COSTAR - A COMPUTER-BASED MEDICAL INFORMATION SYSTEM FOR AMBULATORY CARE

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COSTAR (Computer-Stored Ambulatory Record) is a computer-based medical information system designed to perform the data management functions needed by a group practice in the care of ambulatory patients. The purpose of the system is to replace the traditional document-based patient medical record with a comprehensive, centralized and integrated information system that meets both the medical care and financial/administrative needs of either a fee-for-service or a prepaid group practice. COSTAR was developed in collaboration with the Harvard Community Health Plan (HCHP) (a prepaid group practice located in Boston) and has been operational there since 1969.

The system is fully integrated into HCHP operations and is supported from the Plan's operational budget. Using the following criteria, the HCHP management views the system a success based upon: improved availability of information, reliable operation, professional acceptability, facilitation of a higher standard of patient care and improved management, stimulation of research in health care delivery by providing a readily accessible database, all at an acceptable cost.

Perhaps the best measure of COSTAR's success lies in its daily use and strong support from both clinical and administrative staff of HCHP.

COSTAR 5 is a new, expanded version of the HCHP automated medical record system. It has been developed with emphasis on a modular design and an extensive use of directories in order to provide considerable flexibility in implementation. The principal objectives of COSTAR are to:

1) Facilitate patient care by improving the availability of medical information in terms of accessibility, timeliness of retrieval, legibility, and organization.

2) Enhance the financial viability of the medical practice by providing a comprehensive billing system with accompanying accounting reports.

3) Facilitate medical practice administration by providing the data retrieval and analysis capability required by management for day-to-day operation, budgeting, and planning.

4) Provide data processing support for administrative and ancillary services (e.g., scheduling, laboratories, and planning).

5) Provide the capability to generate standardized management reports and support user-specified inquiry and report-generation on any elements of the database.

6) Support programs of quality assurance by monitoring the content of the database according to user-specified rules and to report automatically any deviations from these standards of care.

In COSTAR, medical information is recorded by the physician on self-encoding encounter forms and entered into the computer system by clerical personnel. For scheduled patients, a selected set of medical record information is printed by the computer just prior to the patient's visit. Such information is always available for emergency visits or telephone calls by direct inquiry via television-like terminals. The computer organizes the information into progress notes, a problem list, a list of active medications and a flowchart of laboratory data for all patients. In addition, specialty and/or disease specific flowcharts are prepared for certain patients. Selective retrieval and aggregate data analysis of the total database for both medical care and medical research are important benefits of the system.

COSTAR 5 is being developed in collaboration...
with industry and with the Intramural Division of the National Center for Health Services Research. Industrial support is a critical element for the national dissemination to a variety of medical groups of diverse size and composition.