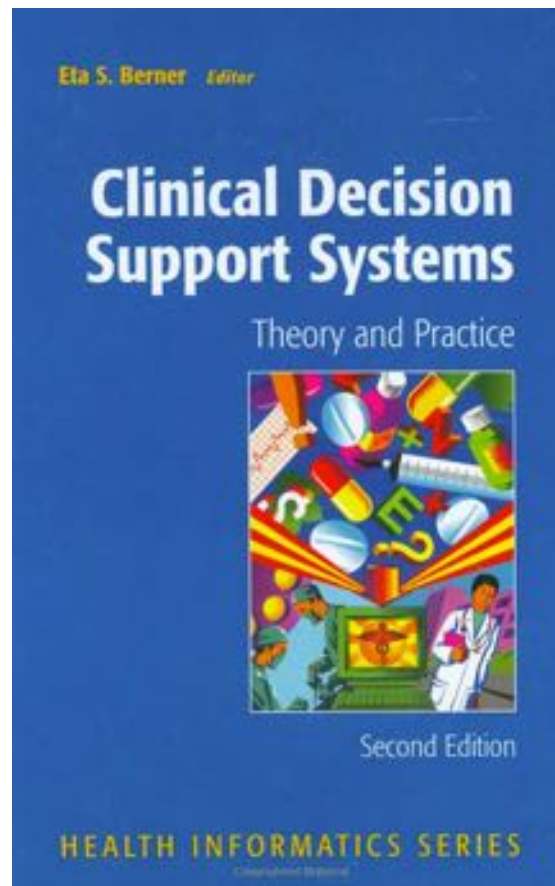
Q: Who should use them? And when?

Q: Physician autonomy?

Q: Doctor-patient relationship?

Q: Legal liability?

Q: Use in rationing?

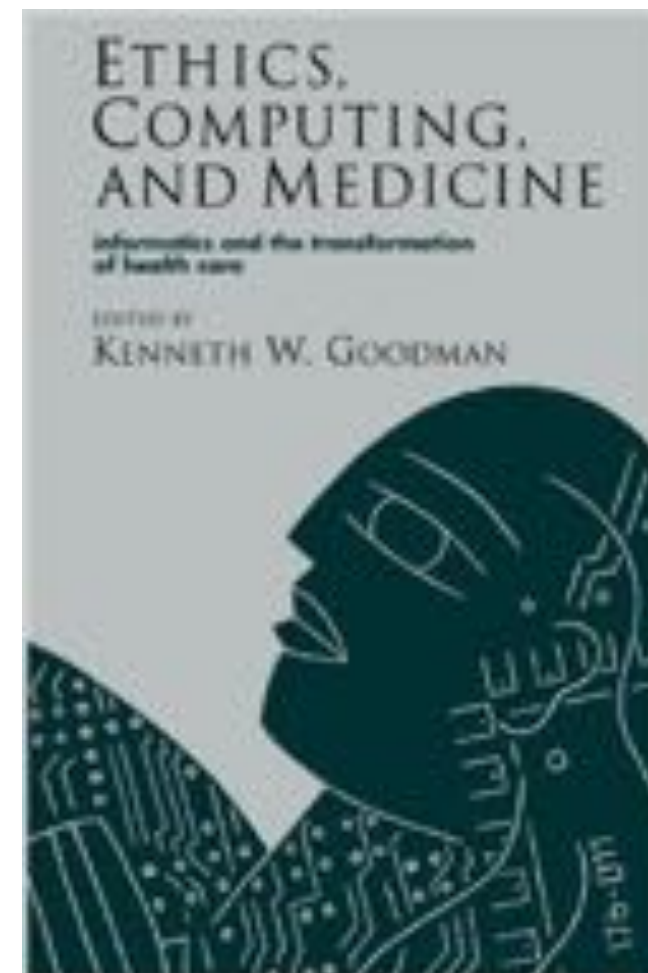
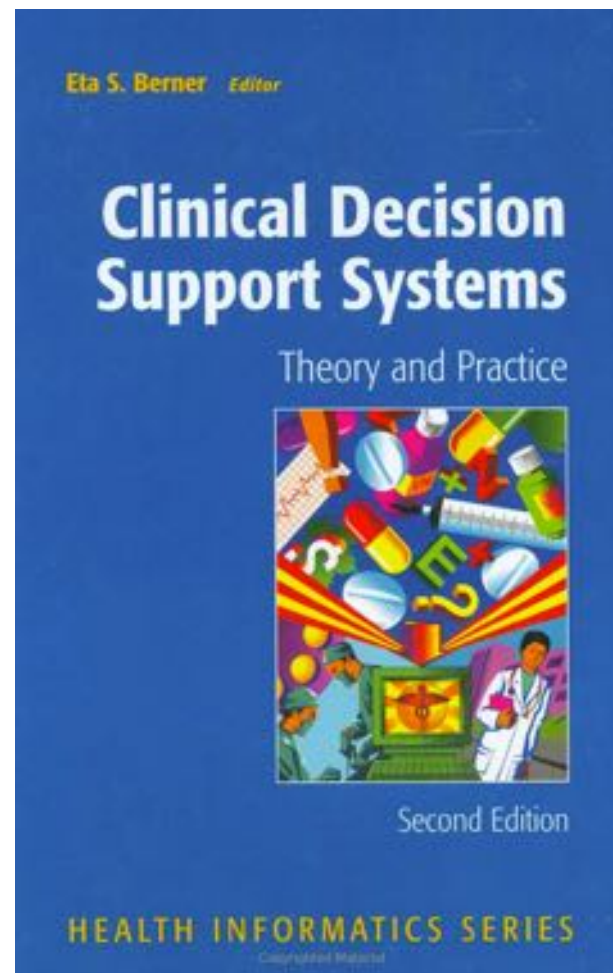


# 6 Ethical and Legal Issues in Decision Support

KENNETH W. GOODMAN

The overarching question may be put thus: does the new technology improve patient care? If the answer is affirmative, we may suppose we have met an important responsibility. If the answer is negative, it seems clear we should not use the new technology. The problem is, we often do not know how to answer the question.





The debate over medical software regulation represents one of the most important controversies of the Computer Age. The balancing of risks and benefits, as well as public safety and technological progress, means that scientists, clinicians, and policy makers have one of civilization's most interesting—and challenging—tasks.

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