**Information Technology Applications**

**Unit 4 – Outcome 2**

**Name:**

**Pastoral Group:**

**Date:**

On completion of this unit the student should be able to evaluate the effectiveness of strategies used

by organisations to manage the storage, communication and disposal of data and information, and

recommend improvements to current practices.

**Nature of Task:** A Test (40 Marks)

**Scope of Task:**

* + Date: 20th September 2011
  + Time: 75 minutes (1 period)

#### Key skills

These skills include the ability to:

* explain why particular information management strategies are used by organisations to monitor

and control their data and information

* discuss the nature of particular threats to the integrity and security of data and information
* discuss possible consequences of ineffective information management strategies
* propose strategies to minimise tensions between stakeholders
* propose and apply criteria to evaluate the effectiveness of information management strategies
* recommend information management strategies to improve current practices.

**The Case Study**

Dr Glen Sheffield, PhD, a general practitioner, has recently moved into a new surgery in the suburbs of Melbourne and has employed a nurse (Miss Darling) and a receptionist (Mrs Balm), both of whom he has known for a long time to be completely honest, skilled and reliable. Dr Sheffield is concerned that his new information system be set up properly from day 1. He previously worked with another doctor, and found that surgery’s information system to be very poorly set up. He does not want to repeat those mistakes in his own business. For the past month he has been working with a temporary system, which he knows is poor, but he is now ready to establish a permanent information system and that’s why you have been called in.

**Currently**

* There is one computer on Dr Sheffield’s desk and one on Mrs Balm’s desk which is in an area accessible to patients. Since Mrs Balm is often helping elderly patients to and from their cars, her desk is not always attended.
* All computers run Windows XP. There is no username or password access and the virus protection program is updated once every month. No encryption exists.
* Nurse Darling helps Dr Sheffield with some procedures, and at other times she sees to patients with medical procedures that do not require the doctor’s services, such as changing dressings and doing medical checkups.
* Patients’ medical histories are currently stored as Word documents on Dr Sheffield’s computer. Each week he copies them to a USB and copies them onto the receptionist’s computer as a backup. The USB is stored safely in the receptionist’s desk drawer, under her computer.
* For simplicity, Mrs Balm uses a patients’ Medicare numbers as unique IDs in their records.
* Dr Sheffield’s installation of Microsoft Word is from a CD he borrowed from his brother who downloaded it using Bit Torrent.
* Mrs Balm’s computer has a wireless internet connection. The only security measures in place are those that come with a standard Windows XP installation.
* The nurse occasionally has to refer to patient histories and either has to interrupt the doctor to use his computer, or use copies of patient histories on Mrs Balm’s computer.
* Nurse Darling prefers to avoid this because the information on Mrs Balm’s computer could be up to a week out of date.
* Patients make appointments with the doctor through Mrs Balm using either the telephone or email.
* When patients move to new areas, or wish to change doctors, Dr Sheffield sends the patients’ medical histories to their new doctors as email attachments.
* When files are no longer needed, they are deleted to the computer’s recycle bin. Unwanted paper records are torn up and put into the rubbish bin.

Dr Sheffield is well aware that his current makeshift system is unsatisfactory in many ways. He employs you to write a report that evaluates the strengths and weakness of his current system, and to recommend improvements.

1. a. What is the difference between **data** and **information**?

**(2 marks)**

b. Why are they **important** and valuable within an organisational setting?

**(1 marks)**

1. What is the main **law** which applies in regards to how Dr Sheffield’ information system stores, communicates and disposes of data and information? Identify the main elements of this law.

**(2 marks)**

1. In what ways, and to what extent is the doctor currently compliant with, or in breach of, this law?

**(4 marks)**

1. List and describe THREE threats (deliberate or accidental) that compromise the integrity and security of data and information stored, communicated or disposed of, by the doctor’s information system? Do not offer solutions, just discuss what threats exist.

**(6 marks)**

1. Recommend procedures, hardware and/or software to **reduce or prevent** each of the threats identified in Question 3.

**(3 marks)**

1. Once you have implemented strategies for the management (storage, communication and disposal) of files within an organisational setting, how would you measure the **effectiveness** of these strategies? **List** & **explain** each criteria.

**(8 marks)**

1. **List** & **explain** the main aspects of a **Disaster Recovery Plan**.

**(8 marks)**

1. If ethical, legal and social dilemmas exist within an organisation, **list** the steps that should be followed to solve these tensions?

**(6 marks)**