

## Information filled by student:

### Course basic information

Code	Course Name	Credit Hours		
		Lecture	Practice	Total
<u>IS212</u>	<u>Data base</u>			<u>3hours</u>

### Research Title

(hospital management system)

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## **Abstract**

**(Purpose and summary of results in qualitative form)**

**An intelligent hospital information management system was developed to assist the patient at the front desk of a hospital. The patient will be able to learn about the doctors, appointment times, relevant departments, laboratory tests and the specific medicine about his/her medical situation. System will provide an intelligent front desk information service for the patients at the hospital entrance. It will also provide software assistance for the doctors to diagnose easily and rapidly by using the program's decision mechanism.**

## **Introduction**

**A hospital information system (HIS) is an element of health informatics that focuses mainly on the administrative needs of hospitals. In many implementations, an HIS is a comprehensive, integrated information system designed to manage all the aspects of a hospital's operation, such as medical, administrative, financial, and legal issues and the corresponding processing of services. Hospital information system is also known as hospital management software (HMS) or hospital management system.**

**Hospital information systems provide a common source of information about a patient's health history. The system has to keep data in a secure place and controls who can reach the data in certain circumstances. These systems enhance the ability of health care professionals to coordinate care by providing a patient's health information and visit history at the place and time that it is needed. Patient's laboratory test information also includes visual results such as X-ray, which may be reachable by professionals. HIS provide internal and external**

**communication among health care providers. Portable devices such as .smartphones and tablet computers may be used at the bedside**

**Hospital information systems are often composed of one or several software components with specialty-specific extensions, as well as of a large variety of sub-systems in medical specialties from a multi-vendor market. Specialized implementations name for example laboratory information system (LIS), Policy and Procedure Management System, radiology information system (RIS) or picture archiving and communication system (PACS).**

**Potential benefits of hospital information systems include:**

**Efficient and accurate administration of finance, diet of patient, engineering, and distribution of medical aid. It helps to view a broad picture of hospital growth Improved monitoring of drug usage, and study of effectiveness. This leads to the reduction of adverse drug interactions while promoting more appropriate pharmaceutical utilization.**

**Enhances information integrity, reduces transcription errors, and reduces duplication of information entries.**

**Hospital software is easy to use and eliminates error caused by handwriting. New technology computer systems give perfect performance to pull up information from server or cloud servers.**

## Theoretical analysis and discussion

### **The necessity of Implementing healthcare**

#### **supply chain management**

**Supply chain management have great significance for hospital purchasing and inventory management.**

**With advanced information technology and modern management concepts, supply chain management will fully optimize some aspects ,such as patients ,healthcare, healthcare service delivery model controlling medical care cost.**

**Medicine is the science and practice of establishing the diagnosis, prognosis, treatment, and prevention of disease. Medicine encompasses a variety of health care practices evolved to maintain and restore health by the prevention and treatment of illness. Contemporary medicine applies biomedical sciences, biomedical research, genetics, and medical technology to diagnose, treat, and** Medical availability and clinical practice varies across the world due to regional differences in culture and technology. Modern scientific medicine is highly developed in the Western world, while in developing countries such as parts of Africa or Asia, the population may rely more heavily on traditional medicine with limited evidence and efficacy and no required formal training for practitioners.<sup>[8]</sup> In the developed world, evidence-based medicine is not universally used in clinical practice; for example, a 2007 survey of literature reviews found that about 49% of the interventions lacked sufficient evidence to support either benefit or harm.<sup>[9]</sup>

In modern clinical practice, physicians personally assess patients in order to diagnose, prognose, treat, and prevent disease using clinical judgment. The doctor-patient relationship typically begins an interaction with an examination of the patient's medical history and medical record, followed by a medical interview<sup>[10]</sup> and a physical examination. Basic diagnostic medical devices (e.g. stethoscope, tongue depressor) are typically used. After examination for signs and interviewing for symptoms, the doctor may order medical tests (e.g. blood tests), take a biopsy, or prescribe pharmaceutical drugs or other therapies. Differential diagnosis methods help to rule out conditions based on the information provided. During the encounter, properly informing the patient of all relevant facts is an important part of the relationship and the development of trust. The medical encounter is then documented

in the medical record, which is a legal document in many jurisdictions.<sup>[11]</sup> Follow-ups may be shorter but follow the same general procedure, and specialists follow a similar process. The diagnosis and treatment may take only a few minutes or a few weeks depending upon the complexity of the issue.

The components of the medical interview<sup>[10]</sup> and encounter are:

- Chief complaint (CC): the reason for the current medical visit. These are the 'symptoms.' They are in the patient's own words and are recorded along with the duration of each one. Also called 'chief concern' or 'presenting complaint'.
- History of present illness (HPI): the chronological order of events of symptoms and further clarification of each symptom. Distinguishable from history of previous illness, often called past medical history (PMH). Medical history comprises HPI and PMH.
- Current activity: occupation, hobbies, what the patient actually does.
- Medications (Rx): what drugs the patient takes including prescribed, over-the-counter, and home remedies, as well as alternative and herbal medicines/herbal remedies. Allergies are also recorded.
- Past medical history (PMH/PMHx): concurrent medical problems, past hospitalizations and operations, injuries, past infectious diseases or vaccinations, history of known allergies.
- Social history (SH): birthplace, residences, marital history, social and economic status, habits (including diet, medications, tobacco, alcohol).
- Family history (FH): listing of diseases in the family that may impact the patient. A family tree is sometimes used.
- Review of systems (ROS) or *systems inquiry*: a set of additional questions to ask, which may be missed on HPI: a general enquiry (have you noticed any weight loss, change in sleep quality, fevers, lumps and bumps? etc.), followed by questions on the body's main organ systems (heart, lungs, digestive tract, urinary tract, etc.).

The physical examination is the examination of the patient for medical signs of disease, which are objective and observable, in contrast to symptoms which are volunteered by the patient and not necessarily objectively observable.<sup>[12]</sup> The healthcare provider uses the senses of sight, hearing, touch, and sometimes smell (e.g., in infection, uremia, diabetic ketoacidosis). Four actions are the basis of physical examination: inspection, palpation (feel), percussion (tap to determine resonance characteristics), and auscultation (listen), generally in that order although auscultation occurs prior to percussion and palpation for abdominal assessments.<sup>[13]</sup>

The clinical examination involves the study of:

- Vital signs including height, weight, body temperature, blood pressure, pulse, respiration rate, and hemoglobin oxygen saturation

- General appearance of the patient and specific indicators of disease (nutritional status, presence of jaundice, pallor or clubbing)
- Skin
- Head, eye, ear, nose, and throat (HEENT)
- Cardiovascular (heart and blood vessels)
- Respiratory (large airways and lungs)
- Abdomen and rectum
- Genitalia (and pregnancy if the patient is or could be pregnant)
- Musculoskeletal (including spine and extremities)
- Neurological (consciousness, awareness, brain, vision, cranial nerves, spinal cord and peripheral nerves)
- Psychiatric (orientation, mental state, mood, evidence of abnormal perception or thought).

It is to likely focus on areas of interest highlighted in the medical history and may not include everything listed above.

The treatment plan may include ordering additional medical laboratory tests and medical imaging studies, starting therapy, referral to a specialist, or watchful observation. Follow-up may be advised. Depending upon the health insurance plan and the managed care system, various forms of "utilization review", such as prior authorization of tests, may place barriers on accessing expensive services.<sup>[14]</sup>

The medical decision-making (MDM) process involves analysis and synthesis of all the above data to come up with a list of possible diagnoses (the differential diagnoses), along with an idea of what needs to be done to obtain a definitive diagnosis that would explain the patient's problem.

On subsequent visits, the process may be repeated in an abbreviated manner to obtain any new history, symptoms, physical findings, and lab or imaging results or specialist consultations.

**prevent injury and disease, typically through pharmaceuticals or surgery, but also through therapies as diverse as psychotherapy, external splints and traction, medical devices, biologics, and ionizing radiation, amongst others.**

**Medicine has been around for thousands of years, during most of which it was an art (an area of skill and knowledge) frequently having connections to the religious and philosophical beliefs of local culture. For example, a medicine man would apply herbs and say prayers for healing, or an ancient philosopher and physician would apply bloodletting according to the theories of humorism.**

**In recent centuries, since the advent of modern science, most medicine has become a combination of art and science (both basic and applied, under the umbrella of**

**medical science). While stitching technique for sutures is an art learned through practice, the knowledge of what happens at the cellular and molecular level in the tissues being stitched arises through science.**

## **Conclusion**

**Medicine is the science and practice of establishing the diagnosis, prognosis, treatment, and prevention of disease. Medicine encompasses a variety of health care practices evolved to maintain and restore health by the prevention and treatment of illness. Contemporary medicine applies biomedical sciences, biomedical research, genetics, and medical technology to diagnose, treat, and** Medical availability and clinical practice varies across the world due to regional differences in culture and technology. Modern scientific medicine is highly developed in the Western world, while in developing countries such as parts of Africa or Asia, the population may rely more heavily on traditional medicine with limited evidence and efficacy and no required formal training for practitioners.<sup>[8]</sup> In the developed world, evidence-based medicine is not universally used in clinical practice; for example, a 2007 survey of literature reviews found that about 49% of the interventions lacked sufficient evidence to support either benefit or harm.

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