**Worksheet # 9**

**Automation and Informatics**

**Learning Objectives**

1. Identify the types of automation used at your facility.

2. Discuss the advantages and potential disadvantages in using technology in your facility.

**Preceptor:** Discuss this activity with the student and please sign-off in E-value that it has been accurately completed.

**Instructions:** Review the list below. Put a check in the box next to the type of automation that your hospital site utilizes. Discuss with your preceptor these various types of automation used by the pharmacy (type, unit, where, when, and how).

**Automation**

* Automated dispensing cabinets
* Robotics

**Barcoding**

* Bar-coding during distribution process
* Bar-coding during medication administration process

**Infusion Pumps**

* Smart Infusion Pumps
* Patient Controlled Analgesia

**Informatics**

* Computer physician order entry (CPOE)
* Clinical Decision Support

1. Specifically discuss how automation affects space, dispensing, efficiency, and patient safety.

Space

How much space does an automated dispensing system use? Has this posed a problem in the pharmacy?

Dispensing

Where are pharmacists and technicians involved in the operation of the automation? Has automation reduced the number of medication errors?

Efficiency

Has automation improved efficiency in the pharmacy? Give an example of when automation can decrease efficiency.

Patient safety

Has automation improved patient safety? Please explain below.

1. Discuss whether the automated systems have the capacity to communicate with one another. In addition, discuss who is responsible for updating the technology and contingency plans for when a system breaks down or malfunctions.
2. Based on your findings/discussions above, identify 3 potential or real problems (barriers) with the use of automation.