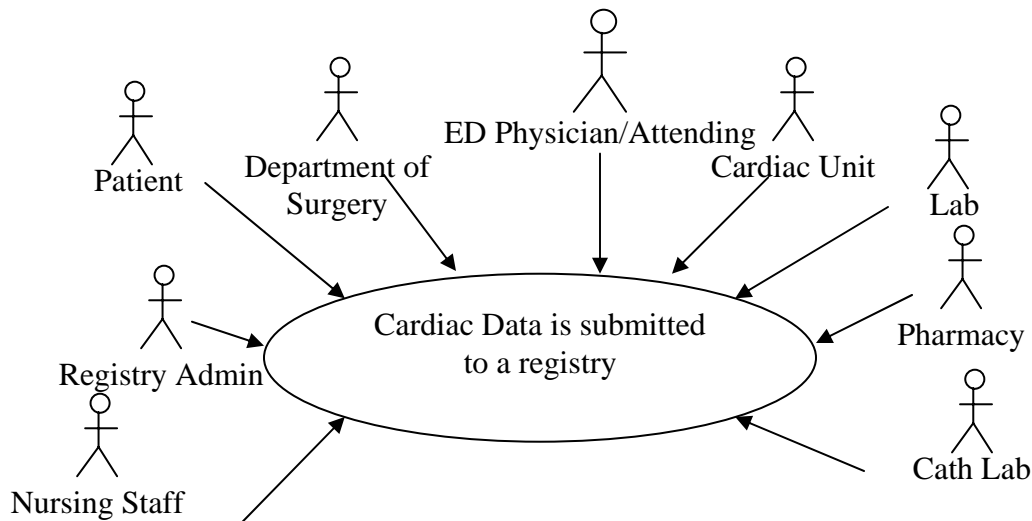


Use Case: Cardiac Patient Data of ACS Patient from ED though Discharge or Death to Cardiac Registry

Use Case Description:

The purpose of this use case is to notify a cardiac registry retrospectively of cardiac patient data. A patient comes into the emergency department (ED) is evaluated; brief medical history is taken, and the patient is determined to have an acute coronary syndrome (ACS). The patient may be admitted, cardiac procedures may or may not be performed, and the patient is either discharged or dies. Once a cardiac patient has been discharged from the hospital or dies, cardiac patient data will be submitted to a cardiac registry. Existing institutional privacy and human subject's protection policies are followed to obtain authorization to transmit the data to a registry. During the course of the ED visit and hospitalization, registry data is completed for all cardiac patients with ACS that come in through the ED department. On a monthly basis after discharge or death, registry data is completed on all patients with ACS that come through the ED and stored in a repository. On a quarterly basis, the data is retrieved and submitted to a registry through a specialized application process.



Use Case Sequence of Steps:

1. Patient presents to an ED
2. Referring physician / clinician takes demographics, brief history and physical, orders ECG and Cardiac Markers
3. Patient is determined to have a ACS; cardiac and pain medications administered
4. One of the following then occurs: 1)Patient is observed for 23 hrs 2) Patient is transfer from Level B site to Level A site, is admitted to Cardiac unit and has procedures done (e.g. PCI, CABG) 3) Patient at Level A site, admitted to Cardiac Unit and has procedure done (e.g. PCI, CABG)
5. Parts of registry form are completed as time allows in during hospitalization
6. Patient is discharged

7. Registry data is completed at the end of the month for call cardiac patients coming through the ED
8. At the end of the quarter using a specialized application, cardiac patient data is submitted to the registry

Story Board: ACS ED Patient Observed for 23 hours (not admitted)

Story Board: ACS ED Patient in Level B to A Admitted/Procedures

Story Board: ACS ED Patient in Level A Admitted/Procedures Performed

Actors:

Patients

Carl Cardiac

Nursing Staff

Tom Triage

Edward ED Nurse

Ursula Unit Nurse

Nancy Nurse

Physicians

Allison Attending

Amanda Attending

Cathy Cathlab MD

Other Staff

Adele Admin

Tommy Transport

Story Board: ACS ED Patient Observed for 23 hours

Carl Cardiac, a 70 year old man, is rushed to the emergency department of his local hospital (Level B) with acute chest pain and shortness of breath. Tom Triage takes his chief complaint and a brief history, and then places him in an ED room. Edward ED Nurse takes vital signs and detailed medical history. Allison Attending orders an ECG and cardiac markers. Carl is diagnosed with ACS and is given cardiac and pain medications. He is observed for 23 hrs and his condition is not worsening. He is discharged home with cardiac medications.

At the end of the month Nancy Nurse is assigned the task of completing the registry data for that month's cardiac patients. She retrieves a list of cardiac patients, and for each one completes the form. When she gets to Carl's name, she accesses his lab results, nursing notes, and discharge summary reports. When completed she stores the data back in the repository.

At the end of the quarter Adele Admin uses a specialized application to retrieve all the completed registries for that quarter from the repository, and prepares the data for submission.

Story Board: ACS ED Patient in Level B to A Admitted/Procedures

Carl Cardiac, a 70 year old man, is rushed to the emergency department of his local hospital (Level B) with acute chest pain and shortness of breath. Tom Triage takes his chief complaint and a brief history, and then places him in an ED room. Edward ED nurse takes his vital signs and detailed medical history. Allison Attending orders an ECG and cardiac markers. Carl is diagnosed with ACS and is given cardiac and pain medications. His condition worsens and Allison Attending orders him to be transported to a major medical center which is less than 90 minutes away. Tommy Transport assists in transporting Carl Cardiac to the medical center.

Once at the medical center, Amanda Attending admits him to the Cardiac Unit. Ursula Unit nurse obtains his demographics, insurance, reviews cardiac risk profile, previous procedures, and detailed medical history. Amanda Attending then sends him directly to the cath lab for a diagnostic and interventional procedure. During the PCI, while things are slow during the angioplasty balloon inflation, Ted Tech, the cath lab technologist, calls up the empty registry forms from the repository on the cath lab logging system and begins filling in relevant information from the case. Cathy Cathlab MD determines that the procedure was not successful and an emergency CABG is needed. She completes the cath report and notifies the operating room of pending CABG. During the post-procedure clean-up, Ted Tech completes as much information as he knows, and stores the partially filled in form back into the repository. Cath Cathlab MD completes the cath report according to hospital standards.

Carl Cardiac is prepared for surgery. Oliver Operate MD performs a successful CABG on him. Oliver Operate MD completes his procedure report. After recovering, Carl Cardiac is sent back to the cardiac unit. He is observed and assessed per unit standards. He is given cardiac and pain medications, and standard post operative therapy. Carl Cardiac progresses as planned and is discharged from the hospital.

At the end of the month Nancy Nurse is assigned the task of completing the registry data for that month's cardiac patients. She retrieves a list of cardiac patients, and for each one completes the form. When she gets to Carl's name, she accesses his lab results, nursing notes, cath report, procedure report, and discharge report. When completed, she stores the data back in the repository.

At the end of the quarter Adele Admin uses a specialized application to retrieve all the completed registries for that quarter from the repository and prepares the data for submission.

Story Board: ACS ED Patient in Level A Admitted/Procedures

Carl Cardiac, a 70 year old man, is rushed to the emergency department of his local hospital (Level B) with acute chest pain and shortness of breath. Tom Triage takes his chief complaint and a brief history, and then places him in an ED room. Edward ED nurse takes his vital signs and detailed medical history. Allison Attending orders an ECG and cardiac markers. Carl is diagnosed with ACS and is given cardiac and pain medications.

Amanda Attending then sends him directly to the cath lab for a diagnostic and interventional procedure. During the PCI, while things are slow during the angioplasty balloon inflation, Ted Tech, the cath lab technologist, calls up the empty registry forms from the repository on the cath logging system, and begins filling in relevant information from the case. Cathy Cathlab MD determines that the procedure was not successful and an emergency CABG is needed. She completes the cath report and notifies the operating room of pending CABG. During the post-procedure clean-up, Ted Tech completes as much information as he knows and stores the partially filled in form back into the repository. Cath Cathlab MD completes the cath report according to hospital standards.

Carl Cardiac is prepared for surgery. Oliver Operate MD performs a successful CABG on him. Oliver Operate MD completes his procedure report. After recovering Carl Cardiac is sent back to the cardiac unit. He is observed and assessed per unit standards. He is given cardiac and pain medications, and standard post operative therapy. Carl Cardiac progresses as planned and is discharged from the hospital.

At the end of the month Nancy Nurse is assigned the task of completing the registry data for that month's cardiac patients. She retrieves a list of cardiac patients, and for each one completes the form. When she gets to Carl's name, she accesses his lab results, nursing notes, cath report, procedure report, and discharge report. When completed she stores the data back in the repository.

At the end of the quarter Adele Admin uses a specialized application to retrieve all the completed registries for that quarter from the repository, and prepares the data for submission.