



Role Based Access Control (RBAC) Healthcare Scenarios

Version 2.0

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1 Introduction

In the scenarios that follow, the red text (i.e., <<Py-**nnn abstract permission name**>>) indicates a reference to the abstract permission name and its unique identifier as listed in the tables in the HL7 RBAC Healthcare Permission Catalog.

ID (xyy-nnn) Legend:

- x = P (permission)
S (scenario)
- yy = OE (order entry)
RD (review documentation)
PD (perform documentation)
SC (scheduling)
- nnn = Sequential number starting at 001

2 Scenario SOE-001. Physician with Order Entry Privileges

Mr. Patient was placed in a clinic examination room for a Diabetic Consultation. The Physician greeted Mr. Patient and accessed Mr. Patient's medical records from within the facility's Electronic Health Record (EHR). Mr. Patient's medical records included the vital signs, patient measurements (e.g., height and weight), and the chief complaint(s) that were entered for this encounter.

The Physician asked Mr. Patient about any problems or concerns. The Physician also asked Mr. Patient about compliance with diet, exercise, and medication regime for diabetes. Mr. Patient admitted that although he was fairly diligent with his exercise program, he had some problems maintaining his dietary regime. The Physician entered this information as a progress note into the EHR as part of the subjective findings for this encounter.

The Physician did an examination of Mr. Patient, and entered the results of the examination into the EHR. Upon his earlier review of the EHR, he noted that Mr. Patient had not had a recent electrical cardiogram (ECG), so he ordered an ECG <<POE-003 New Radiology Order>> for Mr. Patient for review at a subsequent visit.

The Physician accessed Mr. Patient's lab results that were ordered at a previous visit, and found that the random blood glucose was 165 and the hemoglobin A1C was 6.8. The Physician also reviewed previous results for Mr. Patient's hemoglobin A1C and blood glucose for comparison.

The Physician discussed these results with Mr. Patient and explained that the blood tests indicated that his diabetes was not currently under tight enough control. They both agreed to a trial at better compliance with a diabetic dietary and exercise program before a change in medication. The Physician entered an order for a dietary consult <<POE-011 New Consult Order>> for Mr. Patient in the EHR, requested for the following week.

The Physician then ordered a new prescription for metformin <<POE-005 New/Renew Outpatient Prescription Order>> and a refill of glyburide <<POE-006 Change/Discontinue/Refill Outpatient Prescription Order>> at the same doses that Mr. Patient was previously taking. At this point, the Physician used the EHR to assist him in assigning the appropriate Evaluation and Management code for this encounter and finalized the progress notes, orders, history and physical, and consultation findings in the encounter, and by applying his electronic signature to all of the orders <<POE-023 Sign Order(s)>>.

3 Scenario SOE-002. Nurse Practitioner with Order Entry Privileges

Baby Newborn, a 25-hour-old term male newborn of East Asian heritage, is admitted to the Newborn Nursery. The Nurse Practitioner examines the Baby Newborn, suspects neonatal hyperbilirubinemia, and enters a STAT total serum bilirubin (TSB) laboratory order <<POE-001 New Laboratory Order>> into the Electronic Health Record (EHR). A Phlebotomist collects the STAT blood sample from the infant. As soon as the sample is processed, a Laboratory Technician enters and certifies the result, which is an elevated bilirubin level, in the EHR. The EHR notifies the Nurse Practitioner of the new abnormal STAT results.

The Nurse Practitioner then enters the following orders into the EHR:

- q12H bilirubin laboratory order
- Bili lights <<POE-019 New Supply Order>>
- qshift phototherapy 15-20 cm from the infant <<POE-015 New Standing Order(s) PRN>>
- qshift opaque eyeshield
- qshift eye check for discharge, excessive pressure, or corneal irritation
- frequent positioning
- q1h vital signs
- skin thermistor
- increased fluids, PRN
- q2-3h feeding of Enfamil <<POE-009 New Diet Order>>

The Nurse Practitioner also adds his/her electronic signature to the orders.

The Registered Nurse places Baby Newborn under the fluorescent lights with the eyes covered. The position of the light bulbs, time and duration of treatment, and the infant's response are charted in the EHR. Baby Newborn is turned frequently and his body temperature is monitored using a skin thermistor. Vital signs are carefully monitored. The baby is bottle-fed and additional fluids are administered.

Twelve hours later, the Nurse Practitioner reviews the results of the bilirubin test performed q12h. Noting that the bilirubin levels remain elevated, the Nurse Practitioner does not change the active orders.

After another 12 hours, the results are reviewed and the bilirubin levels are within normal limits.

The Nurse Practitioner discontinues the following orders in the EHR:

- q12H bilirubin laboratory order <<POE-002 Change/Discontinue Laboratory Order>>
- Bili lights <<POE-020 Change/Discontinue Supply Order>>
- qshift phototherapy 15-20 cm from the infant <<POE-016 Change/Discontinue Standing Order(s) PRN>>
- qshift opaque eyeshield
- qshift eye check for discharge, excessive pressure or corneal irritation
- frequent positioning
- skin thermistor
- increased fluids, PRN

The Nurse Practitioner also changes the diet from Enfamil formula to the mother's breast milk <<POE-010 Change/Discontinue Diet Order>>, and the vital sign frequency from q1h to qshift.

The following day, Baby Newborn is stable and discharged from the hospital to his parents.

4 Scenario SOE-003. Surgical Resident with Order Entry Privileges

Mr. Patient, a 67-year-old man with a diagnosis of coronary artery disease, arrives at the Same Day Services Unit. After being admitted, Mr. Patient proceeds to the Cardiac Catheterization Laboratory for a radial artery catheterization procedure to determine the location and severity of coronary blockages. After the ancillary department has processed the test results, the Physician receives and reviews the results electronically and consults with Mr. Patient. The Physician recommends Coronary Artery Bypass Surgery to bypass the occluded arteries and create new routes for blood to flow to the heart muscle. Mr. Patient agrees to have the procedure performed and is admitted to an inpatient facility.

Under the supervision of a Surgeon, the Surgical Resident reviews the bypass procedure with Mr. Patient along with the anticipated recovery process and time period.

The Surgical Resident reviews Mr. Patient's admitting information, noting that his Advance Directive indicates "Do Not Resuscitate (DNR)." The Surgical Resident explains to Mr. Patient that he cannot have a DNR in effect prior to the surgery, but that he will enter an order for the DNR after the surgery.

The Surgical Resident places the following orders in Mr. Patient's EHR: instructions to the Surgical Intensive Care Unit (SICU) nursing staff <<POE-013 New Nursing Order>> and the necessary post-operative medications <<POE-007 New Inpatient Medication Order>>.

After the surgery, the Surgical Resident visits Mr. Patient in the SICU to tell him that the surgery was successful. Per the patient's request, the Surgical Resident enters the DNR order <<POE-026 New DNR Order>> into the EHR.

Over the next five days, the Surgical Resident checks on Mr. Patient's progress and documents in the EHR the necessary adjustments to the medication and nursing orders <<POE-008 Change/Discontinue Inpatient Medication Order>>, <<POE-014 Change/Discontinue Nursing Order>>.

In preparation for discharge, the Surgical Resident discontinues the medication, nursing, and DNR <<POE-027 Change/Discontinue DNR Order>> orders.

The Surgical Resident also adds his/her electronic signature to all of the orders entered into the EHR.

5 Scenario SOE-005. Registered Nurse on Surgical Ward with Order Entry Privileges

The Registered Nurse on the Surgical Ward is on duty during the night shift and responds to the call light from Ms. Patient, a 24-year-old female who is 12-hours postoperative a medial collateral ligament surgical repair. Ms. Patient is currently receiving patient controlled anesthesia (PCA) medications as needed through an intravenous (IV) line. Ms. Patient tells the Registered Nurse that the pain medication is ineffective and that her level of discomfort at the surgical site is an “8” on a 1-to-10 scale. Ms. Patient is diaphoretic and has an elevated respiration rate of 30 breaths per minute. The Nurse informs Ms. Patient that (s)he will phone the patient’s surgeon and leaves the inpatient hospital room to phone the physician.

The Registered Nurse pages the patient’s surgeon and informs her of Ms. Patient’s condition. The physician orders a new PCA medication over the phone for pain, while also canceling the original medication. The Registered Nurse enters the telephone order <<POE-017 New Verbal and Telephone Order>> for the new medication into the patient’s Electronic Health Record (EHR). The Registered Nurse also discontinues the original medication order in the EHR per the physician’s telephone order <<POE-018 Change/Discontinue Verbal and Telephone Order>> cancellation. The Registered Nurse adds his/her electronic signature to the telephone orders. Upon delivery of the medication from the pharmacy, the Registered Nurse returns to Ms. Patient’s room and administers the new pain medication. The Registered Nurse returns a short while afterwards to verify the effectiveness of the medication.

The Registered Nurse records in the EHR that the new medication managed the patient’s pain to a satisfactory level.

The EHR will send an alert to Ms. Patient’s physician that there are telephone orders requiring his/her signature.

6 Scenario SOE-006. Physical Therapist with Order Entry Privileges

The Physical Therapist logs onto the electronic healthcare system and prints her inpatient schedule for that day. The Physical Therapist accesses the first patient's record and notes that an order for a walker has been entered for the patient.

Bringing both a walker and a pair of crutches, the Physical Therapist arrives at the Surgical Ward to provide physical therapy to Ms. Patient, a 24-year-old female patient who is 1 day postoperative a right medial collateral ligament surgical repair. The Physical Therapist greets Ms. Patient, performs an evaluation, and gets the patient to stand and walk using the walker. While using the walker, Ms. Patient states, "I have used crutches twice in the past year and would prefer to walk with the aid of crutches rather than a walker."

The Physical Therapist adjusts the crutches to the proper height for Ms. Patient, instructs the proper use of the crutches, and then observes the patient's gait while she demonstrates walking with the crutches.

When the therapy session is over, the Physical Therapist leaves Ms. Patient, accesses the Electronic Health Record (EHR), cancels the prosthetic order for the walker <<POE-022 Change/Discontinue Prosthetic Order>>, and enters a new prosthetic order for the crutches <<POE-021 New Prosthetic Order>>. The Physical Therapist also modifies the physical therapy consult order <<POE-012 Change/Discontinue Consult Order>> to indicate the use of crutches during future sessions. The Physical Therapist also adds his/her electronic signature to these orders.

7 Scenario SOE-007. Physician with Order Entry Privileges

The Physician is reviewing the Electronic Health Record (EHR) for Mr. Patient, who is to be discharged today. The Physician has determined that the radiology exam ordered yesterday is no longer needed and should be discontinued prior to discharge. The Physician enters the discontinue order <<POE-004 Change/Discontinue Radiology Order>> into the EHR.

8 Scenario SOE-008. Ward/Unit/Clinic Clerk

When Mr. Johnson arrives on the ward/unit, it is determined his care should be provided on another ward/unit. The ward/unit clerk then transfers Mr. Johnson to the appropriate location. This also involves a level of care and a physician change.

During Mr. Johnson's hospital stay, he has a cardiac arrest and a code is called. While the various physicians and nurses are working to revive Mr. Johnson, the ward/unit clerk is responsible for entering the necessary orders into the Electronic Health Record (EHR) and releasing <<POE-028 Release Order(s)>> them so the appropriate departments can perform their tasks. Mr. Johnson is revived and remains hospitalized for several more days.

Mr. Johnson has completed his course of inpatient hospitalization and is to be discharged to outpatient care with a follow up appointment in the cardiac clinic. The clerk on the ward/unit discharges the patient. She completes the discharge transaction and processes the information for the follow up appointment.

The clinic clerk assigned to the cardiac clinic begins the day by printing an appointment list for the clinic(s). This provides to the clinic staff of the expected workload for the day. Mr. Johnson reports as scheduled to his outpatient appointment. The clinic clerk acknowledges his arrival and checks-in the patient. Upon completion of Mr. Johnson's evaluation, the clinic clerk then schedules a follow-up appointment, and verifies all encounter information has been appropriately entered to complete the check-out process. The clinic clerk is also responsible for making new appointments for patients including overbooking in accordance within clinic policy.

9 Scenario SPD-001. Physician with Perform Documentation Privileges

Mr. Patient was placed in a clinic examination room for a Diabetic Consultation. The Physician greeted Mr. Patient and accessed Mr. Patient's medical records from within the facility's Electronic Health Record (EHR). After briefly reviewing Mr. Patient's medical records, the Physician next reviewed Mr. Patient's vital signs, patient measurements (e.g., height and weight), and the chief complaint(s) that were entered for this encounter.

The Physician asked Mr. Patient about any problems or concerns. The Physician also asked Mr. Patient about compliance with diet, exercise and medication regime for diabetes. Mr. Patient admitted that although he was fairly diligent with his exercise program, he had some problems maintaining his dietary regime. The Physician entered this information into the EHR in a Progress Note <<PPD-001 New Progress Notes>> for this encounter.

The Physician also noted from reviewing today's encounter in the EHR that Mr. Patient had already visited the lab to draw blood specimens for random blood glucose and a hemoglobin A1C for this appointment based on the Physician's pre-visit planning test orders. The orders were placed during the previous visit. The Physician also noted that the results from today's lab tests were not available yet.

The Physician did an examination of Mr. Patient, and entered the results of the examination into the EHR including updates to the progress notes <<PPD-002 Edit/Addend/Sign Progress Notes>>, reviewed the recent consultation findings, history and physical, and medical and diagnostic problem list. Mr. Patient mentioned that he thought he was allergic to a certain type of clothes detergent, and the Physician recorded this new allergy <<PPD-018 New Patient Allergy or Adverse Reaction>> in the EHR.

The Physician reviewed Mr. Patient's previous lab results and discussed these results with Mr. Patient explaining that the blood tests indicated that his diabetes was not currently under tight enough control. They both agreed to a trial at better compliance with a diabetic dietary and exercise program before a change in medication. The Physician presented Mr. Patient with an informative pamphlet about recommended low fat and low glycemic-indexed foods and recorded this patient education activity <<PPD-006 New Patient Education>> in the EHR. The Physician also entered an order for a dietary consult for Mr. Patient in the EHR, requested for the following week.

He then requested a follow-up appointment to see Mr. Patient in 6 weeks. At this point, the Physician used the EHR to assist him in assigning the appropriate Evaluation and Management code <<PPD-040 New Encounter Data>> for this encounter and finalized the progress notes, orders, history and physical, patient education, and consultation findings in the encounter by applying his electronic signature <<PPD-010 Edit/Addend/Sign History and Physical>>, <<PPD-007 Edit/Addend/Sign Patient Education>>, <<PPD-041 Edit/Addend/Sign Encounter Data>> to all.

Mr. Patient was then sent to the Medical Clerk to receive printed appointment slips for the dietary consult and follow-up appointment with the Physician.

The following week, the Physician received an alert from the EHR that the dietary consult for Mr. Patient was complete. The Physician accessed Mr. Patient's dietary consult and reviewed the findings.

10 Scenario SPD-002. Nurse in Nursery with Perform Documentation Privileges

The Nurse working in the Newborn Nursery receives a newborn girl patient into the unit. The Nurse accesses the patient's medical record within the facility's Electronic Health Record (EHR).

The Nurse measures the Baby Patient's weight, length, head circumference and also takes the blood pressure, heart rate, respiratory rate, and temperature. The Nurse assesses Baby Patient's APGAR (Activity, Pulse, Grimace, Appearance, and Respiration) and reflexes.

The Nurse also administers Silver Nitrate ointment into the eyes and administers a Vitamin K injection in the right quadriceps, per MD standing orders.

The Baby Patient is bathed, bundled, and placed in an isolette.

The Nurse initiates a Nursing Care Plan for Baby Patient in the EHR. The Nurse also records his/her observations, vital signs, patient measurements <<PPD-051 New Vital Signs/Patient Measurements>>, and medication administration in the EHR for Baby Patient.

11 Scenario SPD-003. Nurse on Medical/Surgical Ward with Perform Documentation Privileges

The Nurse working the Medical/Surgical Ward reports to her shift and sees her patient assignments. The Nurse also receives report from the Nurse leaving the shift for each of her assigned patients. The Nurse logs onto the facility's Electronic Health Record (EHR) to review each patient's medical record, to include the medical history, diagnosis, laboratory results, radiology reports, current medications and current treatments. The Nurse prints the nursing tasks and medications to be administered for each assigned patient. The Nurse accesses the Medication cart and obtains the medications necessary for Mrs. Patient at this time interval.

The Nurse begins his/her rounds for an initial assessment of the patients. The Nurse enters the room of 88-year-old Mrs. Patient, who is two days post-op the removal of her right kidney and exchanges introductions. Mrs. Patient is awake and lying supine in the hospital bed with bedrails in the raised and locked position. The Nurse checks the patient ID band while asking how Mrs. Patient is feeling, asking if she is in any discomfort.

Mrs. Patient just received an injection for pain from the Nurse working the previous shift and has no complaints of pain at present. The Nurse also assesses if Mrs. Patient is oriented to person, place, and time. Mrs. Patient is alert and aware of the date, her name, and her surroundings.

Mrs. Patient is receiving oxygen via nasal cannula at 1 liter/hour and the Nurse has an order from the Physician to discontinue the oxygen. The Nurse removes the nasal cannula and closes the oxygen valve. The Nurse takes the patient's vital signs and observes the patient's lung sounds, bowel sounds, pedal pulses, and skin turgor. The Nurse gently dorsiflexes each foot to assess for the presence of Homan's Sign (which would indicate thrombophlebitis). Mrs. Patient displays no calf pain, which indicates a negative Homan's Sign.

The Nurse observes the bag of IV of Ringers Lactate that is still $\frac{3}{4}$ full and infusing at a rate of 60 ml/hour and assesses the site for signs of infection or infiltration. The IV appears to be infusing without any complications so the Nurse hangs the IV piggy-back antibiotic that was ordered and observes Mrs. Patient for a negative reaction while giving Mrs. Patient the incentive spirometer, instructing her to inhale in order to make the ball reach and hover at its mark and allowing Mrs. Patient's lungs to expand as a precautionary measure to prevent pneumonia from occurring. The Nurse instructs Mrs. Patient to repeat this exercise ten times.

The Nurse removes the bandages that cover the surgical incision, assesses the surgical site for signs of redness and swelling, cleanses the wound, and redresses the wound with new 4x4 bandages.

Mrs. Patient also has an indwelling Foley catheter and is thus on Intake and Output. The Nurse empties the drainage bag, observing its color and measuring the amount of urine.

Because the patient is also an Insulin-dependant diabetic, the Nurse wipes Mrs. Patient's index finger with an alcohol swab, pricks the finger with a sterile lancet, places a drop of blood on a

test strip, and inserts the strip in the glucose meter. The blood sugar level is within normal levels, so insulin is not needed at this time.

The Nurse repositions the patient, reminds Mrs. Patient of her phone number and of the call button, says that her meal tray will be arriving shortly, and leaves the room.

The Nurse accesses the EHR for Mrs. Patient and records his/her nursing observations, vital signs, I&O, discontinuation of oxygen, and that patient education was provided regarding the use of the incentive spirometer and call light. The Nurse records the Point of Care blood glucose value <<PPD-023 New Point of Care Lab Testing Results >>, signs the test result <<PPD-024 Edit/Addend/Sign Point of Care Lab Testing Results>>, and also updates the existing Nursing Care Plan for Mrs. Patient. The Nurse accesses the M.A.R. and indicates the medication that was administered to Mrs. Patient <<PPD-046 Record Medication Administration Record (M.A.R.)>>.

12 Scenario SPD-004. Nurse in Pre-Op Setting with Perform Documentation Privileges

Mr. Patient, a 19-year-old college student and collegiate football player with a knee injury requiring surgical intervention, arrives at an Outpatient facility and is admitted by the Admitting Clerk. Mr. Patient provides his health insurance information, emergency contact numbers and information for an advance directive. Mr. Patient receives a patient ID band with his name, date-of-birth, medical record number, and hospital admission date and secures it around his wrist.

The Nurse working in an Outpatient Pre-Operative Unit receives Mr. Patient and orients him to the room. The Nurse scans the patient's ID band, verifies his name on the list of surgical patients, and notes that his operative time is 10:30 a.m. for an Arthroscopy of the Right Knee.

He is told to disrobe, place his belongings into a bag, and put on a hospital gown. Mr. Patient is given warming blankets.

While the patient is undressing, the Nurse accesses the patient's medical record within the facility's Electronic Health Record (EHR) to once again verify the operative procedure to be performed. The Nurse verifies and documents that Mr. Patient's pre-op x-ray reports and lab results, performed one week earlier, are in the EHR. The Nurse also verifies that the surgical consent for the Arthroscopy of the Right Knee, the anesthesia consent, and the blood transfusion consent forms are also in the EHR.

The Nurse notices that the patient has not signed the blood transfusion consent form. Mr. Patient signs it using a digitized signature on a tablet PC <<PPD-032 New Consents and Authorizations>>. The Nurse records that he/she witnessed the patient's signature <<PPD-033 Edit/Addend/Sign Consents and Authorizations>> in the EHR. Additionally, Mr. Patient has donated his own blood in advance and requests that he receive no donor blood. The Nurse records Mr. Patient's request in the EHR <<PPD-036 New Patient/Family Preferences>>. The Nurse also records in the EHR that Mr. Patient has provided a copy of his advance directive <PPD-034 Record Presence or Absence of Advance Directives>>.

The Nurse takes his height, weight, and vital signs, recording the values in the EHR.

The Nurse sees that Mr. Patient displays difficulty bearing weight on his right knee. When he returns to lie on his bed, the Nurse looks at his right knee. The Nurse notes that the patient has difficulty ambulating and that his right knee is markedly swollen, as compared to his left knee, and records her assessment in the EHR.

The Nurse provides Mr. Patient with an indelible marker and asks him to write a 'YES' on his right knee, which is the surgical site. The Nurse confirms the site and side and documents in the EHR that Mr. Patient marked the surgical site.

The Nurse asks when Mr. Patient last ate food and drank liquids and he responds with "last night at 11 p.m." The Nurse records the NPO status in the EHR.

The Nurse asks the patient if he has any allergies, to which he responds that he is allergic to bees and to penicillin. The Nurse asks what happens when he is exposed and Mr. Patient states that his body swells up and it is difficult to breathe when stung by a bee, and that he got itchy as a child when he took penicillin for an infection. The Nurse updates the patient allergy information in the EHR to include the specifics of the allergic reaction <<PPD-019 Edit Patient Allergy or Adverse Reaction >>.

The surgeon has ordered an IV be started and that pre-op medication be administered prior to surgery. The Nurse starts the IV of D5W and also administers the medication via the IV line. The Nurse records that the IV D5W was started TKO, and that the medication was administered, also specifying the time, dose, and route. No untoward reactions were observed.

The Nurse provides Mr. Patient with additional warming blankets. When it is time for surgery, the Nurse sees that the patient is transferred onto a gurney and wheeled towards the Surgical Unit.

13 Scenario SPD-005. Physician Assistant with Perform Documentation Privileges

The Physician Assistant (PA) is on duty at the General Medicine Clinic and is conducting complete physical examinations today. Mrs. Patient, a 49-year-old business executive, is a new patient and arrives at the clinic for her initial exam.

The Health Technician greets Mrs. Patient, measures and records her height, weight, and blood pressure in the Electronic Health Record (EHR), then escorts her to the exam room.

The PA first obtains a medical history from Mrs. Patient and enters that information <<PPD-009 New History and Physical>> into the EHR. In addition, the PA questions Mrs. Patient about her personal habits, including cigarette smoking, amount of exercise, alcohol use, etc., as well as her religious preferences, and how she prefers to receive medical instructions. The PA records that information <<PPD-053 New Health Status Data >> into the EHR.

Next, the PA performs a physical examination and records the findings into the EHR. Mrs. Patient informs the PA that she occasionally gets dizzy when first rising out of bed in the morning. The PA reviews Mrs. Patient's blood pressure values and re-checks Mrs. Patient's blood pressure in standing, sitting, and lying positions, then updates the results <<PPD-052 Edit/Addend Vital Signs/Patient Measurements>> that were previously entered by the Health Technician. The PA also enters "Postural Hypotension" on the patient's Problem List <<PPD-025 New Problem List>>, and instructs Mrs. Patient to dangle her legs over the side of the bed prior to standing to avoid falling.

It has been more than 10 years since Mrs. Patient has had a tetanus shot, so the PA administers this immunization, observing for a possible adverse reaction (none noted), and records this information and his/her signature <<PPD-047 New Immunization>>, <<PPD-048 Edit/Addend/Sign Immunization>> in the EHR.

Mrs. Patient has never had a test for tuberculosis (TB), so the PA administers a TB skin test, records <<PPD-049 New Skin Test>> the administration in the EHR, and instructs Mrs. Patient to return in two days to have the skin test read. The patient is also started on a Hepatitis B immunization series.

Additionally, the PA orders routine laboratory tests, including a Complete Blood Count (CBC), Chemistry Panel, and Urinalysis, all to be collected after an 8-hour fast; a Chest X-ray; and an ECG. Mrs. Patient is instructed to make an appointment to return to the clinic in three weeks for the next Hepatitis B immunization, as well as to review the physical exam, laboratory, and radiologic test results.

The PA reviews the information entered into the EHR to complete the visit. The PA revises <<PPD-037 Edit/Addend Patient/Family Preferences>> Mrs. Patient's preferences to receive written instructions. The PA saw bilateral corneal lipid arcus on the eye exam and adds

“Bilateral Corneal Lipid Arcus, R/O Hypercholesterolemia” to the problem list <<PPD-026 Edit/Addend Problem List>>, signs the history and physical and the personal habits <<PPD-054 Edit/Addend/Sign Health Status Data>>, and sends a note <<PPD-038 New Inter-Practitioner Communication>> to the supervising physician that Mrs. Patient’s orders are available for review.

Two days later, Mrs. Patient returns to the General Medicine Clinic to have the results of the TB skin test read. The PA inspects the administration site and records the negative result in Mrs. Patient’s EHR <<PPD-050 Edit/Addend/Sign Skin Test>>. The PA addends <<PPD-039 Edit/Addend Inter-Practitioner Communication>> the prior note to the supervising physician, indicating the skin test result is available for review.

14 Scenario SPD-007. Pathologist with Perform Documentation Privileges

The Pathologist is performing a frozen section examination on a surgical specimen and reporting the findings. The Pathologist processes the specimen and creates the slides that are to be examined. After reading the slides, the Pathologist telephones the surgeon with the preliminary findings, and enters those preliminary findings <<PPD-020 New Patient Testing Reports>> into the patient's Electronic Health Record (EHR).

The Pathologist dictates the complete report, which a transcriptionist enters into the EHR. The Pathologist accesses the EHR to review the completed test report and add his/her electronic signature <<POE-021 Edit/Addend/Sign Patient Testing Reports>>.

15 Scenario SPD-009. Gastroenterologist with Perform Documentation Privileges

The Gastroenterologist performs a colonoscopy examination on a 57-year-old male patient referred by the Internal Medicine Clinic. The Gastroenterologist dictates consultation findings report, which is entered into the Electronic Health Record (EHR) by a transcriptionist. The Gastroenterologist, accesses the consultation findings <<PPD-012 New Consultation Findings>> in the EHR to review and sign the report <<PPD-013 Edit/Addend/Sign Consultation Findings>>.

16 Scenario SPD-011. Surgical Resident with Perform Documentation Privileges

The Surgical Resident will perform an appendectomy on a 13-year-old male patient who presented to the Emergency Room with symptoms of acute appendicitis. His symptoms included nausea, an elevated temperature, and severe pains in the lower right quadrant of his abdomen.

The Surgical Resident performs the appendectomy, noting that the patient's appendix had perforated. Afterward, the Surgical Resident dictates a Surgical Report, summarizing the procedure performed and the findings, which will then be entered into the patient's Electronic Health Record (EHR) by a transcriptionist. The Surgical Resident accesses the surgical report <<PPD-015 New Surgical Report>> in the EHR, makes minor changes to the report <<PPD-016 Edit/Addend/Sign Surgical Report>>, and then signs it.

17 Scenario SPD-013. Internal Medicine Resident with Perform Documentation Privileges

The Internal Medicine Resident is seeing patients on the Medical unit today. Mrs. Patient, a 50-year-old female with Regional Enteritis (Crohn's Disease), has been an inpatient for three days and is waiting to be released from the hospital.

The Internal Medicine Resident accesses Mrs. Patient's Electronic Health Record (EHR) to review the pertinent information prior to preparing the Discharge Summary that will include the patient's name, medical record number, date of birth, age, admission date, date of discharge, history of current clinical episode, evaluations, clinical course, condition on discharge, discharge diagnosis, and discharge and aftercare plan.

The Resident dictates the Discharge Summary <<PPD-029 New Discharge Summary>>, which is entered into Mrs. Patient's EHR by a transcriptionist. The Resident accesses the Discharge Summary in the EHR, reviews it, and adds his electronic signature <<PPD-030 Edit/Addend/Sign Discharge Summary>>. The EHR then notifies the Attending Physician that the discharge summary is available for review.

18 Scenario SPD-014. Nurse Recording Patient Acuity with Perform Documentation Privileges

The Registered Nurse working the Intensive Care Unit (ICU) is nearly finished working their shift and accesses the Electronic Health Record (EHR) to perform end-of-shift documentation. The Registered Nurse records each of the specific tasks and the number of times they were performed during the shift <<PPD-044 New Patient Acuity>> for his/her patients. (Each recorded task has pre-determined weighted values to identify patient acuity levels and provide staffing guidelines for each ward and shift.)

An alarm for a monitoring device for Patient X sounds and the Registered Nurse responds. After swift evaluation, the Register Nurse determines that Patient X is having difficulty breathing due to an increase of secretions in the trachea and extracts the fluids via suction STAT.

Afterwards, the Register Nurse logs onto the electronic healthcare system and updates the occurrence of the suctioning task for Patient X from two to three times during the shift within the EHR <<PPD-045 Edit/Addend Patient Acuity>>.

19 Scenario SPD-015. LVN with Perform Documentation Privileges

The Licensed Vocational Nurse (LVN) is reviewing the Electronic Health Record (EHR) for Mr. Patient, recently admitted to the medical unit for observation. The LVN notes that a new advance directive has been provided by Mr. Patient, but not yet recorded in the EHR. The LVN records in the EHR that a new advance directive, which supersedes <<PPD-035 Record Rescinded or Superseded Advance Directives>> the previous version, is on file.

20 Scenario SPD-016. Transcriptionist

The physician has dictated a summary of the patient's inpatient activities. The patient's Electronic Health Record (EHR) is accessed and the dictated information is then transcribed <<PPD-055 New Transcription>> into the patient's EHR by the Transcriptionist.

The Transcriptionist has also received corrections to a previously transcribed inpatient report and accesses that patient's EHR to update the transcription <<PPD-056 Edit/Addend Transcription>>.

21 Scenario SRD-001. Physician with Review Documentation Privileges

Mr. Patient was placed in a clinic examination room for a Diabetic Consultation. The Physician greeted Mr. Patient and accessed Mr. Patient's medical records <<PRD-006 Patient Identification and Lookup>> from within the facility's Electronic Health Record (EHR). After briefly reviewing Mr. Patient's recent pertinent medical history <<PRD-003 Review Medical History>>, problem lists <<PRD-016 Review Problem Lists>>, health status data <<PRD-014 Review Health Status Data>>, existing order(s) <<PRD-004 Review Existing Order(s)>>, medications <<PRD-010 Review Patient Medications>>, allergies <<PRD-011 Review Patient Allergies>>, test results/reports (evaluating high and low values) <<PRD-001 Review Patient Testing Reports>>, immunizations <<PRD-013 Review Immunizations>>, and visits <<PRD-012 Review Past Visits>> within the EHR, the Physician next reviewed Mr. Patient's vital signs, patient measurements <<PRD-005 Review Vital Signs/Patient Measurements>> (e.g., height and weight), and the chief complaint(s) <<PRD-002 Review Chief Complaint>> that were entered for this encounter.

The Physician asked Mr. Patient about any problems or concerns. The Physician also asked Mr. Patient about compliance with diet, exercise, and medication regime for diabetes. Mr. Patient admitted that although he was fairly diligent with his exercise program, he had some problems maintaining his dietary regime. The Physician entered this information into the EHR as part of the subjective findings for this encounter.

The Physician also noted from reviewing today's encounter in the EHR that Mr. Patient had already been sent to the lab by the screening nurse to draw blood specimens for random blood glucose and a hemoglobin A1C for this appointment based on the Physician's pre-visit planning test orders. The orders were placed during the previous visit. The Physician also noted that the results from today's lab tests were not available yet.

The Physician did an examination of Mr. Patient, and entered the results of the examination into the EHR. In addition, the Physician accessed the Diabetes Clinical Guidelines <<PRD-007 Review Patient or Disease-Specific Clinical Guidelines>> within the EHR and compared them to Mr. Patient's current treatment status and plan. Upon his earlier review of the EHR, he noted that Mr. Patient had not had an electrical cardiogram (ECG) recently, so he ordered an ECG for Mr. Patient via the EHR and sent him to the Cardiology Department for the study.

Upon Mr. Patient's returning from getting the ECG, he was placed in the Physician's examination room. When the Physician entered the exam room, he accessed Mr. Patient's records in the EHR and looked at the ECG that was just done, which showed a normal sinus rhythm with no acute changes since the previous ECG performed 7 years ago. The Physician then accessed Mr. Patient's lab results, which were now available, and found that the random blood glucose was 165 and the hemoglobin A1C was 6.8. The Physician also reviewed previous results for Mr. Patient's hemoglobin A1C and blood glucose for comparison.

The Physician discussed these results with Mr. Patient and explained that the blood tests indicated that his diabetes was not currently under tight enough control. They both agreed to a trial at better compliance with a diabetic dietary and exercise program before a change in medication. The Physician accessed the Current Directory of Provider Information <<PRD-009 Review Current Directory of Provider Information>> in the EHR to locate telephone number for the Registered Dietitian to ask some questions about the current status of recommending low glycemic-indexed foods for diabetes and also entered an order for a dietary consult for Mr. Patient in the EHR, requested for the following week.

The Physician then ordered a new prescription for metformin and a refill of glyburide at the same doses that Mr. Patient was previously taking, viewing prescription costing information of generic brands <<PRD-015 Review Prescription Costing Information>>.

The following week, the Physician received an alert <<PRD-008 Review Alerts>> from the EHR that the dietary consult for Mr. Patient was complete. The Physician accessed Mr. Patient's dietary consult and reviewed the findings.

22 Scenario SSC-001. Nurse with Scheduling Privileges

Mr. Patient was placed in a clinic examination room for a Diabetic Consultation. The Physician greeted Mr. Patient and accessed Mr. Patient's medical records from within the facility's Electronic Health Record (EHR). At the conclusion of the appointment, the Physician then requested a follow-up appointment to see Mr. Patient back in 6 weeks and ordered some lab tests to be done when Mr. Patient arrived at the follow-up visit.

The Nurse returned for an exit interview with Mr. Patient. At this time the Nurse accessed Mr. Patient's appointment schedule <<PSC-002 Edit/Access Appointment Schedule>> for review. Upon review of the current list of appointments, the Nurse discovers she/he must overbook <<PSC-005 Performs 'Overbook'>> Mr. Patient into the Physician clinic for his 6-week follow-up appointment. The Nurse then makes a new appointment <<PSC-001 New Appointment Schedule>> for the Physician follow-up for the same day as the lab work. The Nurse prints Mr. Patient's appointment schedule <<PSC-003 Display/Print Appointment Schedule>> for him to take and performs the scheduling check-out <<PSC-004 Performs Appointment Scheduling Functions>>. The Nurse then sends Mr. Patient to the pharmacy to obtain his medications.

23 Scenario SAD-001. Admission Clerk

The physician examining Mr. Johnson determines that admission is necessary. The physician completes all his orders, etc., in the Electronic Health Record (EHR). The admission clerk determines the availability of an appropriate bed for Mr. Johnson. When one has been located, the clerk then accesses the system to admit a patient <<PAD-001 Performs ADT Functions>>. During the admission process, a hospital ward/unit location is assigned, the patient is admitted to a bed, and the name of the attending/admitting physician is entered. This information is then available to the clerk and staff on the inpatient ward/unit. A series of background jobs notify various departments (e.g., Pharmacy, Dietary, Chaplain Office, etc.) of the admission of a new patient.

24 Scenario SAD-002. Coders/Reimbursement Specialists

The coding staff in the Health Information Management office accesses Mr. Johnson's Electronic Health Record (EHR) and codes <<PAD-010 Perform Coding Functions>> all the activities of his inpatient stay. New inpatient billable services or corrections to inpatient billable services may also be entered as part of the patient encounter by the coder depending on the facility's procedures. The Billing Office is then able to generate appropriate billing activities to recoup payment from the insurance company.

The Coding staff will also review the coding <<PAD-011 Review Coding Data>> of the outpatient encounters, updating the codes and patient records as needed.

25 Scenario SAD-003. Patient Advocate

The family of a patient on the burn unit wants to establish further nursing assistance for care of their family member. The family is referred to the Patient Advocate.

The Patient Advocate opens a contact report to record the family's concerns on further nursing care. The Patient Advocate accesses the Electronic Health Record (EHR) to look up the patient's identifying information to ensure selection of the correct patient. Upon completion of the contact report, it is closed and the information is made available to the site's management for action as needed.

The Patient Advocate is also completing a previously opened contact report for another patient after investigating and resolving the issue. The Patient Advocate reviewed the patient's billing <<PAD-013 Review Billing Data>> and accounts receivable <<PAD-015 Review Accounts Receivable Data>> data, and looked up the location of relevant paper records <<PAD-019 Review Record Tracking Data>> in the EHR as part of the investigation. The resolution information is added to the existing contact report and the contact report is closed.

26 Scenario SAD-004. Health Records (Medical Records) / Health Information Management Department, Administration

The Health Information Management (HIM) department manager or other administration person begins the day by performing an analysis of progress notes that are not signed in the Electronic Health Record (EHR). The manager runs a standard report <<PAD-016 Display/Print Administrative Report>> that lists all of the names of patients with unsigned progress notes for a specific provider. The list is then forwarded to the providers to complete their progress notes.

The manager is then asked to determine the number of patients who have been seen within the last week who have supplemental health insurance. The manager accesses the system report functionality and creates a report <<PAD-017 Create/Display/Print Administrative Ad Hoc Report>> that will provide this information.

The manager is asked to review documentation by a particular provider to determine if the documentation is complete according to standards. The Manager accesses the specific note <<PRD-017 Review Progress Notes>> and performs a quantitative analysis.

The manager may need to locate <<PAD-018 Perform Record Tracking Functions>> incomplete records, and to notify the appropriate healthcare provider(s) that additional information is needed to complete the record.

27 Scenario SAD-005. Encounter Registration Clerk

Mr. Patient has just moved to the area and contacts the facility to register as a new patient. The Encounter Registration Clerk accesses the Electronic Health Record (EHR) to verify that Mr. Patient is not already registered. Finding no existing record, the clerk creates a medical and administrative record <<PAD-008 New Registration>> for Mr. Patient. During this process, the clerk enters Mr. Patient's private insurance company data and other demographic information (address, phone number, date of birth, employer, emergency contact, etc.).

In addition to registering new patients, the Encounter Registration Clerk will ask returning patients a series of questions to verify demographic, emergency contact, next of kin, and insurance information. Changes to existing information are entered <<PAD-009 Edit/Addend Registration>> into the patient's EHR.

28 Scenario SAD-006. Health Record (Medical Record) / Health Information Management Department, File Clerks

The file clerk is responsible for scanning paper documentation for inclusion in the EHR. The clerk accesses the specific patient record and uses a standard note title to attach the scanned information to. The clerk scans the information, attaches the scanned information to the correct note title <<PPD-004 New Progress Note Comment>>, and electronically signs the note <<PPD-005 Edit/Addend Progress Note Comment>>.

29 Scenario SAD-007. Billing Personnel

A billing clerk logs into the Electronic Health Record (EHR) and pulls up the assigned worklist <<PAD-012 Perform Billing Functions>>. The clerk selects an individual patient from the list and reads the note from the coder in the health information management department. The clerk finds that he/she needs additional information and accesses the patient's EHR. The clerk completes the bill and sends the claim electronically to the insurance company.

30 Scenario SAD-008. Claims Personnel

Personnel in the claims department log into the Electronic Health Record (EHR) and validate the billing date of service (DOS) and billed dollar amount <<PAD-014 Perform Accounts Receivable Functions>>. They access the insurance file to look at payment comments to validate the correctness of the payment. They decrease the unpaid amount to collect and close the amount that was applied to deductible, and access the patient's account and to post the payments. Personnel in the claims department also determine any possible first-party liability related to the third-party claim just processed, and either decreases the insurance amount as appropriate from the first-party co-payment liability, or passes on the full co-payment amount if no adjustment was made.

31 SAD-010. Master Patient Index Clerk

The Master Patient Index (MPI) office is responsible for processing of the local MPI validation activities for their facility. The clerk accesses the Electronic Health Record (EHR) to validate <<PAD-021 Perform Master Patient Index Functions>> Mr. Johnson's data with the potential matches that were identified by the MPI. After verifying that Mr. Johnson is not a match to any existing entries, the clerk adds Mr. Johnson's identity data into the centrally located MPI.

32 SAD-012. Release of Information Clerk

The Release of Information (ROI) Clerk receives a valid request from a patient to release a defined set of information. The clerk reviews the request, accesses the patient specific information in the patient's Electronic Health Record (EHR), and prints copies of the requested information. The clerk logs the details of the request <<PAD-024 Perform Release of Information Functions>>.