Sample Assignment 1: Workflow Analysis Directions
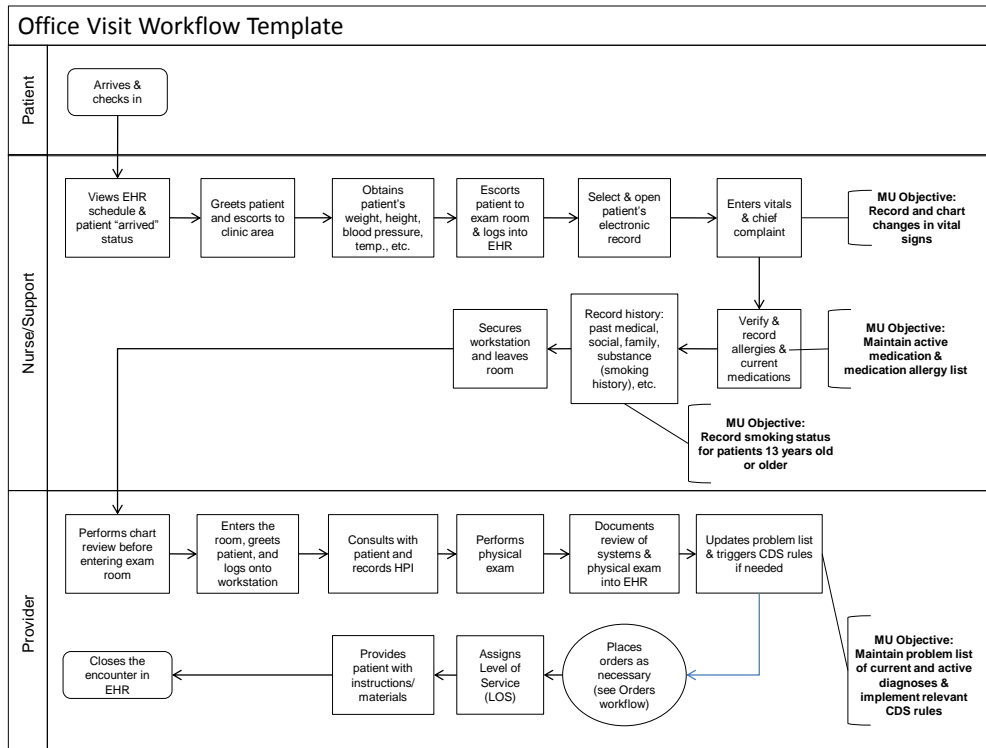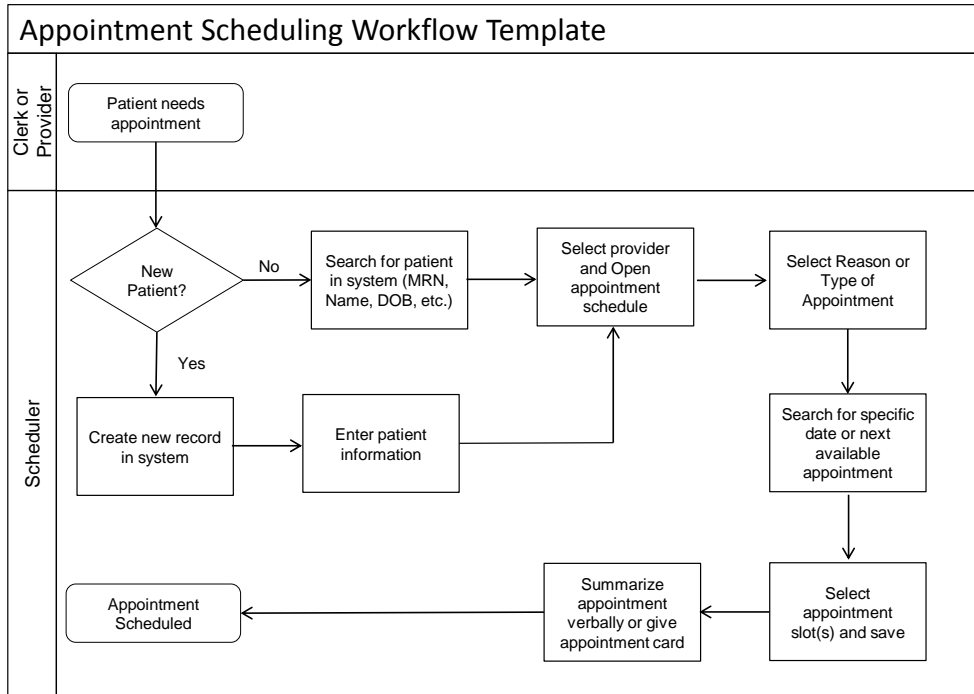
Purpose

The Purpose of this assignment is to:

1. Understand the benefits of nurse workflow analysis in improving clinical and administrative performance using standard flowcharting symbols and rules.

2. Compare and contrast the benefits of information technology and process improvement to enable nurse workflow and improve clinical and administrative outcomes.

Directions

1. Review the brief description of the workflow in primary care clinic for a typical patient visit using a paper medical record.

2. Review standard flowchart symbols at the following website: http://www.breezetree.com/articles/what-is-a-flow-chart.htm

3. Using the flow chart symbols in Word (Insert => Shapes => Flowchart Symbols) develop a flowchart of a typical patient visit from the time the patient schedules an appointment , completes the visit, and leaves the clinic using the format in Figure 1 (remember this is just an example):

4. Review the Key Workflow Problems listed after the Description of the Workflow for a Primary Care Clinic.

5. Each student should write a narrative summary (no longer than 4 pages, 12 point font, double spaced excluding references and title page) that describes how information technology could address each of the workflow problems listed. For example; clinical decision support systems integrated into an electronic health record can alert users to potential drug allergies or e-prescription can eliminate the need for paper prescription pads.   Make sure to not only identify what the information technology is, but how it will improve workflow and clinical or administrative outcomes.

Figure 1
Example of Clinic Flowchart Format

Appointment Scheduling Workflow Template

Clerk or Provider

Patient needs appointment

Scheduler

New Patient? — No → Search for patient in system (MRN, Name, DOB, etc.) → Select provider and Open appointment schedule → Select Reason or Type of Appointment

New Patient? — Yes → Create new record in system → Enter patient information → (to Select provider and Open appointment schedule)

Select Reason or Type of Appointment → Search for specific date or next available appointment → Select appointment slot(s) and save → Summarize appointment verbally or give appointment card → Appointment Scheduled

Office Visit Workflow Template

Patient

Arrives & checks in

Nurse/Support

Views EHR schedule & patient "arrived" status → Greets patient and escorts to clinic area → Obtains patient's weight, height, blood pressure, temp., etc. → Escorts patient to exam room & logs into EHR → Select & open patient's electronic record → Enters vitals & chief complaint

MU Objective: Record and chart changes in vital signs

Enters vitals & chief complaint → Verify & record allergies & current medications

MU Objective: Maintain active medication & medication allergy list

Verify & record allergies & current medications → Record history: past medical, social, family, substance (smoking history), etc. → Secures workstation and leaves room

MU Objective: Record smoking status for patients 13 years old or older

Provider

Performs chart review before entering exam room → Enters the room, greets patient, and logs onto workstation → Consults with patient and records HPI → Performs physical exam → Documents review of systems & physical exam into EHR → Updates problem list & triggers CDS rules if needed

MU Objective: Maintain problem list of current and active diagnoses & implement relevant CDS rules

Updates problem list & triggers CDS rules if needed → Places orders as necessary (see Orders workflow) → Assigns Level of Service (LOS) → Provides patient with instructions/ materials → Closes the encounter in EHR

6. Revise your current flowchart to integrate the new information technology and new process flow described in #5. An excellent resource for this project is listed at the Office of the National Coordinators website at http://www.healthit.gov/providers-professionals/frequently-asked-questions/411#id80 . These include two PowerPoint presentations entitled, "Workflow Process Mapping for Electronic Health Records" and "Workflow Redesign Templates".

7. When you complete your flowcharts and summary of recommendations, post them in the dropbox for Assignment #1 Workflow Analysis.

Grading Rubric for Assignment #1, Part 1

Number	Description	Points
1	Design the current state primary care clinic workflow using standard flowchart symbols.	25
2	Summarize various recommendations to improve workflow and clinical and administrative outcomes using information technology (software, hardware and other devices)	40
3	Integrate recommendations to improve workflow and revise the current state flowchart to reflect the changes.	25
4	Use of appropriate references, format and style in completing the paper and flowcharts.	10
	Total	100

CASE STUDY DESCRIPTION

**WORKFLOW FOR A PRIMARY CARE CLINIC
WITH A PAPER MEDICAL RECORD**

The typical workflow for a patient visit at this primary care clinic begins with the patient intake portion which includes the request for appointment, patient registration, history taking and beginning the clinical exam. The patient contacts the clinic for an appointment via phone call or in-person for a walk-in appointment, taken as available. In both instances, the receptionist collects demographic data from the patient, including date of birth, age, address, social security number, emergency contacts and insurance

provider information. This information is entered into the demographic and insurance component of the clinic's electronic registration system.

New patients are scheduled for a forty-five minute appointment and receive a unique patient identification number (ptID). This number remains the same for the life of the patient at the clinic. A returning patient's information is retrieved, including the ptID, and is scheduled for a twenty minute appointment.

After the patient is scheduled and registration is complete, a new paper chart is developed by the file clerk and the registration information is printed and placed in the chart. If the patient is a returning patient the file clerk pulls the existing paper record from the file room, updates the demographic information and then places the chart in the pending charts bin. The day before the patient arrives for their appointment, the file clerk places the paper chart at the front desk so that it is available when the patient arrives for their appointment.

Upon the patient's arrival, the receptionist queries the patient's social security number and verifies the patient's identity with their last and first name. Demographic information is validated or updated in the registration system. The patient then receives a paper encounter form, requesting information on past medical history, current health concerns and reasons for visit, to be completed while waiting to be placed in an exam room. In the meantime, the nurse is alerted that the patient has arrived and when available, rooms the patient in an exam room in the clinic.

 The second portion of the workflow includes: the physician's physical exam, patient laboratory, radiologic and other testing, and patient discharge. Once the patient is in the exam room, the nurse reviews the completed encounter form, obtains the

patient's vital signs and enters the patient's chief complaint and other relevant data into the paper record. After the nurse completes these tasks, the physician begins his encounter with the patient and completes the exam. The physician documents the exam and writes orders, including medications, lab, radiology and referrals in the chart after the encounter is completed. If the physician writes an order for medication, she provides a written prescription to the patient before they leave the exam room. The physician then flags the chart (to indicate that the chart has orders) and then returns it to the nurse. Upon completion of the visit the patient stops at the clinic front desk and schedules any return visit. The nurse then executes the orders (facilitates scheduling of lab, radiology, medication prescriptions and so forth).

When lab and radiology results are ready, they are printed to the clinics printer and the nurse then places the printed results into the chart.   Patients are called with any abnormal lab and radiology results or sent a letter stating results are within normal limits. When patients need prescriptions refilled, they contact the receptionist who then places a hand written note at the nurse's station in the clinic. The nurse then places the note in the patients chart and places it in a bin for the physician to review at the end of the day. Once the physician writes the refill prescription, she places the chart in the bin and the nurse contacts both the pharmacy and patient.

Key Workflow Problems

1. Patients frequently complain about having to fill out and update the registration forms and health history in the waiting room when they first arrive at the clinic for their appointment.

2. Paper charts occasionally become lost and staff spend a substantial amount of time searching for them.

3. Nurses complain that it is difficult to read the physicians handwriting and have made errors in transcribing orders.

4. It takes considerable time to sort through printed lab and radiology reports and place them in patients charts for the physician to review. It would be much easier to have all lab, radiology and other ready to go for each patient the day before.

5. Nurses complain that they spend an enormous amount of time checking patient's drug allergies and validating correct dosages on medication orders. They often use Google to look up drug information.

6. Patients frequently lose their paper prescriptions written at the office and nurses spend a considerable amount of time having to call the pharmacy to validate them.

7. Patients often ask for information regarding their disease condition and nurses spend a considerable amount of time searching for reliable information on the Web to educate them. Evidence based guidelines are changing all the time and it is difficult to keep up with best practices.

8. Clinic physicians complain that there is not a good system of informing them if one of their patients has been admitted to the emergency room or admitted to the hospital. Emergency room staff complain that they do not have access to outpatient records and the patients past medical history when they are seen in the emergency room.

9. Clinic physicians and nurses complain that it is difficult to piece together the "patients story" in the paper chart. Much of the information is fragmented and caregivers need to see key metrics (trended lab, weight, BMI, and other data) in one place.

10. Patients would like to become more engaged in wellness and make less visits to the clinic for routine health monitoring such as tracking their weight, blood sugar, exercise program, adherence to a diet and so forth. Many also would like to become involved in various support groups but cannot leave their homes. And they would also like access to their own medical record so that they can review it at home.