

ELIZABETH E. MCCOLLIGAN

## COMPUTERIZED MEDICAL RECORDS

---

### INFORMATION SYSTEMS FOR PATIENT CARE

Bruce I. Blum, Editor, *The Johns Hopkins University Applied Physics Laboratory*  
Published by Springer-Verlag, New York, 1984, 400 pp., \$24.50.

---

In the preface to *Information Systems for Patient Care*, Bruce Blum states that the book's objective "is to bring together a collection of papers designed to educate physicians and other health care providers about the use of information systems in patient care." The book does this and more. It is an excellent starting point for anyone new to the field of medical computing, and it also provides a succinct overview of the field for anyone who may already be familiar with a particular aspect of the field but is interested in the bigger picture.

*Information Systems for Patient Care* is organized into a very useful and logical progression through the field of medical computing. The first section of the book provides an historical overview, presents the justification for medical care computing, and discusses some problems that arose in the early stages of the development of the field. Clinical Information Systems are usually categorized by function into three major subdivisions: Hospital Information Systems or Automated Hospital Information Systems, Automated Ambulatory Medical Record Systems, and Ancillary Systems. The second, third, and fourth sections of the book provide an overview of each of these three categories. Each section has a brief introduction and presents many of the well-known Clinical Information System models for each of the classes. Section two, Hospital Information Systems, also includes several chapters on planning, implementing, and conducting medical information system projects. The final section

---

Elizabeth E. McColligan is an assistant professor in the Department of Biomedical Engineering, Johns Hopkins School of Medicine.

of the book discusses the evaluation of Clinical Information Systems from a cost perspective as well as a "service benefit" perspective.

One major deficiency is the lack of a section on Artificial Intelligence in Medicine. A great deal of work has been done and is ongoing in the application of this popular field of computer science to medicine. However, most of this work is still in the laboratory stage and has not been incorporated into the clinical practice of medicine. Work has recently begun to incorporate Expert Systems with Clinical Information Systems, but much more work is needed.

A minor weakness of the book is the lack of chapters specifically describing clinical laboratory and pharmacy systems. These two ancillary departments are important in patient care and are often among the first to be automated. Quite often the volume of information that is processed by these departments requires automation long before the need arises in other areas of a hospital. These systems are frequently left in place and, while they interface with and provide data for the Hospital Information System, they often remain as independent systems.

As a professor, I feel that the book is an outstanding text for an introductory course in medical computing. While I have used it as a text for an upper-level seminar course in clinical information systems for undergraduate and graduate biomedical engineering students with favorable response, I feel it would also be appropriate for upperclass undergraduates and graduate computer science students, as well as medical students. I have heard that the book has also been used as a text for a course in medical information systems offered at Stanford University. As other professors learn about this book, I am sure they will follow suit.

*Information Systems for Patient Care* is an excellent reference text and is a welcome addition to the literature on medical computing. Bruce Blum is to be commended for his outstanding editorial efforts.