

# BOOK REVIEW

**Computers in the Service of Medicine. Essays on Current Research and Applications. Gordon McLachlan and Richard A. Shegog (eds.). 2 Vols. London: Oxford University Press, 1968. 382 p. \$7.00.**

The 23 short articles presented in these two paperback volumes describe work in progress and the current thinking at a number of British medical centers on the use and installation of computers in hospitals. The majority of the authors are doctors, working in medical schools, who see medical computing as their discipline. Progress in this field is notable in the United Kingdom in spite of the use of what we in this country would consider to be small and antiquated computers (although allowance must be made for the fact that more sophisticated computing systems will have been installed since 1967). This progress is probably due to the organization of medical care through the National Health Service, to the existence in British medical schools of social medicine departments which have provided the manpower for most of these studies, and to Nuffield and N.H.S. support of operational research in hospitals in the last ten years.

Everyone remotely interested in computers in medicine will find something of interest in these two small books, since the articles cover such topics as:

justification and installation of hospital computers (1),\* (21);

systems analysis of medical records and the flow of information in a hospital (13) with a critique of this use of systems analysis (14);

computer coding of clinical data—peptic ulcer outpatients (6), diagnosis (16), medical records (17);

various computer methods of identifying patients (3), (4)

and the error rate in patient identification by existing methods (15);  
storage and retrieval of medical information (2), (18), (19); and  
future role of computers in medicine (22).

The applications described are well known, viz., application of computers to EKG analysis (7), automation of clinical chemistry (8), radiation therapy planning (9), detecting side effects of drugs (10), (11), and development of admission policies resulting in greater bed usage (20).

The writers briefly describe their own studies, most of which are incomplete. They omit for the most part references to other workers or to work in the United States. (For a more comprehensive survey of computer applications to medicine in this country, see Levy and Cammarn.<sup>†</sup>) However, McLachlan and Shegog give a simple introduction to some of the problems under consideration today. Clearly the

computer is not a panacea which will change the face of medicine overnight. More efficient use of the doctor's talents and an increase in the quality and quantity of the care of the sick will undoubtedly result from the increased use of computers in medical centers. This will be achieved only if the taxpayer is willing to invest in this type of research, if a significant number of the medical profession are prepared to contribute their energies to making the computer relevant to medical practice, and if the profession as a whole is willing to accept these changes.

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\* Refers to the numbering used in the text.

† Levy, R. P. and M. R. Cammarn. Information systems applications in medicine. *Ann. Rev. Inform. Sci. Technol.* 3: 397-428, 1968.