Motivation for the development and implementation of computerized hospital information systems has been financial and administrative (i.e., driven by the need to capture charges, reduce costs, and document patient care for legal reasons). Most of the systems marketed today have been motivated by those two factors. Historically, such systems have required a major investment in hardware (typically a mainframe and networks); and even though they have demonstrated significant improvement in hospital communications (with a corresponding reduction in paper flow), they have been characteristically weak in supporting professional nursing practice. These factors have prevented the level of acceptance by nurses that was originally foreseen. Only recently have developers and vendors begun to consider the nature of modern nursing practice and its information-processing requirements (Fig. 6.1).

If one considers the original principles that Campbell (1978) identified when observing the activities nurses perform when caring for patients, nursing roles fall into three global categories. The first is managerial roles or coordinating activities that involve the gathering and transmission of patient information, such as order entry, results reporting, requisition generation, and telephone booking of appointments. Although many of these activities have been delegated to unit clerks (at least on day shifts), current hospital information systems can help nurses with those activities. The second category is physician-delegated tasks. Current systems can capture these tasks from the physicians’ order entry set and then incorporate them into the patient care plan. The third category is autonomous nursing function, characteristic of professional nursing practice, when knowledge unique to nursing is applied to patient care. Current systems are beginning to support nurses in fulfilling their responsibilities in this category. All three categories—managerial/coordinating, physician-delegated, autonomous nursing function—must fit together to create a fully operational system. Current systems, although they release nurses to focus on professional nursing practice, fail to provide the appropriate support essential to professional nursing practice. The future requires decision-making
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FIGURE 6.1. Evolution of nursing information systems.

support for professional nursing practice and the capture of information from the patient care plan for nursing administration decision-making related to nursing resource allocation.

Nursing Management Information Systems

From an economic point of view, the combination of the shrinking healthcare dollar and escalating healthcare costs makes it imperative that the productivity issues associated with nursing dollars spent be considered. To that end, nurse managers must ensure that appropriate nursing information is incorporated into any management information system. The major objective of such systems is the provision of information on which decisions can be based that effectively and efficiently allocate nursing resources for the highest quality of patient care. Nursing management information needs to integrate the clinical data about patients that ultimately affect the cost of providing patient care. Historically, nursing costs have never been reliably projected because they did not incorporate fluctuating patient acuity levels and the associated needs for nursing care. Based on the integration of patient clinical data, some current systems now have the capacity to ascertain costs of nursing care for individual patients. This costing must incorporate multiple components such as quality and workload measurements, financial considerations (payroll and general ledger), and staff utilization as well as ed-