Use Cases: Consulting Register Project

Team: Consulting Register

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Use Case Stories

1. Nurse records patient information

A nurse logs patient information in the register. If the patient does not exist in the register, this entails inputting a new patient with a new patient ID and patient information into the register. If the patient exists in the register, then this entails entering visit information for a patient.

Further explanation:

The nurse pulls up the register on their desktop during a visit.

- The system asks for either
  - Patient name and Date of Birth
  - OR
  - Patient ID
- The nurse enters in patient name and DOB.
- The system tells the nurse that the patient is not in the system, and that it has assigned the patient an ID.
- The system gives the nurse the patient ID and asks the nurse to fill in more details about the patient, such as
  - Health insurance number
  - Sex/Gender
  - Address
  - Any past records
  - Parents' information
- The system will then store this information and tell the nurse that the information has been entered successfully.

2. Nurse searches for an existing patient

A nurse uses a patient ID, name and date of birth, or other information that the patient can provide to establish their identity. If the patient is found, then the nurse can look up information from past visits.

Further explanation:

- The nurse needs to access a patient's medical history.
- The system presents the nurse with search options:
    - Patient ID
    - Patient Name and Date of Birth
- The nurse enters the Patient ID.
- The system successfully finds the patient using the patient ID.
- The system retrieves and displays the patient's basic information (name, DOB, etc.) and indicates that the patient exists in the system.
- The system then presents options to the nurse, such as:
    - View past visit history
    - Record a new visit
    - Update patient information
- The nurse selects "View past visit history."
- The system displays a list of the patient's previous visits.
- The nurse can select a specific past visit to view its detailed information (symptoms, vital signs, diagnosis, etc.).
- The system displays the detailed information for the selected past visit.
- The system confirms that the patient's past visit information has been successfully retrieved and displayed.

3. Nurse records patient visit

Nurse records information that is gleaned during the course of the examination, and logs it under a new visit in the system. This information will include patient reported symptoms, vital signs, and conclusions/diagnosis.

Further explanation:

- The nurse is conducting a patient examination and needs to record the details of the current visit.
- The nurse navigates to the "Record New Visit" section for the currently selected patient.
- The system presents the nurse with fields to enter visit information, such as:
    - Date and Time of Visit (system-generated or nurse-entered)
    - Chief Complaint/Patient Reported Symptoms (free text field)
    - Vital Signs
    - Visit diagnosis/diagnoses

- The nurse enters the relevant information into the respective fields.

- The nurse confirms that all necessary information has been entered.
- The system saves the new visit for the patient, and informs the nurse that it has happened.

4. Create outpatient morbidity report

The system generates a morbidity report, summarizing data across visits for a patient. The morbidity report collates all diagnoses for the patient against required morbidity report information defined by the government agency collecting data. The nurse will create the morbidity report when required by accessing a patient in the system and requesting a morbidity report from the system. The system will then provide the nurse with a table of the necessary information.

Further explanation:

- A nurse or administrative staff needs to generate a report on outpatient morbidity.
- The user navigates to the "Reports" section of the application and selects "Outpatient Morbidity Report."
- The system prompts the user to specify the report parameters, such as:
    - Date Range
- The system checks for all outpatient visits within the specified date range and within all other useful parameters.
- The system collates diagnoses and aggregates data.
- The system generates a table along with a title, date range, and completion date.
- The system will allow the nurse to export the morbidity report for later perusal.
- The system lets the nurse save and close the report.

5. Refer a patient to another facility

The nurse records a recommendation in the register system, and sends the recommendation to another facility. This information should be recorded safely and discreetly so that the other facility can query the nurse or original facility if they need additional information or they lose the sent recommendation.

Further explanation:

- During a patient visit, the nurse determines that a referral to another facility is necessary.
- The nurse asks the system to refer the patient (the nurse already has the patient displayed on the interface)
- The system prompts the nurse to enter the referral details, including:
    - Name of the receiving facility.
    - Contact person/department at the receiving facility (optional).
    - Reason for referral.
    - Patient’s basic info
    - Instructins or notes
- The nurse enters the required information.

- The system generates a referral document.
- The nurse asks the system to send the referral after checking for accuracy.
- The system records the referral in the patient's record.
- The system provides a confirmation message that the referral has been sent successfully.

6. Update patient information

A patient has moved or other information has changed. Patient information can be updated/edited. The nurse goes through the patient's record and updates the necessary fields. The nurse then saves the information in the system and closes the patient record.

Further explanation:

- A nurse needs to update a patient's existing information in the system.
- The nurse searches for and retrieves the patient's record.
- The nurse asks the system to update patient information through the interface.
- The system presents the patient's current information. It clearly shows which information may be edited and which information may not be edited.
- The nurse modifies the necessary entries, and then requests that the system save.
- The system saves the updated information to the patient's record, overwriting the previous data.
- The system confirms for the nurse that the information has been saved.

7. Nurse searches for patients associated with clinic ID

A nurse retrieves a list of patients associated with a clinic ID. This list will provide basic information such as patient ID, name, DOB. This information will be helpful for creating the outpatient morbidity report.

Further explanation:

- A nurse needs to retrieve a list of patients registered under a specific clinic.
- The nurse asks the system to retrieve patients associated with a particular clinic.
- The system asks the nurse to enter the Clinic ID.
- The nurse enters the relevant Clinic ID.
- The system validates the Clinic ID.
- The system gathers all patients associated with the clinic id and displays patient names for all patients.
- The system may then provide options for the nurse to go down further paths once information for all relevant patients has been provided.

8. Nurse enters principal diagnosis of a patient condition

When a nurse begins to enter the diagnosis of the patient, a code for the condition will appear using the international statistical classification of diseases and related health problems scheme.

Further explanation:

- The nurse needs to enter the principal diagnosis of a patient in the system.
- The nurse has the patient's record pulled up on the interface, and so goes to the principal diagnosis area within the interface.
- Once the nurse enters the principal diagnosis area, the system provides more options\
    - Select from known diagnoses
    - Enter an all-new diagnosis that is not covered in the standard options
- The nurse selects a diagnosis from the options. The nurse is then asked to provide comments associated with this diagnosis.
- The nurse provides comments (usually related to why the diagnosis was given).
- The nurse saves the diagnosis in the patient's information, associated with the current visit for the selected patient.

Error Cases

1. Nurse loses patient information

In this case a nurse would lose an item of information or omit it and it would not be entered into the system. This would happen during a visit, and the system would prevent the nurse from closing and saving the patient file until the error could be resolved.

- The nurse sees a patient and decides to update patient information
- The nurse navigates to the patient and selects them - in order to update a basic piece of information (ex. address and last name)
- The nurse changes address, and clears the last name field but forgets to enter a new last name
- The nurse attempts to save the patient information - updated
- The system prevents the nurse from saving this updated information, informing them that a required field is missing - last name.
- The nurse updates the missing field and successfully saves the patient information.

2. Nurse enters sensitive information and it is exposed

In this case, the nurse enters information about a patient that is sensitive medical information such as a diagnosis, physical address, or other. However, the nurse enters this information into the wrong area of the system, and it is in danger of being exposed. The system partially mitigates this risk by noting that the sensitive information has not been entered in the appropriate location. However, the risk is not completely eliminated, and the system is not designed to completely eliminate this risk.

- The nurse, instead of entering Patient diagnosis and ID in their proper places in the system, enters them into a part of the system that is not secured.
- The nurse, in haste, has simply left patient ID information and their diagnosis in a file on their desktop instead of the proper location.
- As a result, the visit information is incomplete following the visit.
- The system registers that the visit is not completely filled out. It provides the nurse with a prompt when they attempt to save the information.
- The nurse realizes the mistake and enters the correct information into the system, clearing the information off of the text file on the desktop.
- The nurse is able to save visit information safely.

3. Nurse fails to refer a patient in the system

In this case, the nurse tells the patient that they need to be referred to a specialist. However, the nurse forgets to enter the referral information into the system. When the visit is concluded, the nurse instructs the system to refer the patient, but does not provide a referral facility. This causes the system to notify the nurse of a mistake, and the nurse is required to fix the problem before saving the visit information.

- Nurse concludes a patient visit, telling the patient that they should be referred to a facility specializing on orthopedic care.
- The nurse instructs the system to refer the patient, but does not make a selection for the facility from the list of options
- The nurse attempts to save the visit, and the system does not allow it.
- The system instructs the nurse that they need to select a facility for referral if a referral is required.
- The nurse fixes the issue and selects the correct referral facility.
- The nurse then successfully saves the visit information.