Decision making and decision support systems in healthcare case study samples

Business, Decision Making

Abstract

Decision-making is process physicians do in various aspects of their professional care provision endurance. However, the critical nature of decision-making in the health sector makes physicians vulnerable. The best decisions yield the best quality in care provision. In this context, the formulations of decision support systems have been an aspect of concern in the contemporary health care society. The numerous cases of physicians making wrong decisions and jeopardizing the quality of care have been a topic of criticism that could be effectively solved by these decision support systems. A comprehensive analysis of various case studies depicting the success and efficiency of these systems is necessary to display it is significant in every set of co-relating health facilities. Fundamentally, the DSS offers numerous benefits to health facilities, patients, and physicians as well as the community as a whole health unit. As a matter of fact, the utilization of these systems displays the provision of care as the responsibility of a compact health society rather than independent health facilities.

Healthcare is a vital part of the society that needs to be managed carefully in every aspect. Decision making and decision support system, therefore, are important for clinics and health centers so that they can be able to effectively manage health issues that arise from time to time. Proper management of health problems can only be achieved through developing a decision support system in healthcare that ensures that patient records, prescriptions and other health related information are well maintained in that they can be dealt with without difficulty . This means that, decisions made by

the clinicians through the decision support systems should be able to measure up with respect to their organizational objectives. The services offered by these support systems make it possible for health practitioners to provide care services faster and more efficiently as they simply utilize this system for reference. This means that, healthcare management; need a well-developed DSS to make it easy for workers to manage their jobs efficiently. Mathew W. Morgan, in his work, The Next Generation of Clinical Decision Support, has analyzed the importance of DSS in healthcare with respect to several case studies that display the efficiency of this platform.

The case study presents a compact system, The University Health Network, the largest healthcare organization in Canada, in which the database is created through which every health practitioner is able view different types of health information (Robert, William, & Morgan, 2002). Since this organization is a combination of three hospitals, the management can collect data, combine, compare them, and come up with appropriate results. This platform helps in their decision making process. Virtually, the field of health care is composed of numerous decisions that shape the quality of care offered in a specific facility. The organization has enabled online monitoring of patients through online which makes it easier for workers to keep records of patients so that confusion in medication do not occur.

There exist divergent technologies formulated by different health facilities to act as a decision support software. In this particular case, the three decision support technologies used are CPR (computer-based patient record), CDSS (clinical decision support system), and CDW (clinical data warehouse). The University Health Network has utilized these three technologies to formulate

integrated database systems that have helped their beneficiary health facilities in various arenas of healthcare decision-making. Fundamentally, the system utilizes the computerized physician order entry (CPOE) accessible at numerous retrieval points in the different facilities. The platform has been used to store patient information for a very long time; clinicians find it helpful to refer to the previous cases relating to a particular patient condition. Additionally, the use of the Cumulative Index to Nursing and Allied Health Literature (CINAHL) has enabled health practitioners gain access to divergent resources relating to evidence-based medical content. However, the use of the information presented by these systems is subject to evaluation by the clinician on the basis of evidence and statistics.

It is noteworthy that the information availed using these systems are accessible to only registered and authorized health practitioners. Physicians benefit from this information in various ways depending on the particular dilemma at hand. As a matter of fact, the platform makes it possible for physicians to maintain consistency with respect to drug prescriptions and the quality of care offered at divergent service points. Fundamentally, the technology is managed by University Health Network, which makes it possible for three different health facilities to retrieve data from their database at the same time (Ledbetter & Morgan, 2001). On the other hand, a patient is made available for diagnosis and prescription to physician who uses the platform at that particular time. Additionally, there are plans for the managerial team to extend the capacity of the technology to cover outpatient systems.

Fundamentally, the system has integrated web-based health resources with

basic health and clinical knowledge and made them accessible in one database. As a matter of fact, given the critical and divergent nature of healthcare and hospitality as a field of activity, numerous decisions have to be made with respect to the changing conditions of patients as well as the number of patients who flock health centers for treatment (Ledbetter & Morgan, 2001). Physicians rely on their professional knowledge and experience in daily decision-making process. This ends up working them up and exhausting them compromising the quality of care they deliver. This situation is counteracted by these decision support software that simplify the work done by physicians and often make them implementers rather than problem solvers. For instance, a patient admitted with a given health condition will expect the physician to make the right decisions in terms of the prescriptions and conditions under which the patient is to be maintained. In the context of these technological platforms, the physician evaluates different alternatives from the database and, on the basis of evidence and statistics, chooses the most appropriate option.

There are numerous benefits that couple the installation of this decision support system in, not only the case study, but also other health care facilities. The platform creates a virtual classroom where clinicians and physicians can learn about other fields in health care as well as further their knowledge with respect to their fields of specialization. Additionally, DSS enables physicians to interact professionally on a more competent context that helps them in raising their experience to higher clinical levels. On a more organizational basis, the system creates a point of integration for the different health facilities using the same database (as shown in the case

study). Moreover, the system provides physicians with alternatives relating to particular health conditions that might appear controversial or dilemmatic. In fact, the system enhances the decision-making potential of health workers by heightening their knowledge with respect to quality and provision of care.

For different health facilities to utilize the DSS there are fundamental requirements that each facility must possess to ensure maximum and fair benefit for all the facilities involved. As depicted in the case study, knowledge and presence of computers is very important as it enables the storage and retrieval of health records as well as professional communication between the health workers from the different facilities. Additionally, the system requires a link system that makes it possible for all the health facilities to access the records with equal opportunities. Most importantly, the platform requires a consistent library resource that will enable physicians to learn more from the database as well as getting information that might not be available with respect to their areas of specialization.

However, there are challenges and limitations that might couple the implementation of such systems. For instance, it requires special training that will equip physicians with the skills required in retrieving and interpreting information from the database. Additionally, this system requires a computerized platform and will add more expenses to the financial schedules of the particular health facility. Furthermore, any interference in the information stored in a database or misinterpretation of

information from the database would have grave consequences on the

health of patients and the quality of care.

References

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