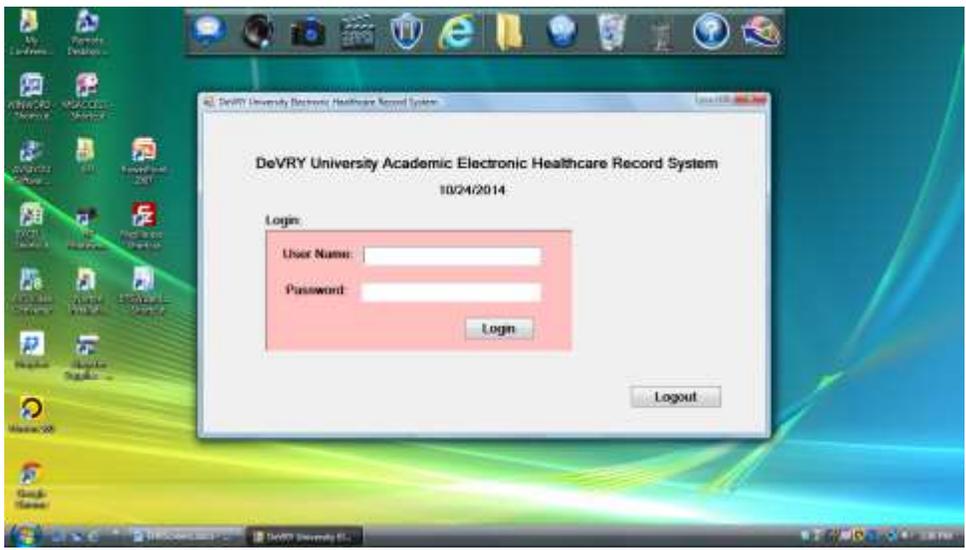


I have not generated any database records based on the screen shown in this document but just wanted to provide screens, data elements, some functional buttons and a start on how a user might navigate through the application. I used the EHR Functional Description document provided by Toni to provide a starting point for discussion. There are some items that I have no knowledge as to what is expected so I could not provide functional screens for them but I did provide them as a menu item.

**Commented [D11]:** We raise numerous questions and offer many comments. Given that we want our students to have the opportunity to revise and update screens we do not believe it necessary to have all of our comments addressed by you in current screens as having our students enact changes would provide an awesome learning opportunity. Along those lines perhaps the comments throughout will help to ensure that all needed items are either in the database OR there is a mechanism for our students to add those fields? An example that appears later would be travel outside the company, to where? Within what timeframe?

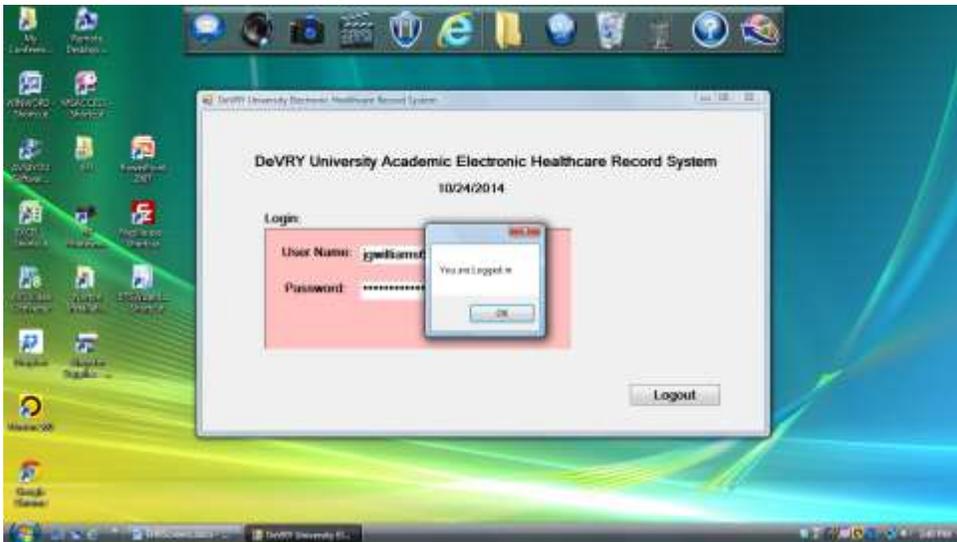
I will describe the screens that I created and the functionality of the buttons on the screens.

The screen below is a login screen which does a database lookup in a table named AccessID in an SQL database named ERHDB. Entries into this table would be made for each legitimate user of the system using an Administrative program that would allow the user to enter user names and passwords as well as a security level code.

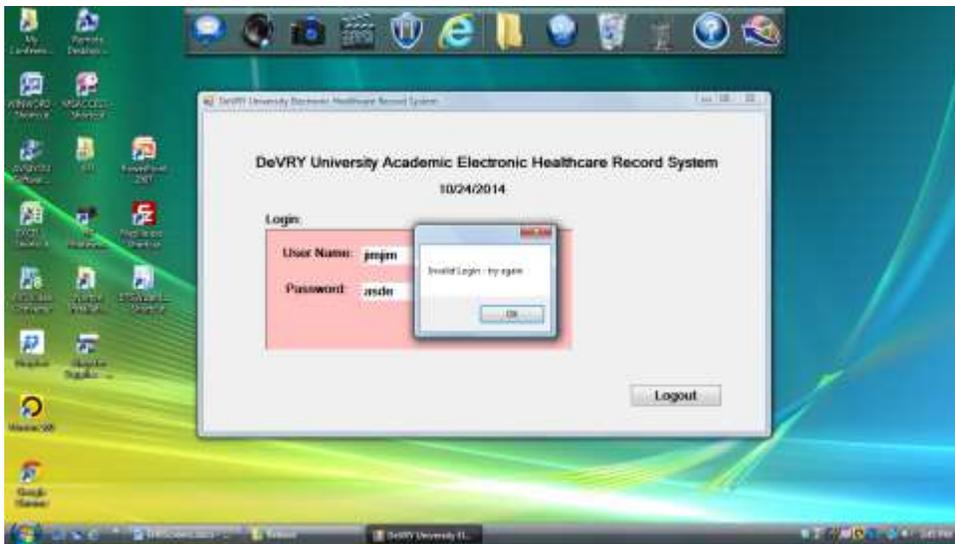




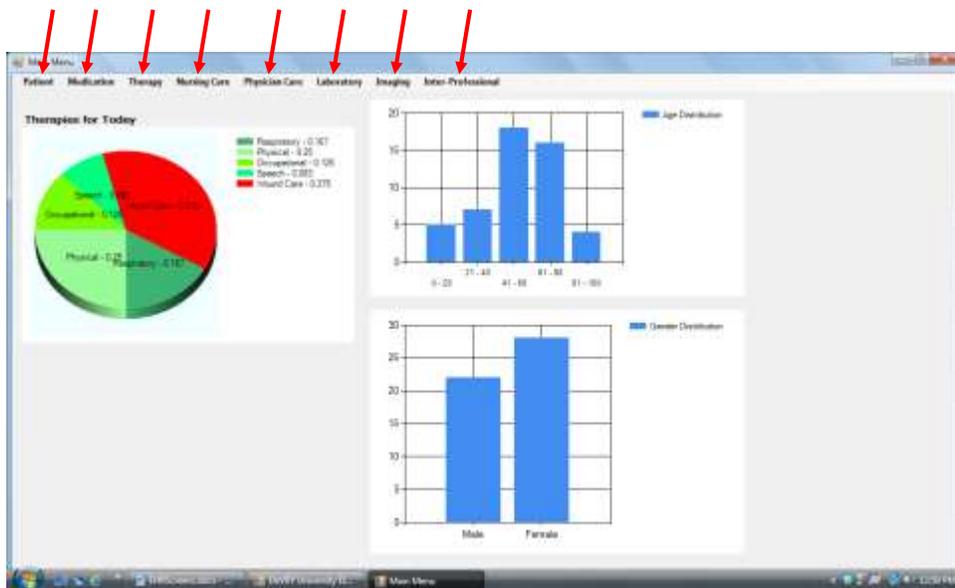
After clicking the “Login” button, the following popup message appears to let the user know they are logged in.



If an invalid username or password is entered, a message telling them so is displayed as show below.



If the login was successful, the screen show below is displayed. It is intended to be a dashboard with the menu items at the top of the screen pointed to by the red arrows. The dashboard charts were simply made up to show that charts and graphs are possible from data in the database. I would rely on Toni and Dee to help determine what would be most useful.



**Commented [D12]:** Love the dashboard but have some questions. Understand that it will display what we select BUT if visible immediately upon login will it be dependent upon login ID as in user class? Can see aggregate information as particularly useful for administrators. Also thinking about the individual nurse view and what might be most useful – I would want to see a view either for a single patient or my assigned patients for the day. Dee and I think that we would like the ability for our nursing informatics students to configure the view for now in order to provide standard reports. Perhaps at a future time we might like an option for individual users to have some view choices.

Other than patient menu will one select the patient first then view the medications, therapy, nursing care options....?

Will required field be noted ie with an asterisk?

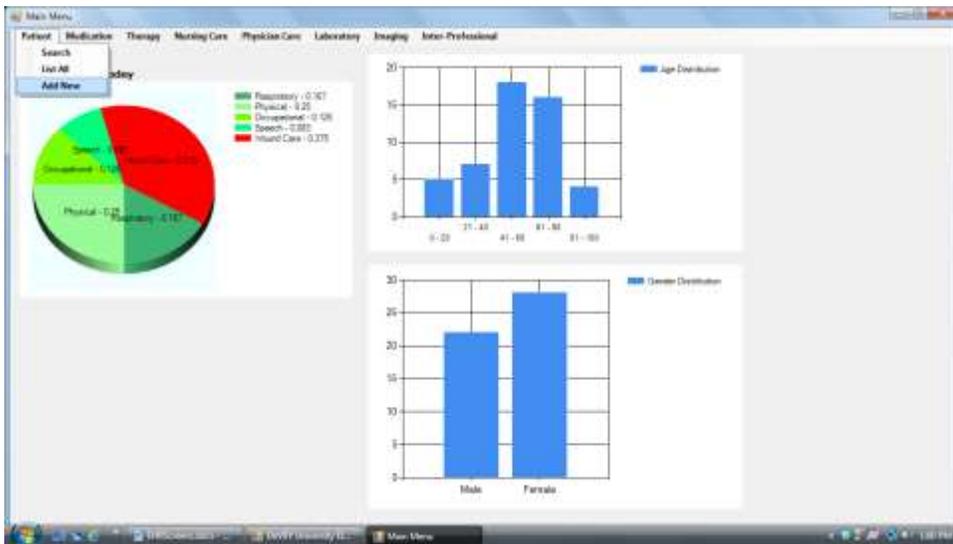
Will we have the opportunity to create verification screens before information is added?

When you click on one of the menu items, you can get a sub-menu that should show the functionality that is available under that menu item. Under the “Patient” menu item, there are 3 functions as shown on the screen below, namely, “Search”, “List All” and “Add New”. The “Search” will allow the user to find a specific patient for purposes of adding information, updating information, deleting information, printing information, displaying information. The “List All” function will provide a table of all patients from which the user can select one for performing the same function as the “Search” function provides. The “Add New” function provides the user with the ability to add a new patient and all the data about that patient that is currently available. The following screens show what the user will see when the “Add New” menu item is selected.

**Commented [D13]:** Really like the add new option (easy to populate new patient) Demographic

**Commented [D14]:** Plus Unique Identifier for verification (MRN, and DOB)

Would it also be possible to look up by unique patient encounter number? See list of encounters? See Active or inactive encounters (inpatient, outpatient, ED, etc.)  
 Would there be unique codes for clinic/physician office location? I ask because I believe that some charges might not work if applied outside their defined areas (although this may be cart before horse).



The screen below is the mandatory screen to capture demographic information about the patient. The menu items across the top are additional categories of data that can be entered about a patient. The “Insurance” item is not shown but will be added. Also, the location of the patient (ER, Intensive Care, other hospital room) needs to be entered but I am not sure exactly where this should occur. When this screen comes up, a Medical Record Number (MRN) is generated from a database table called “MedicalNumber” and is simply a sequential number that is one greater than the last patient who was entered.

The data fields that are colored blue on the demographic screen below are list boxes which let the user select values rather than type them in.

The buttons at the bottom of the screen provide functionality for adding a demographic record to the database or updating existing records when the patient demographic record already exists. This same screen is used when adding a new patient or editing demographic data or adding or editing any on the menu items at the top of the screen when the patient demographic record already exists. Note that when the selection from the main menu was to “Add New”, the edit and delete buttons are disabled. When the user selects the “Search” option and finds the patient this screen will appear but when this screen comes up, it will have the edit and delete buttons enabled. The user can

**Commented [D15]:** Great!

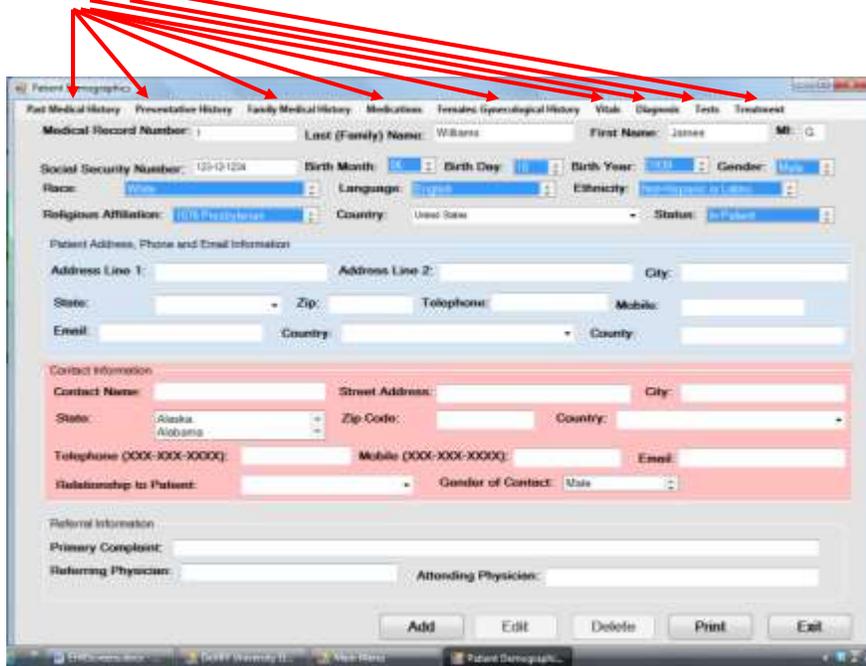
**Commented [D16]:** Will we also retain/show past visits or status like inpatient active?

**Commented [D17]:** Am thinking that we would need to supply a list of rooms which would be assigned to the respective areas – that way we would also need to show bed status – occupied, empty – clean/dirty and if rooms are semi-private m/f although we could have all privates eliminating that option. Would not be permitted to place a patient in a bed already occupied

**Commented [D18]:** If this mirrors what I have seen it occurs during the registration (add patient) function-was that the question?

then also select to add to or edit any of the Menu Items on this screen. Since medications, vitals, diagnoses, tests and treatment can exist multiple times for a patient, these items can be added as many times as necessary or selected ones can be edited.

Menu Items



The menu item “Past Medical History” is shown being selected from the menu items as shown on the screen below. There are no sub-menu items for this menu item. When this menu item “Past Medical History” is selected, a search of the database is made to determine if this item for the selected patient already exists or if it is a “New Add”. If the item already exists for the patient, the “Past Medical History” screen will be filled in with the existing data and the user can edit it as necessary. If the item does not exist for the patient, then the user can enter the information required on the “Past Medical History” screen.

**Commented [DI9]:** I like pre-populating PMH which can then be reviewed and updated. I take it that will overwrite the field so that information from past encounters would not show the record as it was at that time for that previous encounter?

**Commented [DI10]:** Eventually would like physician name to be selected from a list of physicians with privileges to admit/consult (that could be updated by our students) that way we could associate provider number for prescription functionality, associate practice type/standard order sets, eventually set up automatic notifications possibly...

**Commented [DI11]:** Could there be a field for travel outside the USA past 21 days /location? Might need some flexibility on time/location to flag possible exposure to Ebola, Dengue fever or other juicy organisms

**Commented [DI12]:** Would PMH pull forward isolation status as past history of MRSA (methicillin resistant staphylococcus aureus), VRE, CDiff, and should probably provide the opportunity to add additional resistant organisms

**Commented [DI13]:** When PMH is pulled forward would there also be an associated date or a field that would display last encounter in the system (although there might be another treatment episode elsewhere)

Selecting "Past Medical History"

Commented [DI14]: Possibility of a scaled back "face page" limited primarily to demographic information for clerks who do not need to know details of medical history?

The screenshot shows a web-based medical record form. The 'Past Medical History' tab is selected and highlighted in red. The form contains various input fields for patient information, including name, date of birth, gender, and address. There are also sections for contact information and referring physicians. At the bottom, there are buttons for 'Add', 'Edit', 'Delete', 'Print', and 'Exit'.

The screenshot shows a detailed medical history form. It includes fields for 'Last Name', 'First Name', 'MI', 'MRN', and 'Birthdate'. The form is divided into several sections: 'Previous Physician's name', 'Date of last exam', 'Have you ever been hospitalized?', 'Have you ever been tested for hepatitis A, B or C?', 'Have you been vaccinated for hepatitis B?', 'Have you been vaccinated for hepatitis A?', 'Date Last Tuberculosis (TB) Screening', 'If positive TB screen, date of last chest x-ray', 'Have you had a sexually transmitted disease?', 'Result of TB screening', 'Result of Chest XRay', 'Diagnosis', and a list of conditions being treated or treated in the past. At the bottom, there is a text area for 'Please describe any current or past medical treatment or surgery not listed above' and buttons for 'Clear', 'Add', 'Update', 'Delete', 'Print', and 'Exit'.

Commented [DI15]: Tetanus? vaccine

Commented [DI16]: HIV/AIDs?

“Preventative and Social Medical History” Screen

Commented [DI17]: Flu and pneumonia shot s/dates!

Second Hand Smoke exposure and add to smoking yrs. of usage, tried options to quit document offered medication option, education, and pt. refusal OR ability for NI students to add the same to the screens

Preventative and Social Medical History

Last Name: [text] First Name: James MI: 0 MFI: 1 Birthdate: 06/18/1929

Social and Preventative History

Do you currently smoke or chew tobacco? No Yes If no, have you in the past? No Yes

Do you drink alcohol, beer, or wine? No Yes If no, have you in the past? No Yes

How many drinks per week? [dropdown]

Do you currently drink coffee and/or tea? No Yes If yes, how many cups per day? [dropdown]

Do you exercise daily/weekly? No Yes

Do you use seatbelts while driving? No Yes Do you wear a helmet while riding a bike? No Yes

Close Add Update Delete Print Exit

“Family Medical History” Screen

Family Medical History

Last Name: [text] First Name: James MI: 0 MFI: 1 Birthdate: 06/18/1929

	Living?	Age (or age at death)	List serious illnesses
Mother:	Yes No		
Father:	Yes No		
Sister:	Yes No		
	Yes No		
Brother:	Yes No		
	Yes No		

Has any member of your family (including children and parents) had any of the following illnesses:

Illness	Which family member?	Illness	Which family member?
Anemia or blood disease:		Cancer:	
Diabetes:		Glaucoma:	
Heart disease:		High blood pressure:	
HIV disease / AIDS:		Mental illness / Depression:	
Stroke:		Other serious illness:	

Close Add Update Delete Print Exit

“Patient Medication” Screen for Adding a Medication.

**Commented [DI18]:** Later will Need to be able to view as a medication list printable for patient discharge or incorporation  
 Need to add when dose taken last  
 Karen West ( would like to see when next dose due for patient education and clear way to state when a medication is to not be taken anymore ( NI students)

Need a place to detail if stopped a previous medication (was it stopped by patient and why, completed as per prescription, stopped by physician?)  
 (Could lead to identifying financial problems or education needs)  
 Karen West ( we have a drop down menu when medication itself is clicked on giving option to document completed, stopped , nurse d/c'd for update such as primary dose change 80mg to 160 etc)

Will we have a drop down formulary look up? Need other option to enter non-formulary medications  
**OR ability of NI students to add ....**

**Commented [DI19]:** Later we will want to pull the med list for physician review and a continuation order

“Female Gynecological History” Screen

**Commented [DI20]:** Is LMP (last menstrual period) in this section? It is data that should be collected and NI can add

Also  
 Pregnant now?  
 Positive Preg Test (Home Test, Clinic test, Ultrasound) Due date.....

Birth Control Method (BCP, IUD, Depo, Marina)

Along with ever pregnant will need Gravida, Para and AB details

any pregnancy problems (during, delivery and after)

Blood type (for Rh factor)

Need area for detail of gynecological problems  
 HPV vaccine – y/n date

Past Medical History” Screen

The screenshot shows the 'Patient Demographics' window with the following sections:

- Medical Record Number:** [Field]
- Last (Family) Name:** [Field]
- Social Security Number:** [Field]
- Birth Month:** [Dropdown] **Birth Day:** [Dropdown]
- Language:** [Dropdown] **Ethnicity:** [Dropdown]
- Religious Affiliation:** [Dropdown] **Country:** [Dropdown]
- Address:** Address Line 1, Address Line 2, City, State, Zip, Telephone, Mobile, Email, Country.
- Contact Information (highlighted in red):** Contact Name, Street Address, City, State, Zip Code, Country, Telephone, Mobile, Email, Relationship to Patient, Gender of Contact.
- Referring Physician:** Referring Physician, Attending Physician.

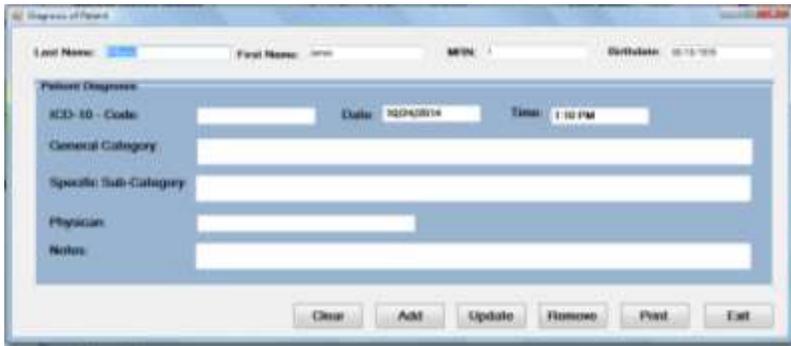
“Add Vital Signs” Screen

The screenshot shows the 'Add Vital Signs' window with the following fields:

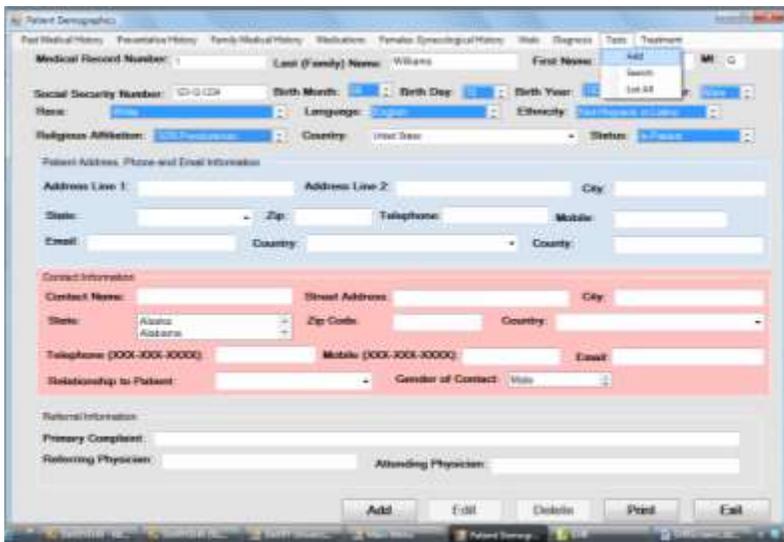
- Patient Info:** Last Name, First Name, MRN, Birthdate.
- Vital Signs Grid:**
  - Temperature: [Field]
  - Blood Pressure Systolic: [Field] | Blood Pressure Diastolic: [Field]
  - Pulse: [Field]
  - Respiratory Rate: [Field]
  - Oxygen Saturation %: [Field] | Oxygen Saturation LIMin: [Field]
  - Weight - Lbs: [Field]
  - Height Feet Part: [Field] | Height Inches Part: [Field]
  - Date/Time Taken: [Field] | Temp. Taken: [Field]
- Buttons:** Clear, Add, Update, Remove, Chart, Exit.

**Commented [DI21]:** Drop down list to select where bp taken (right upper arm, left upper arm, right leg, left leg) and how (manual auscultation, automated bp cuff, palpation, Doppler)  
 Form page where all vital signs can be seen to trend  
 Eventual capability to convert vital signs into graph and will it highlight abnormal in different color. (have capability to edit or section for recheck for abnormal , also place to document what they did about abnormal, notified MD, recheck \_\_\_\_\_, cuff checked and repositioned, replaced.....)  
 Orthostatic vital sign

“Diagnosis of Patient” Screen



The “Tests” menu item has sub-menu as shown below. The “search” option allows the user to search for a specific test, the “list All” will provide a list of all medications for a patient and the “Add” will allow the user to add a medication for the patient.



**Commented [D122]:** OK – forgive my earlier question as this answers the “pick patient first” for function

**Commented [D123]:** Am thinking that the NI students will need to develop list of tests which then would be tied to a charge master? Students would also need to research details for each diagnostic measure – normal test options such as chest x-ray, PA and lateral, a drop down menu that populates ordering physician name, reimbursable reasons, any special instructions that might range greatly noting implants or various other points – probably free text for now, pregnancy status where appropriate, order status – routine or STAT, complete/incomplete/resulted which may be used to pass the charge? Escort needed y/n and transport method such as stretcher/wheelchair

“Tests Performed” screen

Tests Performed on the Patient

Last Name: [text] First Name: [text] MIN: [text] Birthdate: [text]

Order a Patient Test

Name of Test: [text] Date of Test: [text] Time of Test: [text]

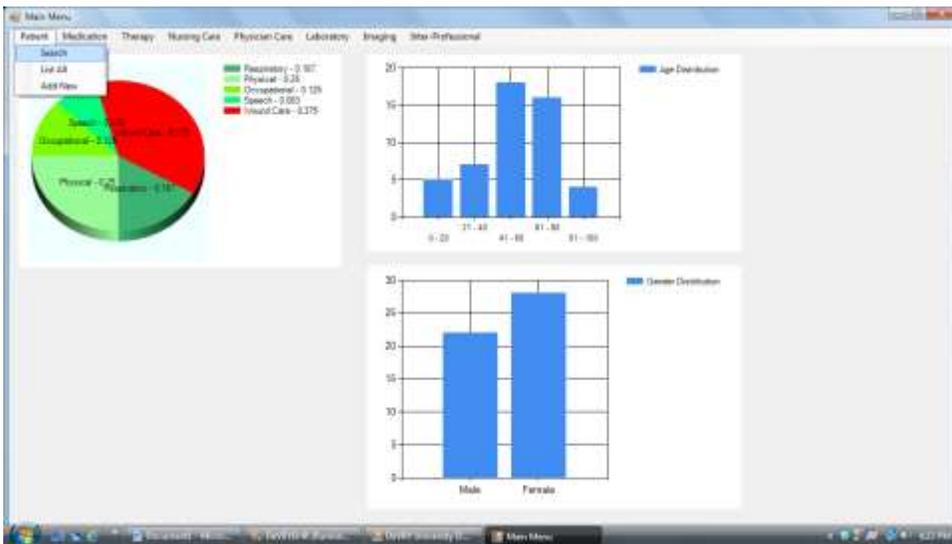
Test Code: [text] Name of Person Ordering the Test: [text]

Notes: [text]

Clear Add Update Remove Print Exit

**Commented [DI24]:** Possibility to add note at screen bottom that results available with link to same.  
Karen West – Print option in the real world has been taken to only a few screens (medication list, face sheet, MAR, patient education) otherwise the ability to print parts of the record have been diminished for patient privacy. Students should still have the ability to screen shot serial screens for work assignment clarity.

Under the “Patient” menu item on the Main Menu” screen there is a sub-menu item “search” as shown below. Clicking on this will get you a search screen.

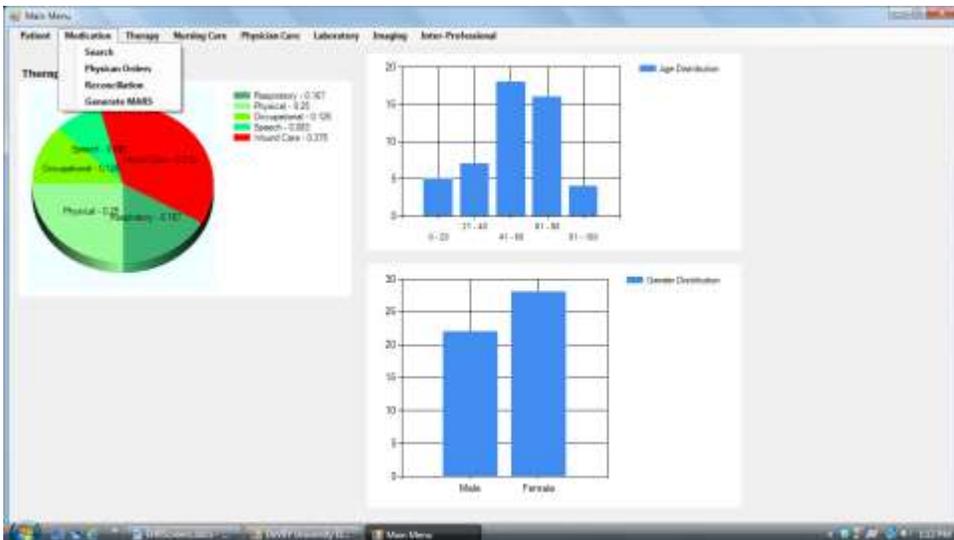


“Patient Search” Screen

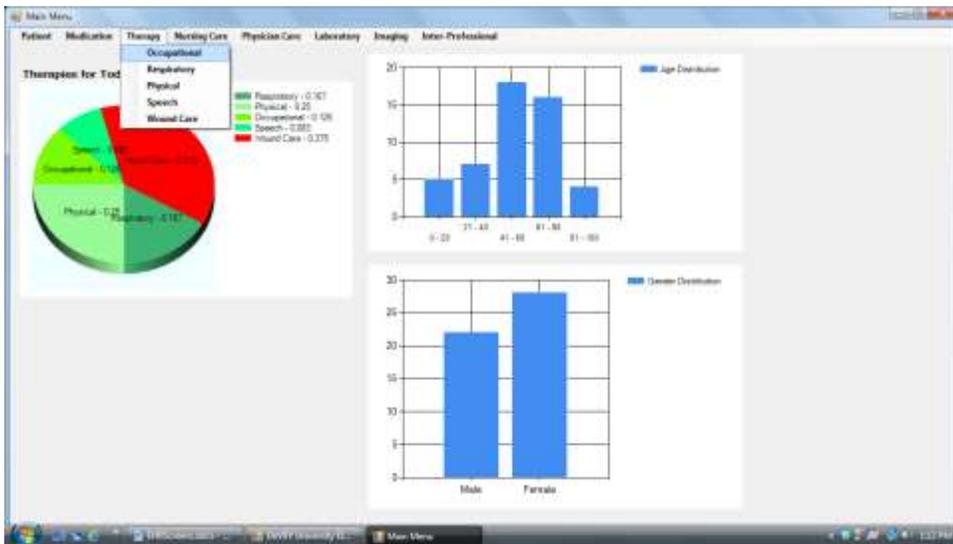


The user enters the search criteria into the textboxes and clicks the “Search” button. The results of the search are listed in the table at the bottom. The user selects the desired patient and then clicks on the button for the function he/she wants to perform. This will bring up the patient’s demographic screen from which the user can select any of the screen that were shown above to add, edit, delete or print the results. The screen below shows the sub-menu items under the “Medications” menu item.

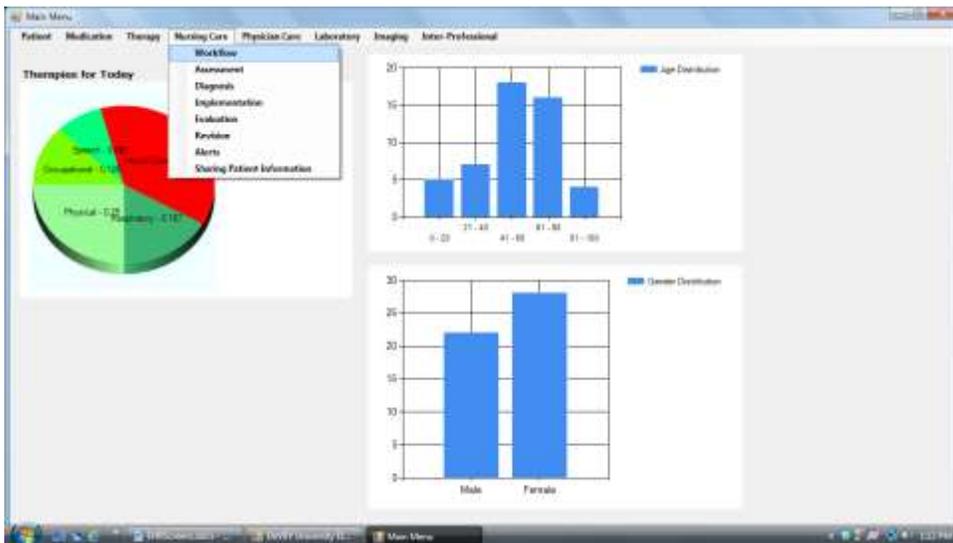
**Commented [DI25]:** Should search option include ability to search by encounter type and/or date of birth  
 Do we want ssn here because clinical users do not need - being phased out as an identifier or make available for financial users?



The sub-menu items under the “Therapies” menu item.



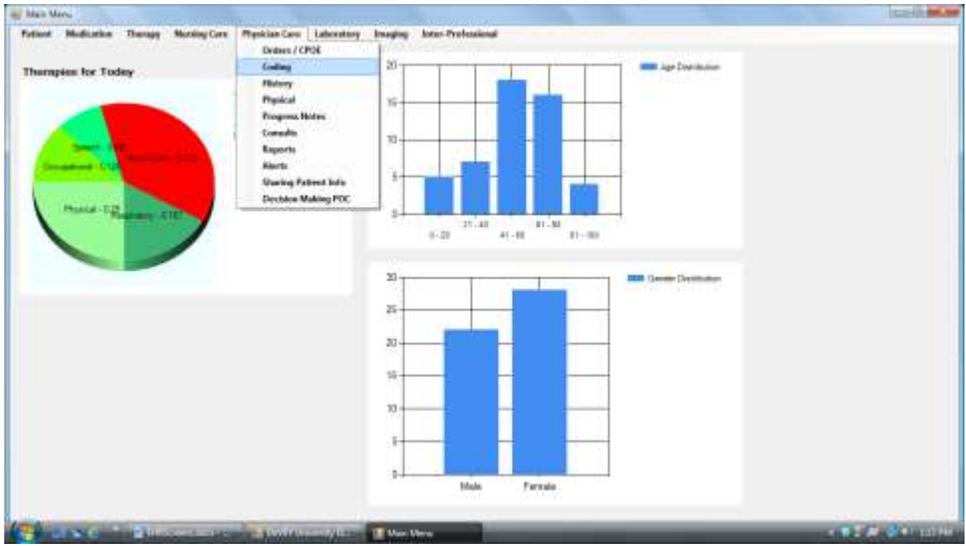
The sub-menu items under the “Nursing Care” menu item. Not sure what all of these mean from a functional or data point of view – so need help [here!](#)



**Commented [DI26]:** Would this reflect a sort of cheat sheet for each nurse for assigned patients for the day? If so there would need to be a way to group patients assigned for the day

Karen West – What about a main screen after sign in that shows patient assignment for that nurse. We would need a master screen to make assignments with.

The Sub-menu items under the “Physician Care” menu item are shown below. Need help in defining the functionality and data elements involved.



**Commented [D127]:** Will physicians see a patient list? Or will they have to manually enter patient name after they select each function? Of course our NI should be able to create that list and incorporate into the physician view

**Commented [D128]:** Perhaps I misunderstood the “Add tests” item above as I was thinking of physician order mode? We are thinking that for now NI students might be able to build the order screens – typically grouped by department/ancillary department such as laboratory, radiology, PT, OT, speech, NI students might also build out consults such as PT, OT, speech, social services

Can see patient lists coming under reports – regular patients as well as perhaps consults

Sharing patient info? Need more information here.  
 Karen West- Is this supposed to be an option to transfer record via internet? What about option to print record?

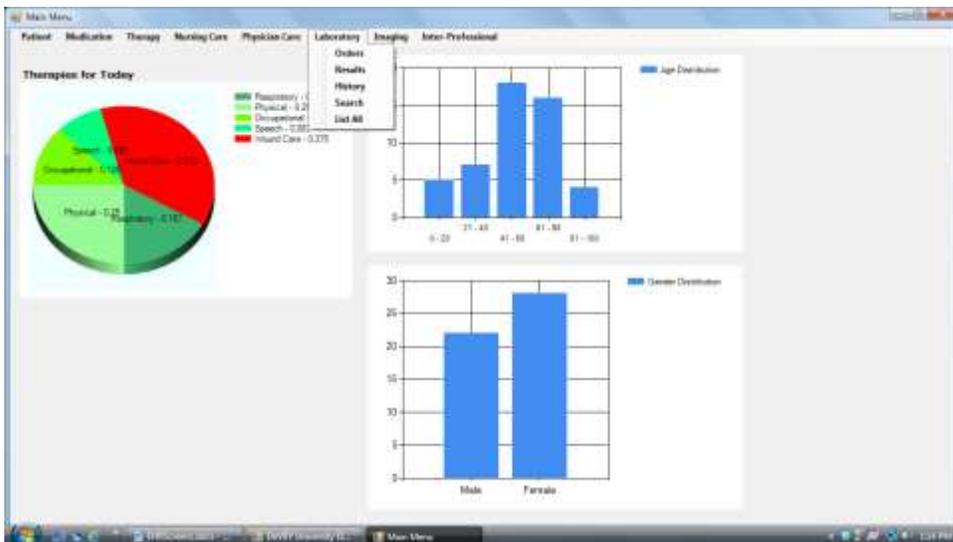
Decision Making POC - same as decision support or evidence-based order sets?

If the “Coding” sub-menu item was selected and it was intended to provide the ICD-10 codes for billing and informational purposes, then it might send the user to the ICD-10 web site where the codes are defined and displayed. The screen shown below is an example of going to a web site and displaying pages shown at that site.

**Commented [D129]:** Like that but would that be only one option then physicians would select actual codes?



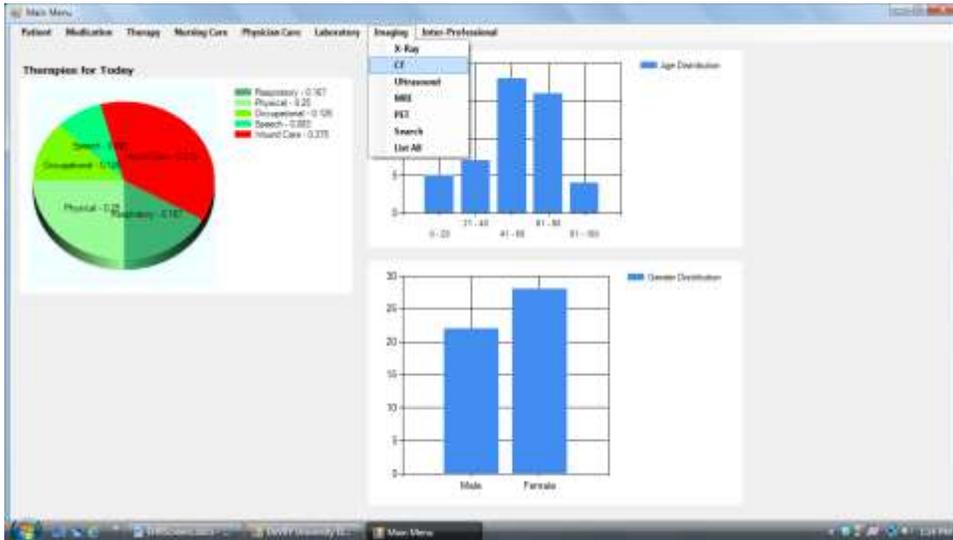
The sub-menu items for the “Laboratory” menu item are shown below. The functionality and data for these needs to be defined.



**Commented [D130]:** Again would like for students to build out order screens for options – for the point of clarification for me would this be lab personnel inputting orders OR would it be another mechanism that other personnel could input lab orders?

Would like to show results – what was ordered, completed, pending, resulted. We are thinking that since Rome was not built in a day that we need an interim means to input results

The sub-menu items for the “Imaging” menu item are shown below. The functionality and data elements for these sub-menu items need to be defined.



The sub-menu items for the “Inter Professional” menu item are shown below. The functionality and data elements for these sub-menu items need to be defined.

