A^2 Database & Foundation Scenario

Group 5 - Logan Stein, Alex Escatel, Burhan Cutlerywala, Mike Squires

The first release of A^2 technology will be the foundation of the project. For this first release of A^2 technology, the user will be able to create an account based on their role (administrator, patient, etc.) and then will be able to view data and/or update data depending on the type of data and level of user.

An important part of medicine and specifically administering anesthesia is knowing the patient's medical history and being able to pull up this information on the fly. A key component in A^2 technologies will be a database of patients that can be accessed by an administrator. If the patient is new and does not exist in the database of patients yet, the administrator will have the option to add a new patient. On the flip side, administrators will need a login to access the system. This is to promote security within the facility and make sure not just anyone can access patient data. Because we are using and storing medical data, encryption will be necessary to stay compliant with HIPAA laws. All medical data will be encrypted locally before being stored to any database and decrypted locally once received from the database.

Scenario “Implement Database”

For the A^2 technologies program there needs to be two distinct roles of users: system admin and user admin (surgeon). During initial setup, there would be a system admin to set up administrators who would have access to patient data. This system admin would be needed to edit the administrators depending on their work status.

When a user first launches the application, they would be greeted with a login screen where they need to enter their credentials. Once logged in, they have one of two choices, they can either create a new patient or view a previous patient’s records. If they are viewing previous patients records, they will be able to search for patient data from the patient database. In this portion of the interface the administrator will be able to add new data to the patient's profile and will also be able to update the patients (ex. patients weight changes).

Finally, when user data is pulled from the database, a screen should be able to be accessed which displays the patient history. Also another screen should be able to be accessed which displays current patient data, including heart rate, blood pressure, body temperature, fluid balance, etc.

Figure 1 - Diagram of System Admin and User