Health Information Systems

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KEYWORDS

- Laboratory information system • Health information systems
- Electronic medical record • Electronic health record
- Computerized provider order entry • Decision support

PART 1–A. HEALTH INFORMATION SYSTEMS—SETTINGS AND FUNCTIONS

Hospitals and health care organizations are complex systems comprising innumerable intricate operations and processes. Factoring advances in technology and medical knowledge, this complexity is further compounded. With such complexity, there is generation of immense amounts of information. Health information systems (HISs) are computing systems that capture, store, manage, or transmit this vast amount of information as it pertains to the health of individuals, clinical care, or the activities of health-related organizations. **Fig. 1** provides an overview of various HISs, which can be divided into 4 categories: (1) foundational systems, (2) financial systems, (3) departmental systems, and (4) electronic medical records (EMRs).

Foundational systems handle the managerial aspects for health care organizations and include the master patient index (MPI) and computing systems, which inform other HISs about admission, discharge, and transfer (ADT) activities. The transmitted message from an ADT system includes demographic information, such as name, date of birth, and gender. The MPI serves to index this information, like name, date of birth, gender, race, and social security number, ensuring that all registered patients are represented once without duplicate identities. The MPI also ensures consistent demographic information across all HISs within a health care organization.

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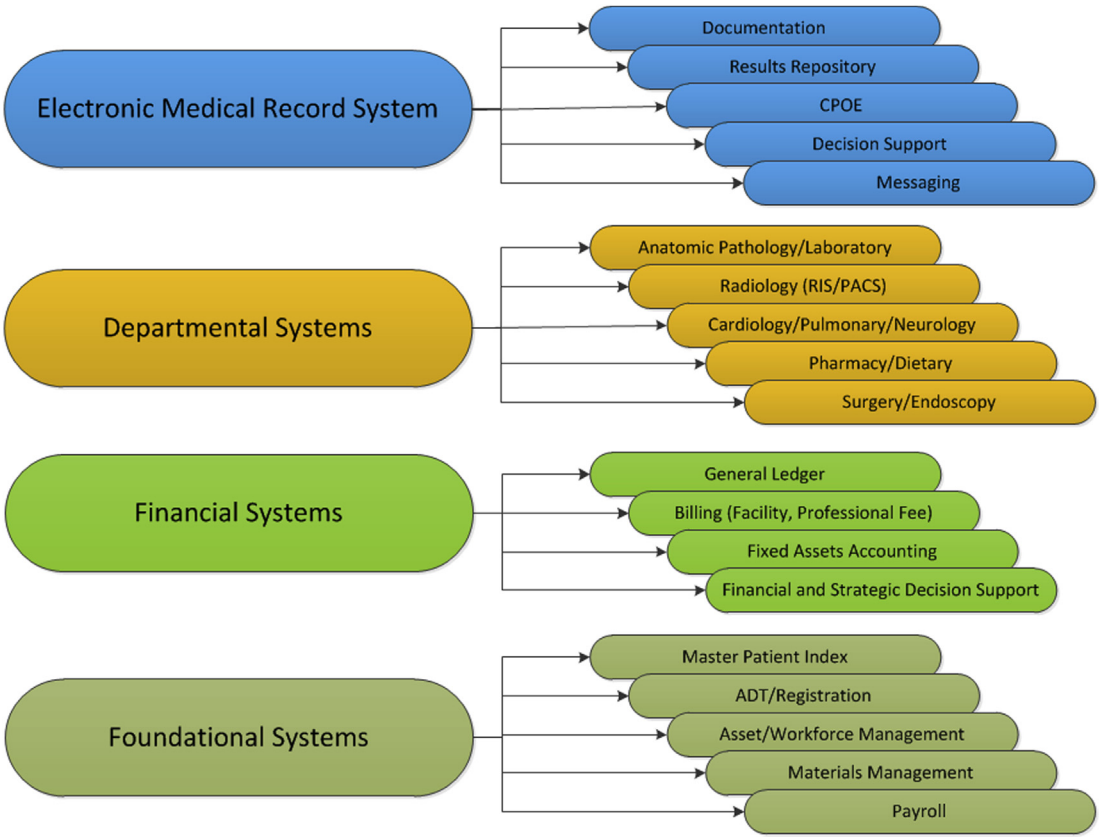

Fig. 1. Overview of HISs.

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