Please answer the following essay questions:

1. **How does nursing decision making differ from that of physicians?**

Nurses play an instrumental role in the overall goal of improving patient outcomes in healthcare delivery. Nurses act as the front line support in many interactions with patients. Their primary role differs in that they play a supportive role to the physician. Their primary purpose is in facilitating the initial contact with the patient and in gathering information and vitals that feed into the physical exam with the physician. When executed properly the nurse effectively reduces a lot of over overhead and through the process allows the patient to receive the critically focused attention that they need with the physician. In many cases, the instincts of the nurse carry through to the physician and allow him/her to consider the evidence presented from the initial triage. The nurse can judge the situation and given their educational background and skills gained through work experience can advise on the criticality of a chief complaint. This instinct and judgment help set the physicians priority of care.

Often times in a healthcare encounters, it is the interaction with the nurse that leaves a lasting impact with the patient. Before and after, they assist the patient in educating them both in the initial phase and at discharge. Nurses are generally more accessible to a patient than a physician. Because of this you find nurses in various capacities serving in settings such as; Hospitals, Homecare, Ambulatory Care, Community centers, Nursing Home / Extended Care, Student Health Service and in Nurse Education.

How might information technology solutions to assist nurses differ from IT solutions focused on physicians?
The same tools encompassed in CPOEs and EHRs benefit the nurse as much as they do the physician. As pointed out in the previous question, nurses generally start the process by updating charts and recording vitals which are then reviewed during the physical exam by the physician. Areas within these systems that help automate manual work for the nurses center around systems that monitor patient vitals. As automations are built to feed the data gathered by machines into the EHR it reduces potential for error and makes this information quickly accessible for making evidence based decisions.

Other opportunities are in building in checklists and alert mechanisms. As these become more prevalent in the EHRs it will help facilitate accuracy and ensure that all necessary care considerations are made in providing care for the patient. Alerting specifically can propel better patient outcomes by proactively alerting clinical staff when critical decisions or attention is needed.

Resource:
- Stephanie Kitt Presentation given on 08/01/2010.

2. **How does pharmacist decision making differ from that of physicians?**
The underlying focus of a pharmacist is different from that of a physician. The physician is focused on diagnosing the problem from the patient's chief complaint and forming a care plan for treatment.

The pharmacist is focused more on the treatment of the identified condition through identifying pharmaceutical solutions. In many cases they are a knowledge resource. The physician is definitely capable and issues their medications. The pharmacist's education is more specialized in understanding drug interactions, toxicology, doses, etc. This specialized knowledge in pharmacotherapy becomes a valuable resource to the physician in carrying out the best care for his/her patients. Together they combine to have an interdisciplinary knowledge.

 In Anne's word, it is the pharmacist's role to "ensure safe and effective medication use to improve patient outcomes." The added distinction on this point in her slide was that it "includes all steps of the process". The physician and the pharmacist both share this common goal.   A couple key things were said on this fact as it related to the pharmacist.

 - If a physician prescribes a medication that has a potent interaction with a current medication, it is as much the

pharmacist's responsibility as it would be the physician to identify and remedy the problem. There is increasing complexity in the administration of medications and it is easy to make mistakes.

- To be involved in all steps of the process the role of pharmacists is changing. Where it has been traditional for pharmacists to be locked away in the dungeons of a hospital setting, this is no longer the case. Pharmacists are now starting to participate in rounds with the physicians. In community settings, pharmacists also can offer advice to patients filling prescriptions and help educate them.

- Being a part of the rounds aids in evaluating adverse affects, confirming correct dose and regiments. The pharmacist is allowed to be an input into the goal of improving patient outcomes.

- As medications are prescribed through CPOE systems, the machine will not release the medications without first being approved by the pharmacist in hospital environments. This gives them the opportunity to review prescriptions to ensure safe and effective medications. In community settings, they also act as a check and balance to review the prescribed medications and ensure safe administration

- Act as drug information resources to all clinicians. They are resourceful in locating information and applying it electronically. Where needed they can guide physicians and nurses to these resources for knowledge sharing.

How might information technology solutions to assist pharmacists differ from IT solutions focused on physicians?
As with the decision making process, the pharmacist use of information technology solutions differs by focus. Physicians are keenly interested in gaining improvements in diagnostic tools and improving the workflow involved in review of information related to the patients' problem list, medical history, etc to lead them to a quicker diagnosis of the chief complaint.

The pharmacists purpose is to get ensure safe and effective medications. They certainly would share a common interest with the physician in seeing a list of current medications being taken by the patient. The pharmacist also rely on systems such as:

- Pharmacy information systems – an information resource to help with clinical screening, prescription management, inventory management of medications, and patient drug profiles.

- Automated Medication Dispensing Systems (ADMs) – Adds efficiencies in pharmacy settings in the dispensing of drugs just in time that it is needed and loops in an approval review process for the pharmacist.

- E-Prescribing – Enables prescriber's to electronically transmit accurate and error-free prescription orders directly from the point of entry to the pharmacy to be fulfilled. This aids in the main goal of ensuring safe and effective medications by reducing error in having to transcribe the information.

All of the above, as Anne pointed out are becoming very critical components in pharmacy. Pharmacists have become increasingly dependent on it. With constant interruptions in a given work day, these systems when operating as expected help reduce issues and introduce needed efficiencies in the process and allow for the pharmacist to direct more attention on issues that make a positive impact on patient outcomes.

Resource:
- Anne Bobb Presentation given on 08/01/2010.

3. **What are some of the factors, as discussed on the slides and in class, that impair the ability of pharmacists, nurses, and physicians to make consistently prompt and evidence based decisions?**

Some of the things discussed and presented in class that impair pharmacists, nurses and physicians ability to

make prompt and evidence based decisions as

- Increased complexity – We discussed two different perspectives on this. The first being that medication therapies have grown more complicated. Factors such as who can receive them, preparations needed, possible adverse reactions with the use of other medications all have to be considered.

- Resource and time constraints – Nurses, Pharmacists and Physicians all share in this concern where there is more and more demand for their time and not enough resources to fulfill that demand. Stephanie Kitt shared from a nursing perspective, the average worker puts in 7.5 hours of overtime per week to sustain the demand. The professionals in these positions are aging at a pace that is not equaled with new careers being started to fill the gaps left when they exit the work force. As the general population also ages, the aging generation will grow more reliant on healthcare. Equally as concerning is the lack of qualified educators to train the up and coming generation of professionals in the medical field. All of these factors and more exasperate the problem. Clinicians are forced to do more with less and it frustrates their ability to make prompt and evidence based decisions.

- Interruptions – Along with resource and time constraints, interruptions are frequent. This leads to diverted attention and contribute to mistakes made in making decisions.

- Lack of integrated systems – An example given by Anne was a situation where a patient's record may exist in the CPOE, but in the automated dispensing machine system, the patient is not able to be located. This causes unneeded disruption in the workflow process and requires the pharmacist to divert their attention from where it was otherwise focused.

Resource:
- Anne Bobb and Stephanie Kitt Presentation given on 08/01/2010.

References

Bobb, A., RPh, & Kitt, S., RN MSN. (Presenters). (2010). *Clinical Thinking - A Nursing and Pharmacist Perspective*.
    [Electronic version]. Northwestern University.