

**DECISION SUPPORT IS GOOD FOR YOUR  
HEALTH**

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# QUESTION 1

The system discussed in this case was a decision support system. However, other types of computer-aided support are utilized in medicine.

Can you think of way that the medical profession could use AI system? For example, how about pattern recognition?

Could that help in diagnosing illness?

- ▶ Artificial Intelligence is a machine which can imitate human thinking and behavior. Yes, in medical profession AI system can be used for decision support or for the best solution for any diagnose. Based on case study Isabel is one of the AI system which assist b listing possible diagnose test list of test that can be performed and treatment options after we enter patient's symptoms.
- ▶ Pattern recognition is one of AI application which is a field of research activity in which observation being made are classified and described. It is recognized pattern by clinical characteristics. It is mainly based on certain symptoms or signs being associated with certain diseases or conditions, not necessarily involving the more cognitive processing involved in a differential diagnosis.
- ▶ This may be the primary method used in cases where diseases are frequently received, or the provider's experience may enable him or her to recognize the condition quickly. Theoretically, a certain pattern of signs or symptoms can be directly associated with a certain therapy, even without a definite decision regarding what is the actual disease.

## QUESTION 2

A big worry in the collating and aggregation of medical institution is that the more access there is to person's medical information, the more exposed that personal information becomes. HIPAA (Health Insurance Portability and Accountability Act), signed into law in 1996, addresses the security and privacy of your health data.

The law was enacted to try to ensure that medical records, electronically stored and transferred, would be protected.

Do you think that making your medical records available to the various branches of the medical industry (doctors, therapist, insurance companies, hospital billing, etc) is, on the whole, good or bad? Why?

Can you think of any instances where disclosure of medical information could cause problems for patient?

- ▶ Good. Personal data of patient's which stored electronically and transferred among doctors, therapist, insurance companies and hospital billing will help the patients and people who involve to smoothly move.
  - ▶ Doctors: Before being diagnose doctors always wanted to know if the patient has previous history or any type of medical issues. By having the data electronically doctors will understand patient's condition and will able to diagnose based on current illness. For example allergic to some medication, so that doctor can give alternate medication.
  - ▶ Therapist: follow up therapy at different branches will assist the therapist to check the last therapy so that redundant information collection not required.
  - ▶ Insurance companies: Will able to see patients record to cover the bills and assist patients to cut down the steps such as for history of claims
  - ▶ Hospital Bill: When a patient being send from one department or branch to another for any medical checkup or admission etc. will able to assist the employees to trace the record and transfer the billing to patients at the last branch or clinic.
  
- ▶ When patients information being disclosure it could be problem to patients such as:
  - ▶ Medical study. Probably the patient being diagnose with strange cases and this could be medical study for interns but it will be uncomfortable for the patients.
  - ▶ Security. Patients might think that their information is no longer secure with the hospital and many people knows about the problem and this can be end up for the patient to not get treated to the hospital again.

## QUESTION 3

Could predictive analytics be a part of the HHC decision support system? If so, what sort of data would it analyze?

What might it tell medical staff?

Would it be useful only to those who are already ill or could it help healthy people? How?

- ▶ Predictive analytics is an area of data mining that deals with extracting information from data and using it to predict trends and behavior patterns.
- ▶ It is can be part of HHC decision support. It will analyze the data which is related to clinical information from the database from different branches.
- ▶ It will able to tell the possible solution for the input of details we enter with the prescription. It will able to assist ill people or healthy as precautions. For the ill people it will able to tell us the possibility of the sickness and prescription that required for treatment.
- ▶ For healthy people it would be precaution for the individual to stay healthy.

# QUESTION 4

A clinical study has shown that telemonitoring, discussed briefly in this case, helps in keeping down medical costs. In fact, monitored patients were hospitalized about half as often as those with the same illness who were not monitored.

Emergency room visits were five times more likely among those who were unmonitored. What types of illness could be monitored this way (think chronic diseases like high blood pressure)?

Would it make sense to use the system as follow-up care?

How could the data be utilized to help those who might become sick in the future?

Into what part of Isabel would the data fit?



- ▶ HHC uses telemonitoring personnel to track patients with chronic illness. Chronic illness required careful monitoring, however with thousands of patients with chronic illness unable to track in person all the time, thus telemonitoring plays vital role. Yes, it's make sense as the data which collected for certain time period will able to diagnose the conditions of the patient. Vice versa if the condition is good or bad both able to secure the patient's condition with the regular monitoring and based on the collected data.
- ▶ With the collected data will able to assist doctors to identify or check the patient's current condition. With the change of result of the checkup which has done will show the doctors what is their current condition. Such as blood pressure, if it's getting increase that shows the individual is not in good condition. Same goes to diabetic patients where the reading is more than the benchmark.
- ▶ Isable will able to fit at the recollection of the data of individual possible sickness and treatment or prescription based on the symptom. This is because Isable stored thousands of data from book, journal and other source together with previous cases and treatment. It will able to assist to take the next cause treatment for the existing individual.

# QUESTION 5

Could an automated medical diagnosis system ever replace live doctors?  
Why or why not?

Would you trust an experienced doctor over a database that you could  
query yourself? Why or Why not?

- ▶ No. Live doctors cannot be replaced by machines. This is because human is unique in way they have the experience of completing successful surgery at any cause though there is minor failures and misdiagnose. When comes to machines, there is some vulnerabilities which feels it is still not secure. Electricity supply, system corruptions, incorrect program and etc. If a surgery being operate by machine, what will happen to the patients when one of these vulnerability happens? It could end up patient's life in danger.
- ▶ I would rather trust experienced doctor over database. In my opinion database is created by human. Human able to come out with the diagnose based on the research. The doctor has hands on experienced on the treatment which able to explain much better instead of database. It will only show what is the problem and possible diagnose and ways of treatment.

*THANK YOU*