5301 ALPHA ROAD SUITE 80 - 25
Dallas, TX 75240
Tel: +1-800-418-6824
Fax: +1-972-301-8845
Website: https://onetouchemr.com

Usability Test Report for OneTouch EMR 3

Based on: NISTIR 7742 Common Industry Format for Usability Test Reports

OneTouch EMR 3
Date (s) of Usability Tests:
08/01/2018 till 08/17/2018 - Initial SED report
11/21/2022 till 11/26/2022 - (a)(6), (a)(7) and (a)(8) removed
11/04/2024 till 11/08/2024 - (b)(11) incorporated
Date of Report: 11/11/2024
Report Prepared By: Robert Abbate
Phone Number: 800-418-6824
Email Address: meaningfuluse@onetouchemr.com
Mailing Address: 5301 ALPHA ROAD SUITE 80 - 25, Dallas, TX 75240

1. Executive Summary

A usability test of OneTouch EMR 3, a full clinical EHR module for providers in an ambulatory setting covering multiple specialties, was conducted multiple times over the years and. **Initially the testing was done on August 13 to August 17, 2018, then from November 21 till November 26, 2022 and finally November 04 till November 08, 2024** in Dallas, TX over remote tele-conferencing sessions using Skype, GotoMeeting and Google Meet. The purpose of this study was to test and validate the usability of the current user interface and provide evidence of usability in OneTouch EMR 3 as the EHR under Test (EHRUT). During the usability test, 10 healthcare providers (including an Administrator) matching the target demographic criteria served as participants and used OneTouch EMR 3 in simulated, but representative tasks. The administrator conducted the study and managed overall progress.

The study focused on measuring the effectiveness of, efficiency of, and satisfaction with OneTouch EMR 3 among a sample of participants representing current and potential users of the system. Performance data was collected on thirty-five (38) tasks typically conducted on an HER in the following nine (9) areas. Tasks created were based upon the criteria specified within the test procedure structure for evaluating conformance of Electronic Health Record (EHR) technology to the certification criteria defined in certification criteria identified in 45 CFR Part 170 Subpart C of the Health Information Technology: ONC Certification Criteria for Health IT.

a) 170.315(a)(1) CPOE – Medications
b) 170.315(a)(2) CPOE – Laboratory
c) 170.315(a)(3) CPOE – Diagnostic Imaging
d) 170.315(a)(4) Drug-drug, Drug-allergy Interaction Checks
e) 170.315(a)(5) Demographics
f) 170.315(a)(14) Implantable Device List
g) 170.315(b)(2) Clinical Information Reconciliation and Incorporation
h) 170.315(b)(3) Electronic Prescribing
i) 170.315(b)(11) Decision support interventions

During the 180 minute one-on-one usability test session (three of total sessions), each participant was greeted by the administrator and thanked for volunteering their time to participate in the survey. The administrator introduced the test and instructed participants to complete a series of tasks (given one at a time) using OneTouch EMR. During the testing, the administrator timed the test and, along with data loggers, recorded user performance data on paper and electronically. The administrator did not give the participant assistance in how to complete the task.

The following types of data were collected for each participant:

- Number of tasks successfully completed within the allotted time without assistance.
- Time to complete the tasks
- Number and types of errors
- Path deviations
- Participants' verbalizations
- Participants' satisfaction ratings of the systems

All participant data was de-identified – no correspondence could be made from the identity of the participant to the data collected. Following the conclusion of the testing, participants were asked to complete a post-test questionnaire and were compensated with a $120 for their time. Various recommended metrics, in accordance with the examples set forth in the NIST Guide to the Processes Approach for Improving the Usability of Electronic Health Records, were used to evaluate the usability of OneTouch EMR.

Results of the study indicated that the OneTouch EMR was satisfactory with regards to effectiveness and efficiency and that the participants were very satisfied with the system.

2. Introduction

The EHR tested for this study was OneTouch EMR 3. The application is cloud based Electronic Health Record for the Ambulatory settings only. The software is designed to the ONC Certification Criteria for Health IT objectives for the Ambulatory setting. The usability testing attempted to represent realistic exercises and conditions with actual users of the EHR.

The purpose of this study was to test and validate the usability of the current user interface and provide evidence of usability in OneTouch EMR 3 as the EHR under Test (EHRUT). To this end, measures of effectiveness, efficiency and user satisfaction, such as time on task, deviations from optimal path, and errors were captured during the usability testing.

3. Method

3.1. Participants

A total of 10 participants were tested on OneTouch EMR. Participants in the test were physicians and a registered nurse in an ambulatory setting with varied specialties including gastroenterology and internal medicine, and an administrator with hospital and ambulatory setting experience. No participants had any prior experience with OneTouch EMR. Participants were recruited by OneTouch EMR Administrative Staff.

In addition, participants had no direct connection to the development of or organization producing the EHRUT(s). Participants were not from the testing or supplier organization. Participants were given the opportunity to have the same orientation and level of training as the actual end users would have received. For the test purposes, end-user characteristics were identified and translated into an ID numbers so that the participant remains anonymous, and the individual's data cannot be tied back to individual identities.

Recruited participants had a mix of backgrounds and demographic characteristics conforming to the recruitment screener. The following is a table of participants by characteristics, including demographics, professional experience, computing experience and user needs for assistive technology. Participant names were replaced with Participant IDs so that an individual's data cannot be tied back to individual identities.

User ID	Gender	Age	Education	Occupation /Role	Professional Experience	Computer Experience	Product Experience	Assistive Technology Needs
OT01	Male	40-49	Associate degree	Clinical Assistant	50	72	24	No
OT02	Female	30-39	Bachelor's Degree	Clinical Assistant	48	240	48	No
OT03	Male	40-49	Master's Degree	Physician's Assistant	60	220	48	No
OT04	Female	50-59	Associate degree	Clinical Assistant	48	180	36	No
OT05	Male	20-29	Master's Degree	Physician's Assistant	60	120	18	No
OT06	Male	40-49	Doctorate Degree (e.g., MD, DNP, DMD, PhD)	MD	120	220	48	No

OT07	Male	20-29	Bachelor's Degree	RN	96	220	30	No
OT08	Female	40-49	Bachelor's Degree	RN	84	210	24	No
OT09	Male	60-69	Trade/technical/vocational training	Clinical Assistant	160	200	32	No
OT10	Male	30-39	Master's Degree	Admin	126	240	48	No

List of participants to test tasks (1-24)

User ID	Gender	Age	Education	Occupation /Role	Professional Experience	Computer Experience	Product Experience	Assistive Technology Needs
OT11	Male	20-29	Bachelor's Degree	RN	90	200	30	No
OT12	Female	50-59	Bachelor's Degree	RN	90	180	24	No
OT13	Male	30-39	Doctorate degree (e.g., MD, DNP, DMD, PhD)	MD	125	240	48	No
OT14	Male	50-59	Master's Degree	Physician's Assistant	60	80	24	No
OT15	Female	30-39	Associate Degree	Clinical Assistant	42	210	52	No
OT16	Male	30-39	Bachelor's Degree	Physician's Assistant	68	260	46	No
OT17	Female	30-39	Associate degree	Clinical Assistant	58	190	38	No
OT18	Male	30-39	Master's Degree	Clinical Assistant	45	125	15	No
OT19	Male	40-49	Trade/technical/vocational training	Admin	150	200	30	No
OT20	Male	40-49	Master's Degree	Clinical Assistant	110	240	54	No

List of participants to test tasks (25-38)

3.2. Study Design

Overall, the objective of this test was to uncover areas where the application performed well – that is, effectively, efficiently, and with satisfaction – and areas where the application failed to meet the needs of the participants. The data from this test may serve as a baseline for future tests with an updated version of the same EHR and/or comparison with other EHRs provided the same tasks are used. In short, this testing serves as both a means to record or benchmark current usability, but also to identify areas where improvements must be made.

During the usability test, participants interacted with OneTouch EMR. Each participant used the system in the same location, and was provided with the same instructions. The system was evaluated for effectiveness, efficiency and satisfaction as defined by measures collected and analyzed for each participant:

- Number of tasks successfully completed within the allotted time without assistance.
- Time to complete the tasks
- Number and types of errors
- Path deviations
- Participants' verbalizations
- Participants' satisfaction ratings of the systems

Same study design is used when testing for b.11 i.e. tasks 25 till 38.

3.3. Tasks

A number of tasks were constructed that would be realistic and representative of the kinds of activities a user might do with this EHR, and representative of the functionality required for ONC Certification Criteria for Health IT, including:

1) Record a Patient Demographic information
2) Modify and Display Patient Demographic Information
3) Use CPOE to record Medication
4) Use CPOE to change and display Medication
5) Use CPOE to record new Lab order
6) Use CPOE to change and display Lab order
7) Use CPOE to record Imaging order
8) Use CPOE to change and display Imaging order
9) Prescribe a new medication that would be contraindicated to patient allergy (drug-allergy interaction)
10) Prescribe a medication that would be contraindicated to the patient medication (drug-to-drug interaction)
11) Configure a health maintenance plan for each or a combination of the following: problem list, medication list, demographics, and/or lab tests and results, vital signs and a combination of two.
12) Enroll a patient in one health maintenance plan based on a diagnosis in their active problem list
13) Record and Parse a UDI in implantable device list
14) Access UDI device information and Change device status
15) Incorporate CCDA to create new patient
16) Conduct reconciliation of Medication, Allergies and Problems
17) Generate new CCDA with reconciled data
18) Create a new Prescription
19) Cancel Prescription
20) Change Prescription
21) Refill prescription
22) Receive fill status notification
23) Request and receive medication history information
24) Adjust Severity level of drug-drug interaction
25) User selects (activates/adds/enables/configures) evidence-based DSI using any of the required elements alone or in combination
26) User records source attributes for evidence-based DSI
27) User changes source attributes for evidence-based DSI
28) User accesses source attributes for evidence-based DSI
29) User triggers Decision Support Intervention(s) based on any of the required elements alone or in combination
30) User accesses source attributes for triggered evidence-based DSI
31) User triggers Decision Support Intervention(s) based on the problems, medications, allergies and intolerances incorporated from a transition of care/referral summary C-CDA file using (b)(2) functionality (if applicable)
32) User provides feedback for a triggered evidence-based DSI
33) User exports feedback data in a computable format, including the data identified in (b)(11)(ii)(C) at a minimum (intervention, action taken, user feedback provided (if applicable), user, date, and location)
34) User selects (activates/adds/enables/configures) Predictive DSI using the required USCDI data elements
35) User records user-defined source attributes for a Predictive DSI
36) User changes user-defined source attributes for a Predictive DSI
37) User accesses user-defined source attributes for a Predictive DSI

38) User triggers a user-supplied Predictive DSI

Tasks were selected based on required measures for ONC Certification Criteria for Health IT, frequency of use, and representative of commonly performed tasks. These tasks are listed in Appendix D with task time and Optimal Paths. Tasks from 25 till 38 were performed by a second group of users in November, 2024 for "170.315(b)(11) Decision support interventions" testing.

3.4. Procedures

Upon arrival, participants were greeted and were then assigned a participant ID. To ensure that the test ran smoothly, two staff members participated in this test, the usability administrator and the data logger. The administrator moderated the session including administering instructions and tasks. The administrator also monitored task times, obtained post-task rating data, and took notes on participant comments. A second person served as the data logger and took notes on task success, path deviations, number and type of errors, and comments.

Participants were instructed to perform the tasks:

- As quickly as possible making as few errors and deviations as possible
- Without assistance; administrators were allowed to give immaterial guidance and clarification on tasks, but not instructions on use.
- Without using a think-aloud technique

Task timing began once the administrator finished reading the question. The task time was stopped once the participant indicated they had successfully completed the task. Following the session, the administrator gave the participant the post-test questionnaire and questions. Participants' demographic information, task success rate, time on task, errors, deviations, verbal responses, and post-test questionnaire were recorded into a spreadsheet. Scoring is discussed below in the Data Scoring section.

Same procedure was used for tasks 25 till 38 tested in November, 2024 for "170.315(b)(11) Decision support interventions" testing.

3.5. Test Location and Environment

The testing was conducted at OneTouch EMR head office in Dallas, TX via remote setting where participants were isolated from other participants in the study. The application was setup by OneTouch EMR Support Staff according to the OneTouch EMR documentation describing system setup and preparation. The application is a cloud-based, and the participants performed the tasks in the demo database using "test" user accounts and "test" patients. Each participant was assigned a unique user name and password to login.

Although OneTouch EMR is accessible through any web browser, for consistency and uniformity each participant used Google Chrome as the web browser during the testing. The administrator was also present in remote session with the participant to facilitate the test while the data logger was overlooking remote session in order to see both the participant's progress and activity. Technically, the system performance (i.e. response time) was representative to what actual users would experience in a field implementation. Additionally, participants were instructed not to change any of the default system settings (such as color scheme, display settings, and font size).

3.6.Test Forms and Tools

During the usability test, various documents and instruments were used, including:

1) Participant Demographic form (Appendix A)
2) Moderator's Guide (Appendix B)

3) Post-test System Satisfaction Questionnaire
4) Preliminary Questionnaire

The Moderator's Guide was devised to be able to capture required data. Each test was observed by the data logger. The data collected was recorded in a spreadsheet.

3.7.Participant Instructions

The participant instructions were read from the Moderator's Guide, which is available in Appendix B: Moderator's Guide.

3.8.Usability Metrics

According to the NIST Guide to the Processes Approach for Improving the Usability of Electronic Health Records, EHR's should support a process that provides a high level of usability for all users. The goal is for users to interact with the system effectively, efficiently, and with an acceptable level of satisfaction. To this end, metrics for effectiveness, efficiency, and user satisfaction were captured during the usability testing.

The goals of the test were to assess:

The goals of this test were to assess:

1) The efficiency of OneTouch EMR by measuring the length of time it takes for a user to complete the task; and the success of task completion.
2) The efficiency of OneTouch EMR by measuring the path deviations taken by the user during the task.
3) The efficiency of the OneTouch EMR by measuring the average task time and path deviations.
4) The effectiveness of OneTouch EMR by measuring the number and types of errors experienced by the user during the task.
5) The satisfaction of the user with OneTouch EMR by logging their comments on the task.

3.9.Data Scoring

The table below details how tasks were scored, errors evaluated, and the time data analyzed.

Measures	Rationale and Scoring
Effectiveness: Task Success	A task was counted as a "success" if the participant was able to achieve the correct outcome, without assistance, within the time allotted on a per task basis.
Effectiveness: Task Failure	If the participant abandoned the task, did not reach the correct answer, or performed it incorrectly, the task was counted as a failure. No task times for failed tasks were used in calculations.
Effectiveness: Task Deviations	The participant's path (i.e. steps) through the application was recorded. Deviations occur if the participant, for example, went to a wrong screen, clicked on an incorrect menu item, followed an incorrect link, or interacted incorrectly with an on-screen control. The task deviations were rated on a scale of 1 = no deviations, 2 = minor deviations, 3 = major deviations.
Efficiency: Task Time	Each task was timed from when the administrator said "Begin" until the participant said "Done." If the participant failed to say "Done," the time was stopped when the participant ceased performing the task. Only task times for tasks that were successfully completed at or under the target time were included in the average task time analysis. Average time per task was calculated for each task.
Satisfaction: Task Rating	Participant's subjective impression of the ease of use of the application was measured by administering both a simple post-task question as well as post-session questionnaire. After each task, the participant was asked to rate "Overall, this task was" on a scale of 1 (very difficult) to 5 (very easy) using likert scale. These data are averaged across participants per task. Common convention is that average ratings for systems judged easy to use should be 3.3 or above.

	To measure participants' confidence in and likeability of OneTouch EMR overall, the testing team administered the System Usability Scale (SUS) post-test questionnaire that included questions like "I thought the system was easy to use," and "I would imagine that most people would learn to use this system very quickly." See full System Usability Score questionnaire in Appendix C.

4. Results

4.1. Data Analysis and Reporting

The results of the usability test were calculated according to the methods specified in the Usability Metrics section above. Participants who failed to follow session and task instructions had their task relevant data excluded from the analysis. The only exclusions were made for individual tasks but not for an entire study. The usability testing results for OneTouch EMR are detailed below. The results should be seen in light of the objectives and goals outlined in the study Design section. Task times are mentioned in seconds.

Task	Mean Task Time	SD	Completion Rate (%)	Mean # Path Deviations	SD	Mean Task Satisfaction	SD
Record a Patient Demographic information	02:53	29	100%	0.5	0.71	4.5	0.71
Modify and Display Patient Demographic Information	02:20	26	100%	0.3	0.48	4.5	0.71
Use CPOE to record Medication	00:52	14	100%	0.2	0.42	4.7	0.48
Use CPOE to change and display Medication	00:49	14	100%	0.2	0.42	4.7	0.48
Use CPOE to record new Lab order	00:44	11	100%	0.1	0.32	4.9	0.32
Use CPOE to change and display Lab order	00:45	9	100%	0.0	0.00	4.9	0.32
User CPOE to record Imaging order	00:41	10	100%	0.2	0.42	4.8	0.42
User CPOE to change and display Imaging order	00:46	9	100%	0.0	0.00	4.8	0.42
Prescribe a new medication that would be contraindicated to patient allergy (drug-allergy interaction)	00:25	10	100%	0.3	0.48	4.6	0.70
Prescribe a medication that would be contraindicated to the patient medication (drug-to-drug interaction)	00:26	9	100%	0.2	0.42	4.7	0.67
Configure a health maintenance plan for each or a combination of the following: problem list, medication list, demographics, and/or lab tests and results, vital signs and a combination of two.	03:17	20	70%	0.8	1.23	3.8	1.03
Enroll a patient in one health maintenance plan based on a diagnosis in their active problem list	00:51	7	90%	0.5	0.97	4.2	0.79
Record and Parse a UDI in implantable device list	01:01	10	100%	0.4	0.70	4.5	0.71
Access UDI device information and Change device status	00:28	4	100%	0.1	0.32	4.9	0.32

Incorporate CCDA to create new patient	03:16	39	70%	0.8	1.23	3.8	1.32
Conduct reconciliation of Medication, Allergies and Problems	03:17	23	90%	0.8	1.23	3.9	0.99
Generate new CCDA with reconciled data	02:57	7	100%	0.5	0.71	4.3	0.82
Create a new Prescription	03:04	13	70%	0.8	1.03	3.6	1.35
Cancel Prescription	00:24	4	100%	0.0	0.00	5	0.00
Change Prescription	02:04	7	90%	0.6	0.70	3.8	1.03
Refill prescription	02:03	8	100%	0.6	0.70	3.6	1.17
Receive fill status notification	00:20	3	100%	0.0	0.00	5	0.00
Request and receive medication history information	00:20	2	100%	0.0	0.00	4.8	0.42
Adjust the severity level of drug-drug interaction	00:28	2	100%	0	0.00	5	0.00
User selects (activates/adds/enables/configures) evidence-based DSI using any of the required elements alone or in combination.	01:59	10	90%	0.5	0.71	4	0.82
User records source attributes for evidence-based DSI.	00:27	6	100%	0	0	4.7	0.48
User changes source attributes for evidence-based DSI.	00:52	10	90%	0.3	0.48	3.90	0.99
User accesses source attributes for evidence-based DSI.	00:20	4	100%	0.5	0.71	4.30	0.82
User triggers Decision Support Intervention(s) based on any of the required elements alone or in combination.	03:04	13	80%	0.9	1.10	3.60	1.17
User accesses source attributes for triggered evidence-based DSI.	00:21	3	100%	0	0.00	5.00	0.00
User triggers Decision Support Intervention(s) based on the problems, medications, allergies and intolerances incorporated from a transition of care/referral summary C-CDA file using (b)(2) functionality (if applicable).	00:57	9	90%	0.6	0.70	3.80	1.03
User provides feedback for a triggered evidence-based DSI.	00:27	5	100%	0.6	0.70	3.60	1.17
User exports feedback data in a computable format, including the data identified in (b)(11)(ii)(C) at a minimum (intervention, action taken, user feedback provided (if applicable), user, date, and location).	00:20	3	100%	0	0.00	5.00	0.00
User selects (activates/adds/enables/configures) Predictive DSI using the required USCDI data elements.	02:02	9	90%	0.1	0.32	4.80	0.42
User records user-defined source attributes for a Predictive DSI.	00:28	3	100%	0	0.00	5.00	0.00
User changes user-defined source attributes for a Predictive DSI.	00:58	7	100%	0.3	0.48	4.20	0.79

User accesses user-defined source attributes for a Predictive DSI.	00:21	4	100%	0	0.00	4.70	0.48
User triggers a user-supplied Predictive DSI.	00:20	4	100%	0	0.00	4.70	0.48

As Table above shows, relative to optimal performance standards as defined by OneTouch, participant performance in the OneTouch EMR usability test was quite satisfactory. The overall average task completion rate was ninety-seven (96) percent.

4.2.Discussion of the Findings

Overall, the participants performed the tasks in the expected amount of time as a new user of the system, or faster. All tasks were performed successfully either the first or second try with little to no deviation. The participants' verbal comments and feedback regarding areas of improvement coincide with their overall rating of the task.

4.3.Effectiveness

Of the thirty-eight (38) tasks presented, a large majority of the tasks were successfully completed by all of the participants. Over all of participants, the mean successful task competition rate was very high with an overall average rate of nighty-seven (96) percent indicating that in general the participants had little or no difficulty completing the tasks.

4.4.Efficiency

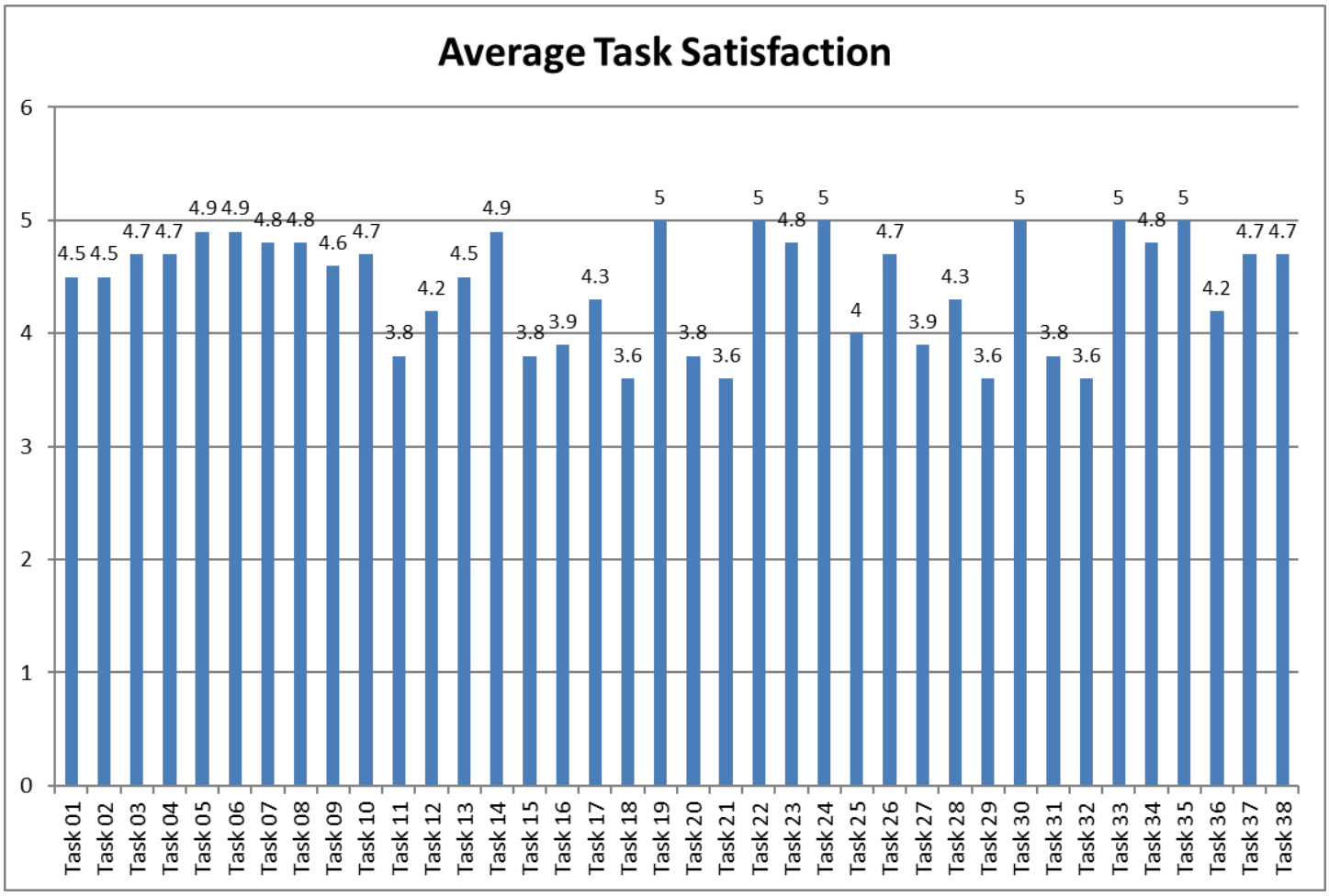
Participants who successfully completed tasks generally completed those tasks within an acceptable time. Some tasks were completed more quickly than the calculated optimal time, while some tasks took slightly longer than expected. The tasks that took the longest required the participants to navigate more to a particular portion of a page, interact with a workflow, locate and select specific actions and controls. Some of those tasks as discussed below:

There were some non-system factors that lead to lower expectation outcomes. For example, new workflows for functions unrelated to real world experience or introduced into the system. Some of them are as below:

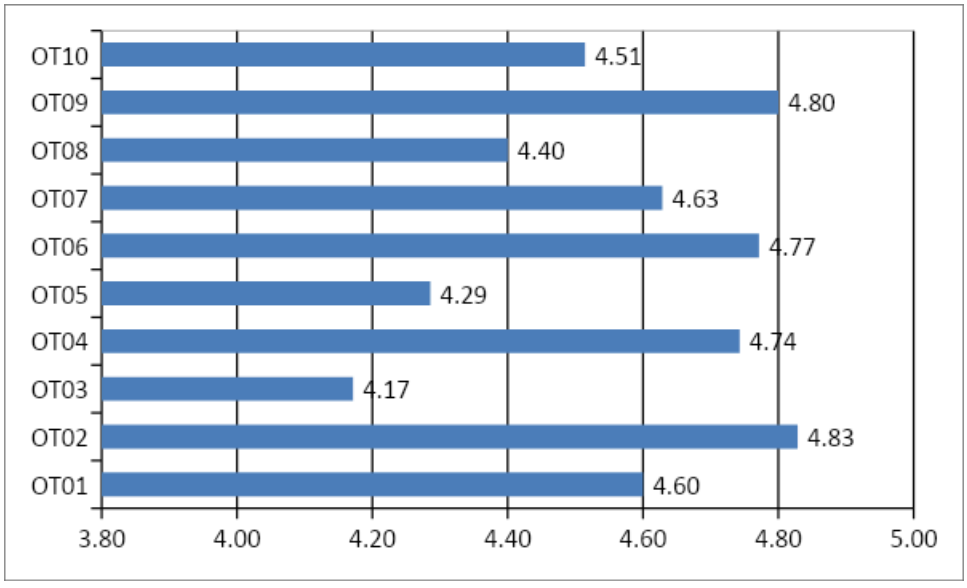
- CCDA Import and Reconciliation Process
- Implantable device recording by a UDI and system parses rest of the detail via API
- Configuring CDS Intervention rules based on different elements

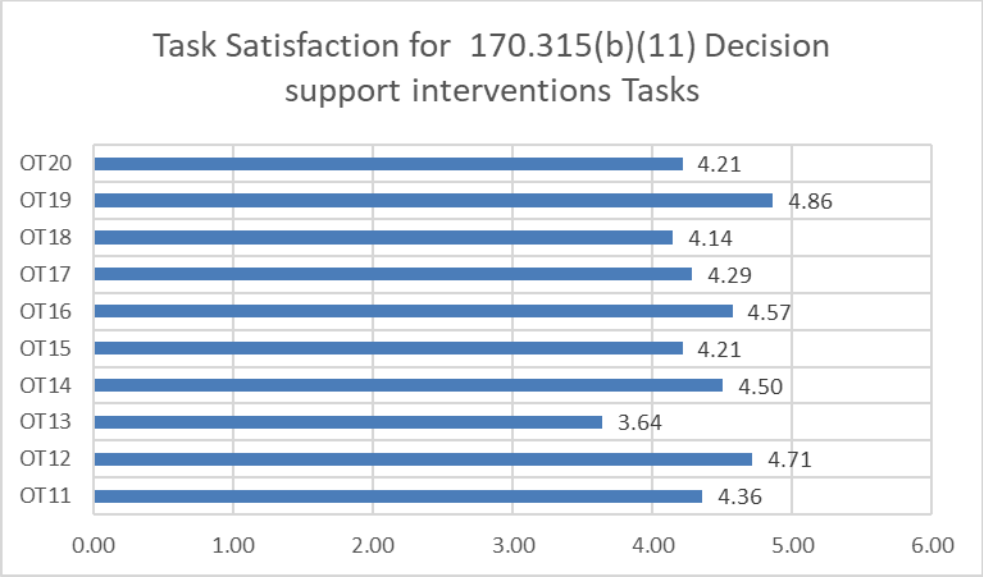
4.5.Satisfaction

Participants verbally indicated their satisfaction with the ease of use for each task using a likert scale of "1" ("Very Difficult") to "5," ("Very Easy"). As the figure below shows individual task satisfaction ranged from a low of 3.6 out of 5 on Tasks (18, 21, 29, 32) to a high of 5 out of 5 on Tasks (19, 22, 24, 30, 33 and 35). The overall average task satisfaction was 4.45 indicating that overall the participants were well satisfied with their tasks.



In general, the participants were very satisfied with the ease of use of the OneTouch EMR. The following chart displays overall satisfaction for each participant:





The System Usability Scale (SUS) is a simple, 10-item Likert-type attitude scale providing a global subjective assessment of usability from the user's perspective (John Brooke at Digital Equipment Company developed the SUS in 1986). The SUS scale is scored from 0 to 100; scores above 68 represent systems with above average usability, scores over 80 are considered better than average.

The average total SUS score for the OneTouch EMR was sixty-nine (69.6) and ranged from a low of sixty (60) and a high of ninety (90). Overall, participants rated their satisfaction with the OneTouch EMR system to be above average and given the high individual satisfaction ratings and excellent task performance data.

4.6.Major Findings

This evaluation demonstrated that OneTouch EMR is a usable system with a relatively short learning curve. Participants with lesser amounts of experience using different portions of OneTouch before the study experienced little initial difficulty understanding the navigation and information architecture. Participants with more experience were able to solve most tasks without difficulty or error. After doing repeated steps on various tasks, the users could locate where they needed to go in the system quicker, as most screens are laid out in the similar fashion, making it easier for users to navigate to different areas of OneTouch EMR.

4.7.Areas for Improvement

The overall task success rate was quite high which indicates that most of the system is highly usable and does not require major improvements. There is however always a room for improvement and certain areas can be enhanced to increase task completion rate and increase user satisfaction.

- Improved Task Workflow

  Some of the areas require the user to navigate into multiple sub-tabs or navigate to multiple pages before a task can be performed. This can be improved by introducing a wizard-like style so that the user is aware of the overall progress of the task and has full control on the task being performed.

  Some extra hits/help text may be introduced so that users can easily understand the task and complete it.

- Streamline User interface

  There is a need for improvement in eRX screens as they do not look consistent with the workflow of other application areas.

4.8.Risks Identified

This evaluation demonstrated that OneTouch EMR is a usable system with a relatively low risk and learning curve. The following tasks were identified with a higher risk along with their descriptions.

- Difficulty in locating information on the screen leading to incorrect text entry.
    - Tasks11: Configure a health maintenance plan for each or a combination of the following: problem list, medication list, demographics, and/or lab tests and results, vital signs and a combination of two.
    - Task 18: Create a new Prescription
    - Task 21: Refill prescription
- Position of the UI element on screen might cause users to miss while adding information to the forms.
    - Task25: User selects (activates/adds/enables/configures) evidence-based DSI using any of the required elements alone or in combination.
    - Task11: Configure a health maintenance plan for each or a combination of the following: problem list, medication list, demographics, and/or lab tests and results, vital signs and a combination of two.
- DSI might not trigger if the proper fields are not checked in the UI.
    - Task 29: User triggers Decision Support Intervention(s) based on any of the required elements alone or in combination.
    - Task31: User triggers Decision Support Intervention(s) based on the problems, medications, allergies and intolerances incorporated from a transition of care/referral summary C-CDA file using (b)(2) functionality (if applicable).

The table below lists the tasks in numerical rating from 1 to 100, where 100 indicates the highest risk and 1 indicates the lowest risk.

Task	Risk Value
Configure a health maintenance plan for each or a combination of the following: problem list, medication list, demographics, and/or lab tests and results, vital signs and a combination of two.	65
User triggers Decision Support Intervention(s) based on any of the required elements alone or in combination.	60
User triggers Decision Support Intervention(s) based on the problems, medications, allergies and intolerances incorporated from a transition of care/referral summary C-CDA file using (b)(2) functionality (if applicable).	60
Enroll a patient in one health maintenance plan based on a diagnosis in their active problem list	45
Create a new Prescription	40
Refill prescription	40
User selects (activates/adds/enables/configures) evidence-based DSI using any of the required elements alone or in combination.	35
Prescribe a new medication that would be contraindicated to patient allergy (drug-allergy interaction)	25
Prescribe a medication that would be contraindicated to the patient medication (drug-to-drug interaction)	25
Incorporate CCDA to create new patient	25

Conduct reconciliation of Medication, Allergies and Problems	25
User records source attributes for evidence-based DSI.	25
User changes source attributes for evidence-based DSI.	25
User provides feedback for a triggered evidence-based DSI.	25
User selects (activates/adds/enables/configures) Predictive DSI using the required USCDI data elements.	25
Record a Patient Demographic information	10
Modify and Display Patient Demographic Information	10
Use CPOE to record Medication	10
Use CPOE to change and display Medication	10
Use CPOE to record new Lab order	10
Use CPOE to change and display Lab order	10
User CPOE to record Imaging order	10
User CPOE to change and display Imaging order	10
Record and Parse a UDI in implantable device list	10
Access UDI device information and Change device status	10
Generate new CCDA with reconciled data	10
Cancel Prescription	10
Change Prescription	10
Adjust the severity level of drug-drug interaction	10
User records user-defined source attributes for a Predictive DSI.	10
User changes user-defined source attributes for a Predictive DSI.	10
User triggers a user-supplied Predictive DSI.	10
Receive fill status notification	0
Request and receive medication history information	0
User accesses source attributes for evidence-based DSI.	0

User accesses source attributes for triggered evidence-based DSI.	0
User exports feedback data in a computable format, including the data identified in (b)(11)(ii)(C) at a minimum (intervention, action taken, user feedback provided (if applicable), user, date, and location).	0
User accesses user-defined source attributes for a Predictive DSI.	0

To mitigate the risk of high risk tasks, users should pay more attention to the UI elements to input the data and make sure all the relevant elements are checked/inputted accordingly. For example, tasks 11, 18 and 21 pose the major risk in OneTouch EMR 3. This is due to the fact that the screens are complex and have many UI elements to import. Missing or choosing an incorrect checkbox/radio button might not produce the desired results.

The screens for tasks 11 and 25 have a checkbox that triggers the intervention for all patients. So, if the user does not choose that checkbox then no intervention will be triggered. So, users should check that checkbox to make sure that the intervention triggers as soon as the form is filled in and submitted.

5. Appendices

5.1. Appendix A

Participant Demographic Questionnaire

Please complete the following information for the Usability Study

Participant ID#: _____

Age group

20-29 _____

30-39 _____

40-49 _____

50-59 _____

60-74 _____

75 and older _____

Your current title: _____

How long have you held this title (years): _____

What is your primary work environment?

Private Practice/Office _____%

Ambulatory Surgery Center _____%

Hospital _____%

Have you ever used an EHR?

Yes: ____ No: ____

If yes, how many and for how long:

_____

Indicate your primary use and frequency of the following tasks within the EHR you currently use:

(Frequently, Sometimes, Never)

Create/modify/review medication orders: _____

Create/modify/review Lab orders: _____

Create/modify/review Dx Study orders: _____

Drug/Drug/Allergy interaction checks: _____

Adjust severity level of drug/drug interactions: _____

Record/update patient medications list: _____

Review patient medications list: _____

Record/update patient medication allergies list: _____

Prescribe medications: _____

Reconcile patient's active medications, problems and/or allergies _____

Configure Clinical Decision support guidelines: _____

View Clinical Decision support guidelines/recommendations: _____

5.2.Appendix B

Moderator's Guide to conducting Usability Test for OneTouch EMR

Administrator: _____

Data Logger: _____

Date/Time: _____

Participant Number: _____

Prior to testing:

- Confirm schedule with participants
- Ensure EHRUT lab environment is running properly

Prior to each participant:

- Reset application

Prior to each task:

- Reset application to starting point for next task

After all testing:

- Confirm all data has been properly recorded in spreadsheet

Orientation (10 minutes)

Thank you for participating in this study. Our session today will last 00 minutes. During that time you will take a look at an electronic health record system.

I will ask you to complete a few tasks using this system and answer some questions. We are interested in how easy (or how difficult) this system is to use, what in it would be useful to you, and how we could improve it. You will be asked to complete these tasks on your own trying to do them as quickly as possible with the fewest possible errors or deviations. Do not do anything more than asked. If you get lost or have difficulty I cannot answer or help you with anything to do with the system itself. Please save your detailed comments until the end of a task or the end of the session as a whole when we can discuss freely. I did not have any involvement in its creation, so please be honest with your opinions. The product you will be using today is OneTouch EMR, Version 3. Some of the data may not make sense as it is placeholder data.

All of the information that you provide will be kept confidential, and your name will not be associated with your comments at any time.

Do you have any questions or concerns?

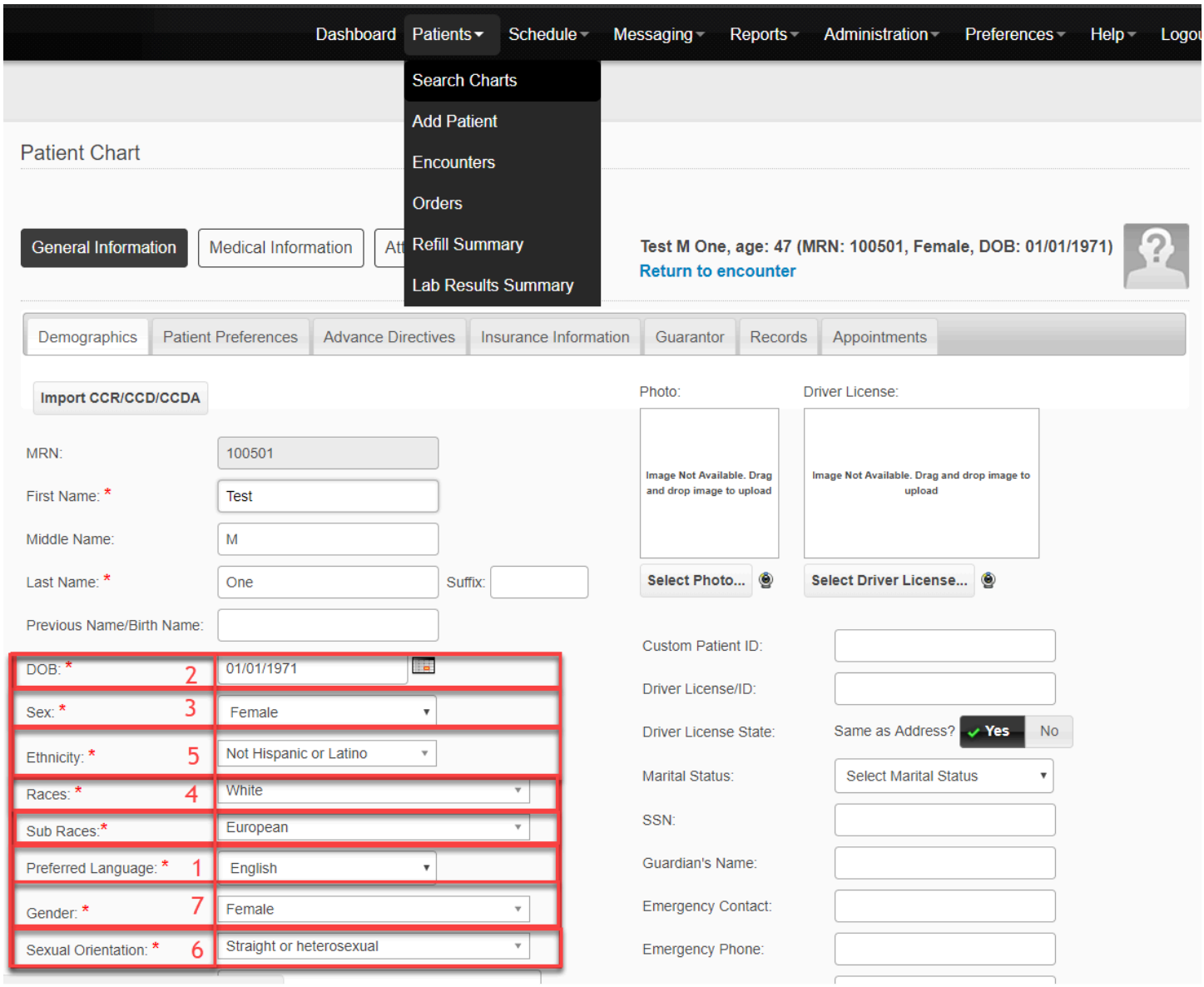
Individual Task Instructions

Have the demonstration URL account open to the login page at the beginning of each participant's session. Provide login credentials and the test patient they will be using for each task.

"For each task, I will read the description to you and say "begin." At that point please perform the task as instructed and say "done" once you believe you have successfully completed the task. If you feel you have not completed the task successfully and will not be able to, please say "done" anyways, and we can discuss in detail your impressions of the task afterwards. We will use the same login information and the same test patient. There will be an appointment on the schedule for this patient. Let's begin."

Task 1: Record Patient Demographic information

Instructions: Record a patient's preferred language, date of birth, birth sex, race, ethnicity, sexual orientation and gender identity as shown in the screen below:



Time Allotted: 180 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patients Menu on Top -> Add Patient -> Enter patient details -> Save

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

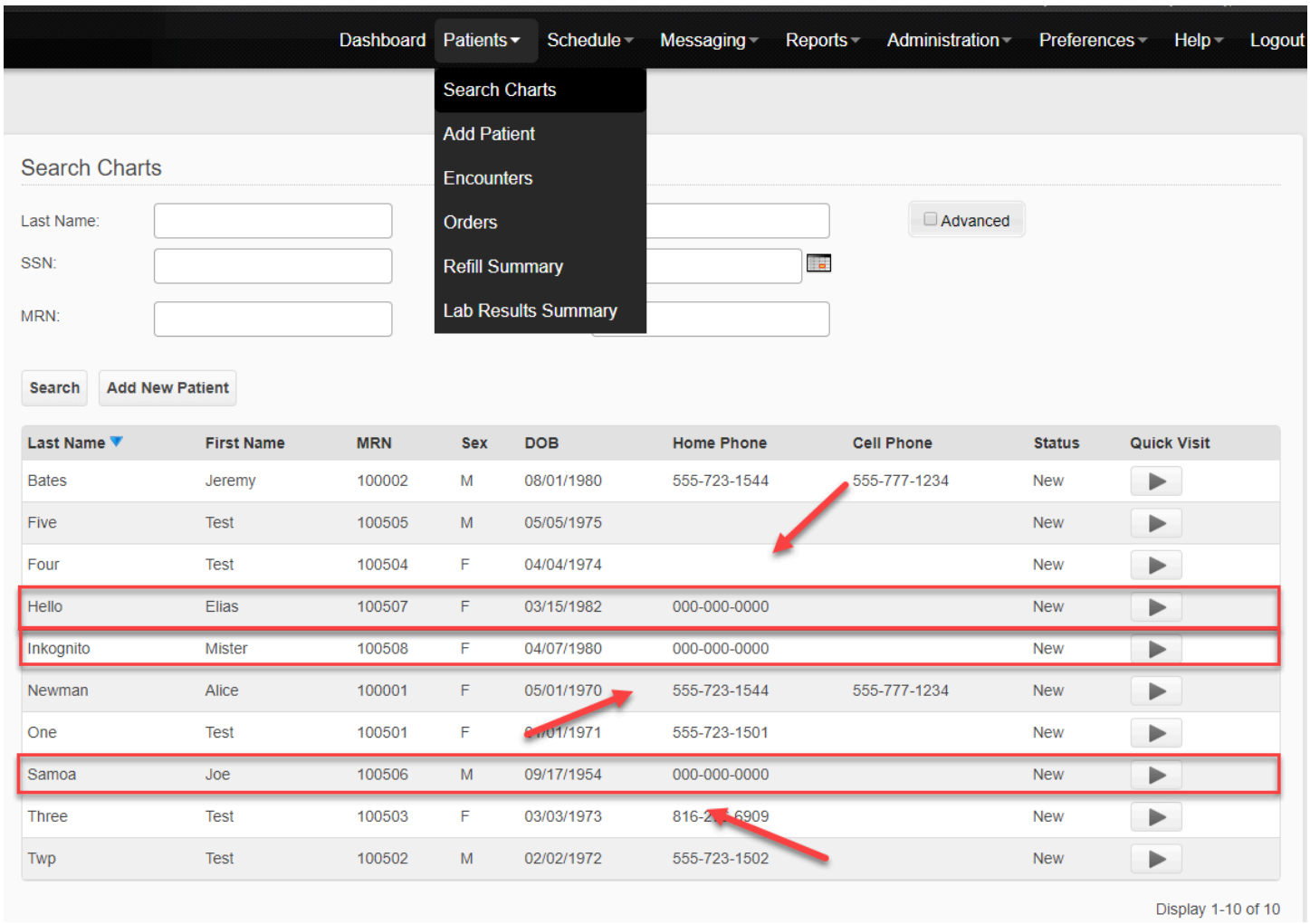
Rating:

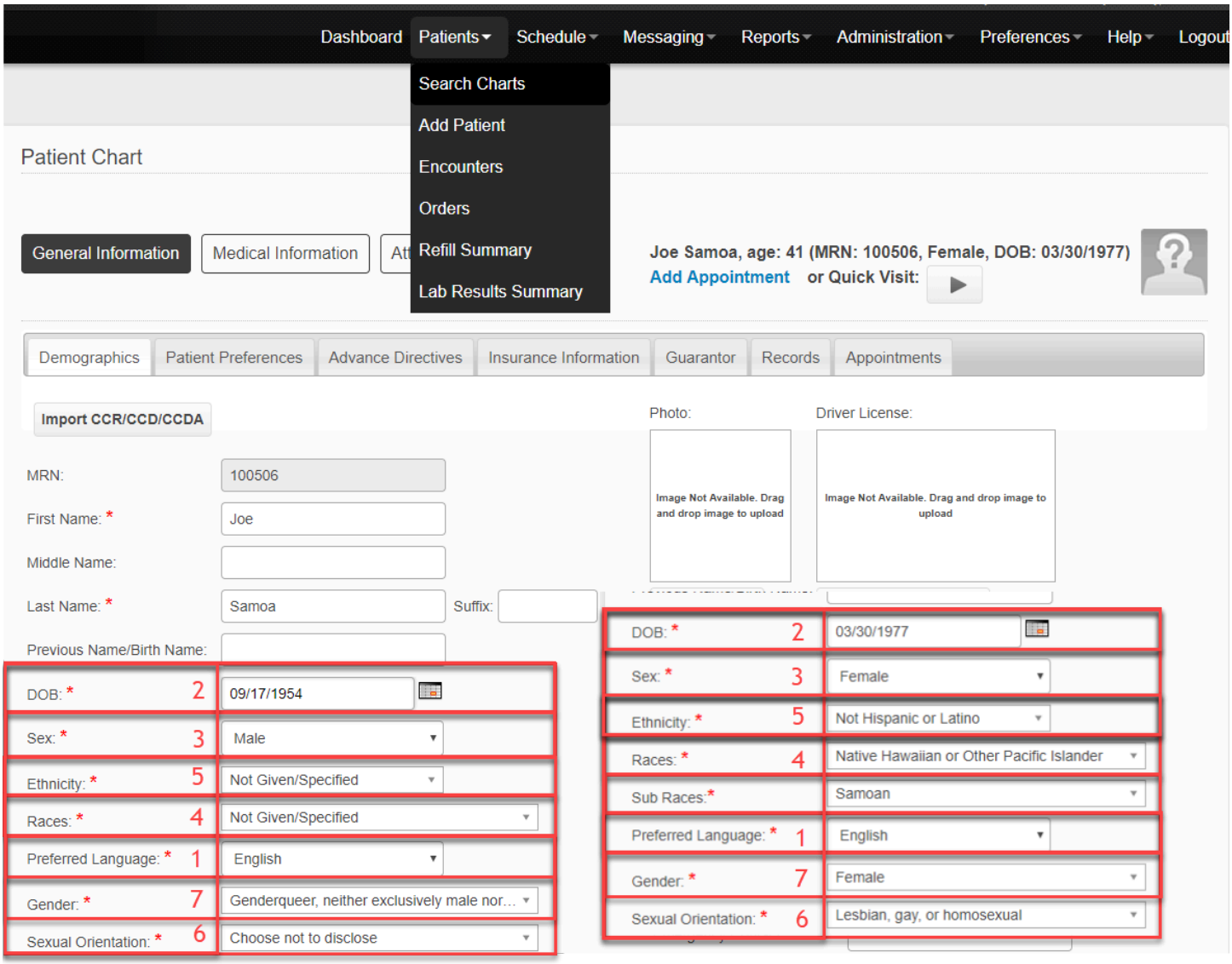
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 2: Modify and Display Patient Demographic Information

Instructions: Search and display same patient's (as previously added) record and modify preferred language, date of birth, birth sex, race, ethnicity, sexual orientation and gender identity as shown in the screen below. Once saved, load the patient chart again to verify the modified information.





Time Allotted: 150 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patients Menu -> Search Charts -> Select Patient -> Enter patient details -> Save -> Load Chart -> Verify

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

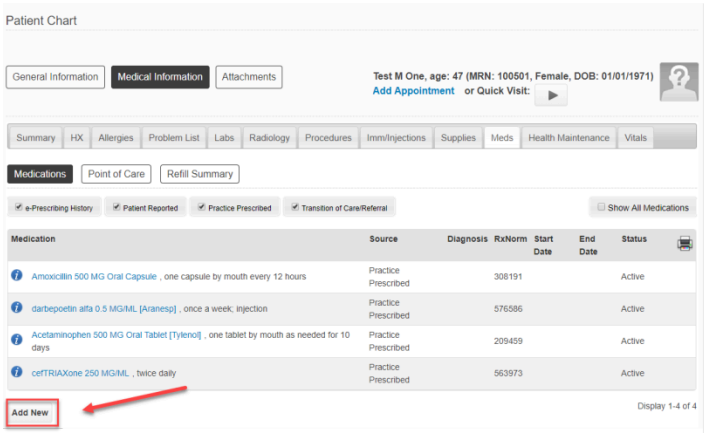
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

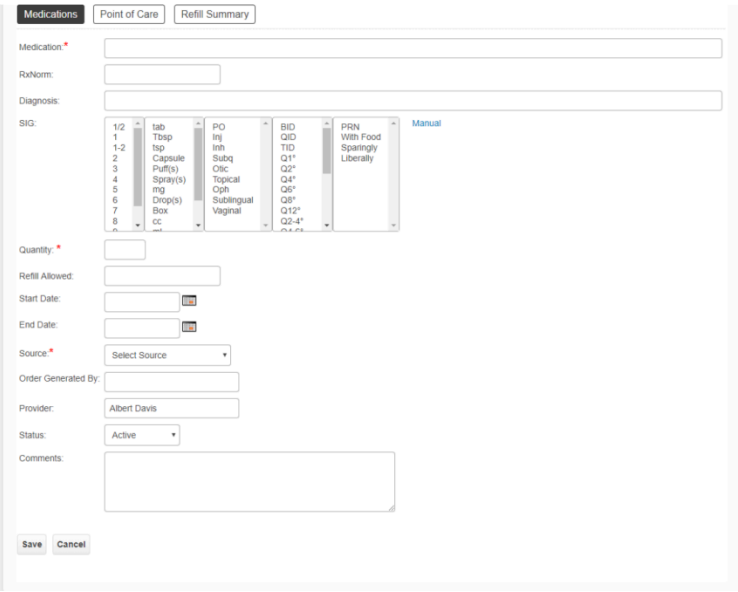
Administrator/Logger Comments:

Task 3: Use CPOE to record Medication

Pre-requisite: Administrator should load patient chart first

Instructions: Record a new medication of “Amoxicillin 500 MG Oral Capsule” and save.





Time Allotted: 60 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patient Chart -> Medical Information -> Meds -> Add New -> Save

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

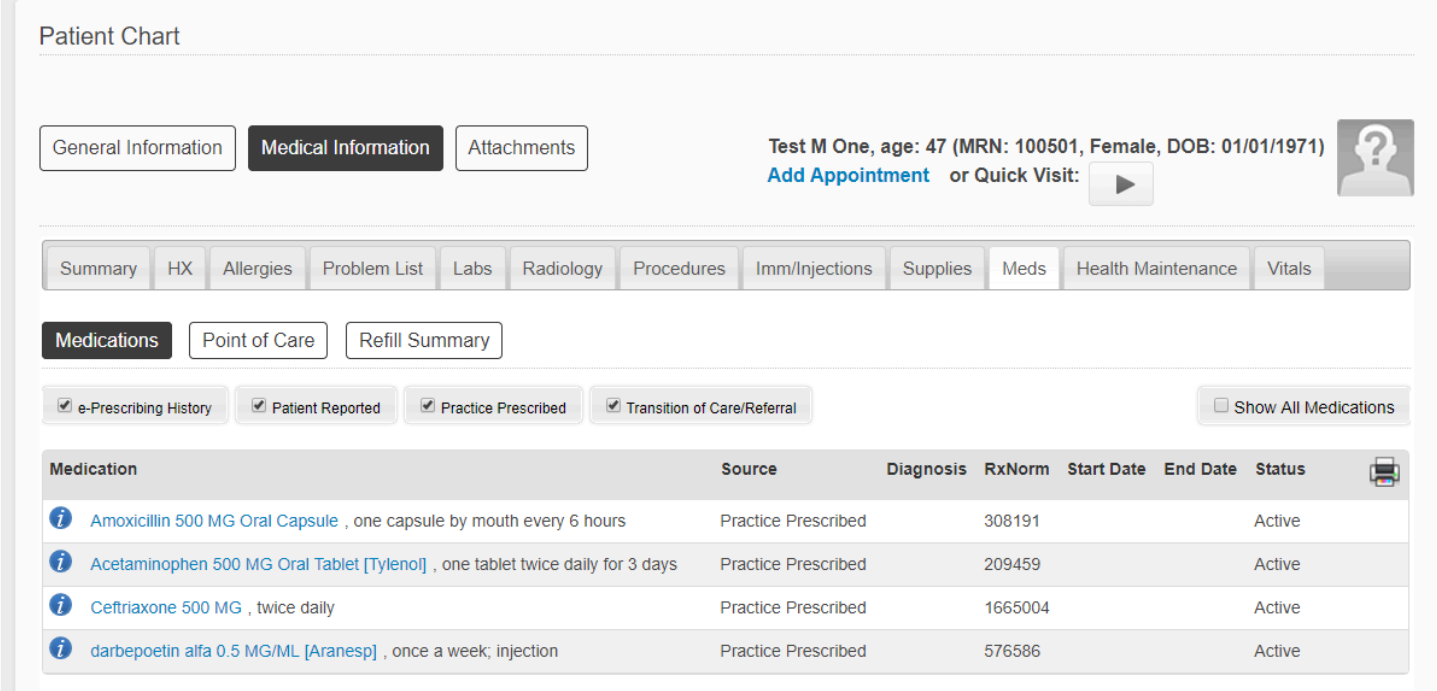
Rating:

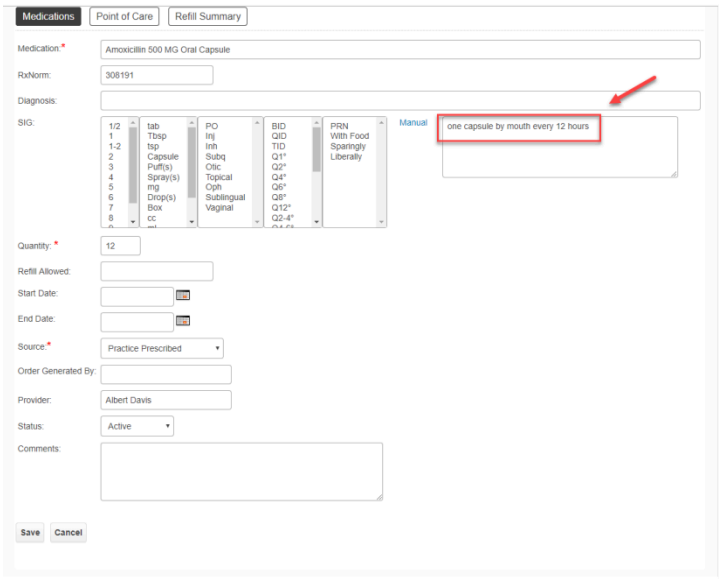
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

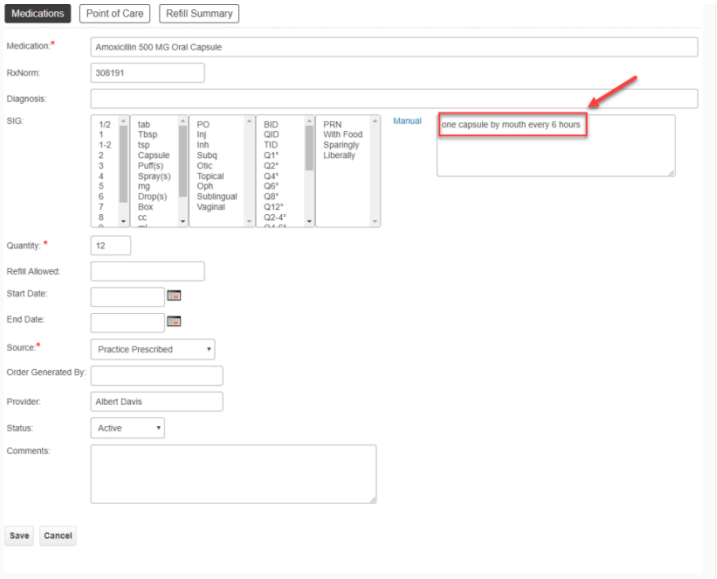
Administrator/Logger Comments:

Task 4: Use CPOE to change and display Medication

Instructions: Modify existing medication of “Amoxicillin 500 MG Oral Capsule” and save.







Time Allotted: 60 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patient Chart -> Medical Information -> Meds -> Click on Med in grid to modify -> Modify Med -> Save -> Display

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

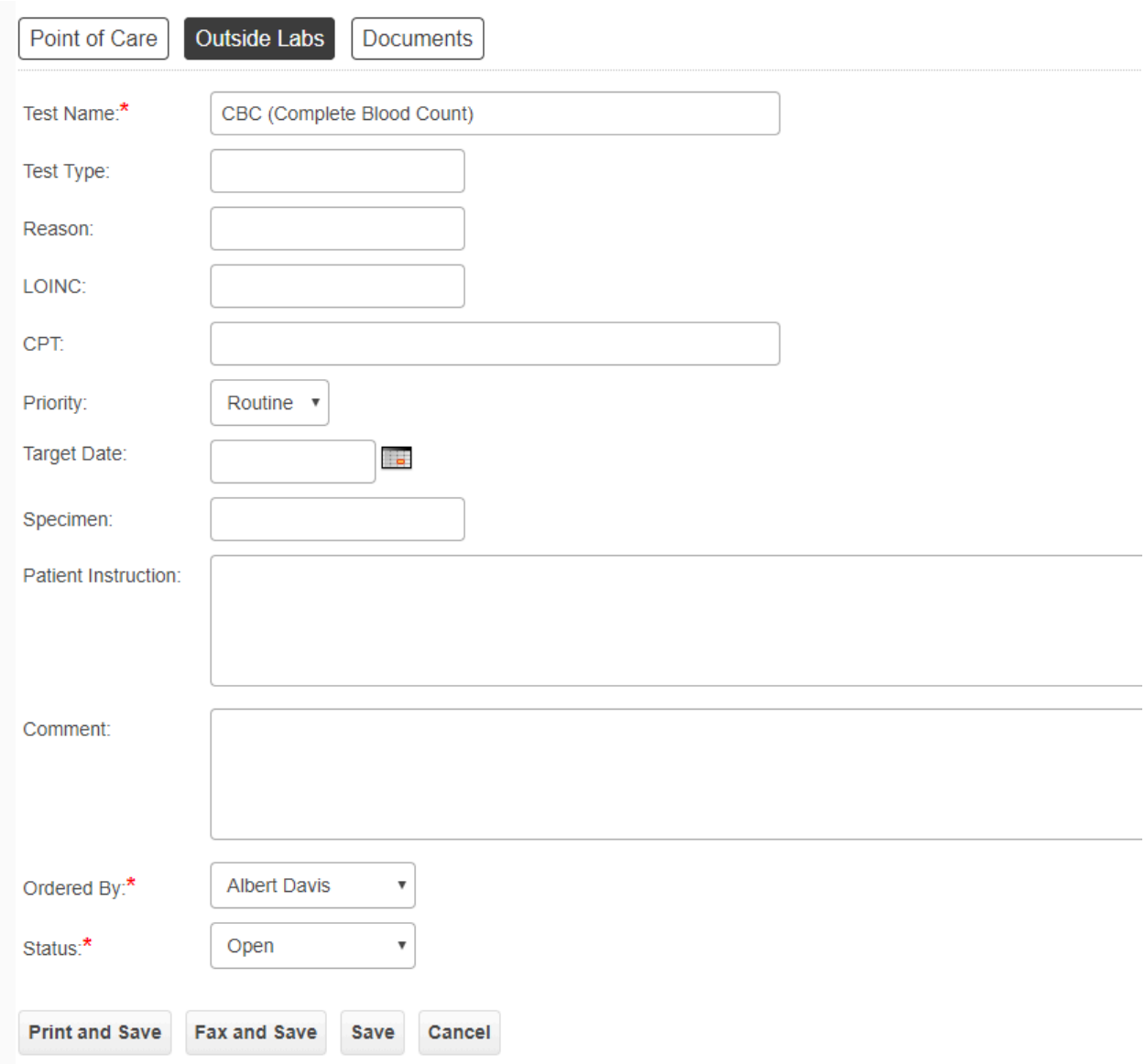
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 5: Use CPOE to record new Lab order

Pre-requisite: Administrator should load patient chart first

Instructions: Order a lab test as “CBC (Complete Blood Count)” and enter minimum details to complete the order and Save.



Time Allotted: 50 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patient Chart -> Medical Information -> Labs -> Outside Labs -> Add New -> Save

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

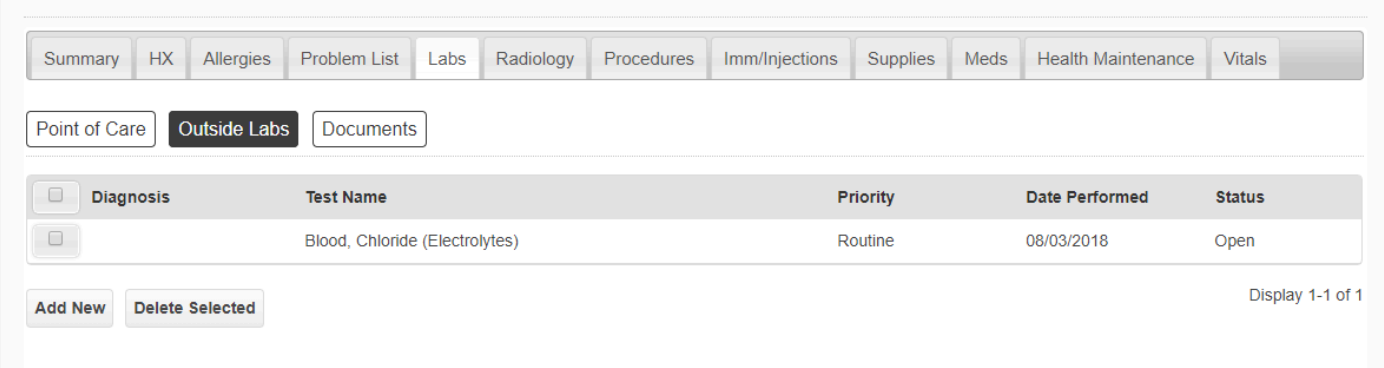
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 6: Use CPOE to change and display Lab order

Pre-requisite: Administrator should load patient chart first

Instructions: Change lab test from "CBC (Complete Blood Count)" to "Blood, Chloride (Electrolytes)" and enter minimum details to modify the order and Save to display the modified order (as shown below).



Time Allotted: 20 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patient Chart -> Medical Information -> Labs -> Outside Labs -> Select Order -> Modify - > Save

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

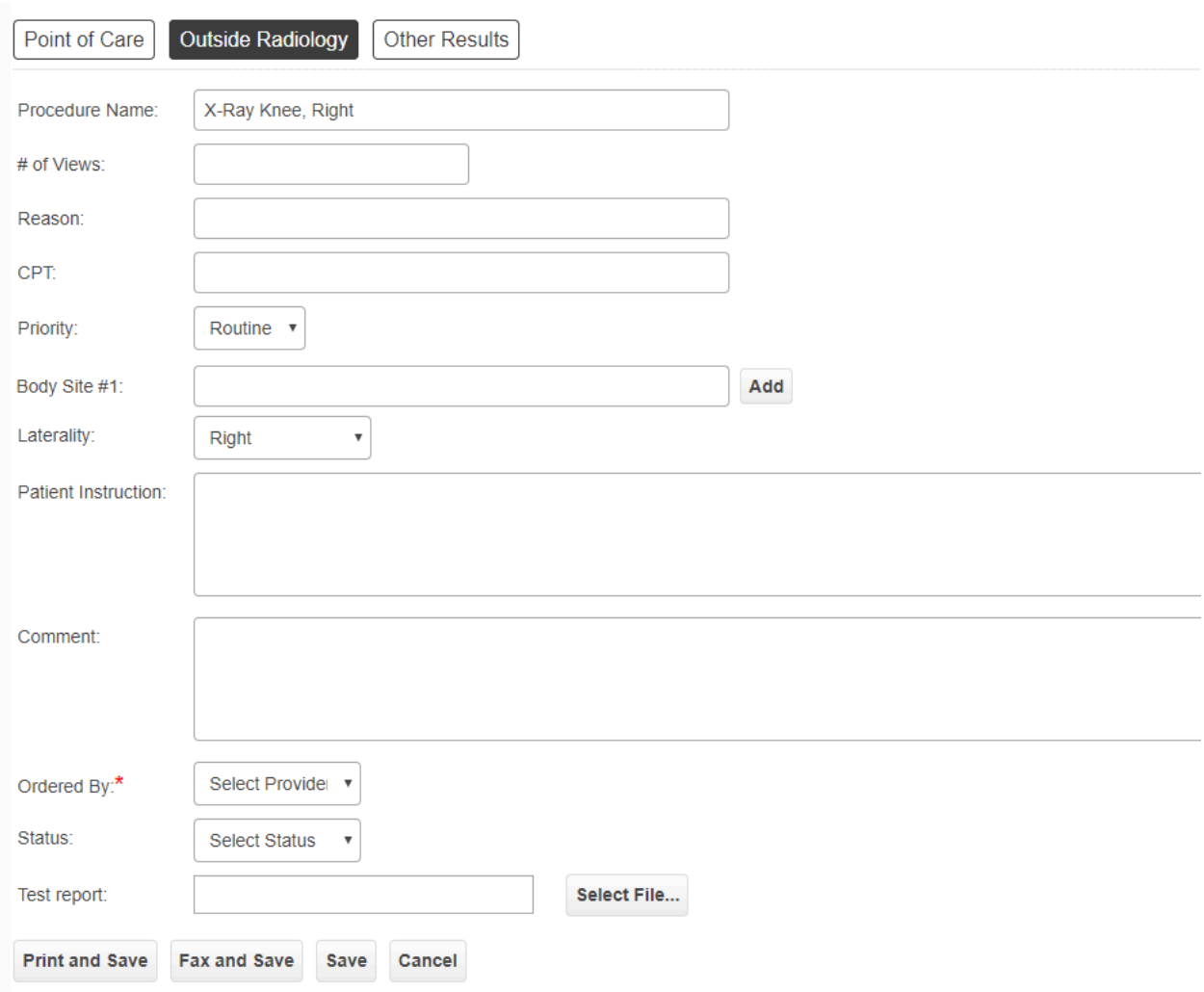
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 7: Use CPOE to record imaging order

Pre-requisite: Administrator should load patient chart first

Instructions: Order an x-ray of patient's right knee as "X-ray Knee, Right" and enter minimum details to complete the order and Save.



Time Allotted: 50 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patient Chart -> Medical Information -> Radiology -> Outside Radiology -> Add New -> Save

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

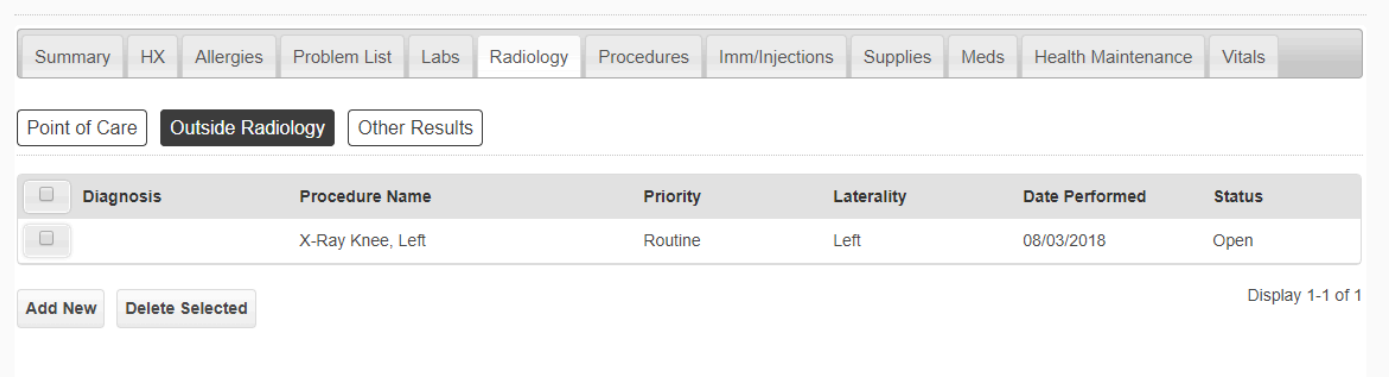
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 8: User CPOE to change and display imaging order

Pre-requisite: Administrator should load patient chart first

Instructions: Modify an x-ray of patient's right knee as "X-ray Knee, Right" to left knee and enter minimum details to modify the order and Save to display the modified order (as shown below).



Time Allotted: 30 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patient Chart -> Medical Information -> Radiology -> Outside Radiology -> Select Order -> Modify -> Save

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

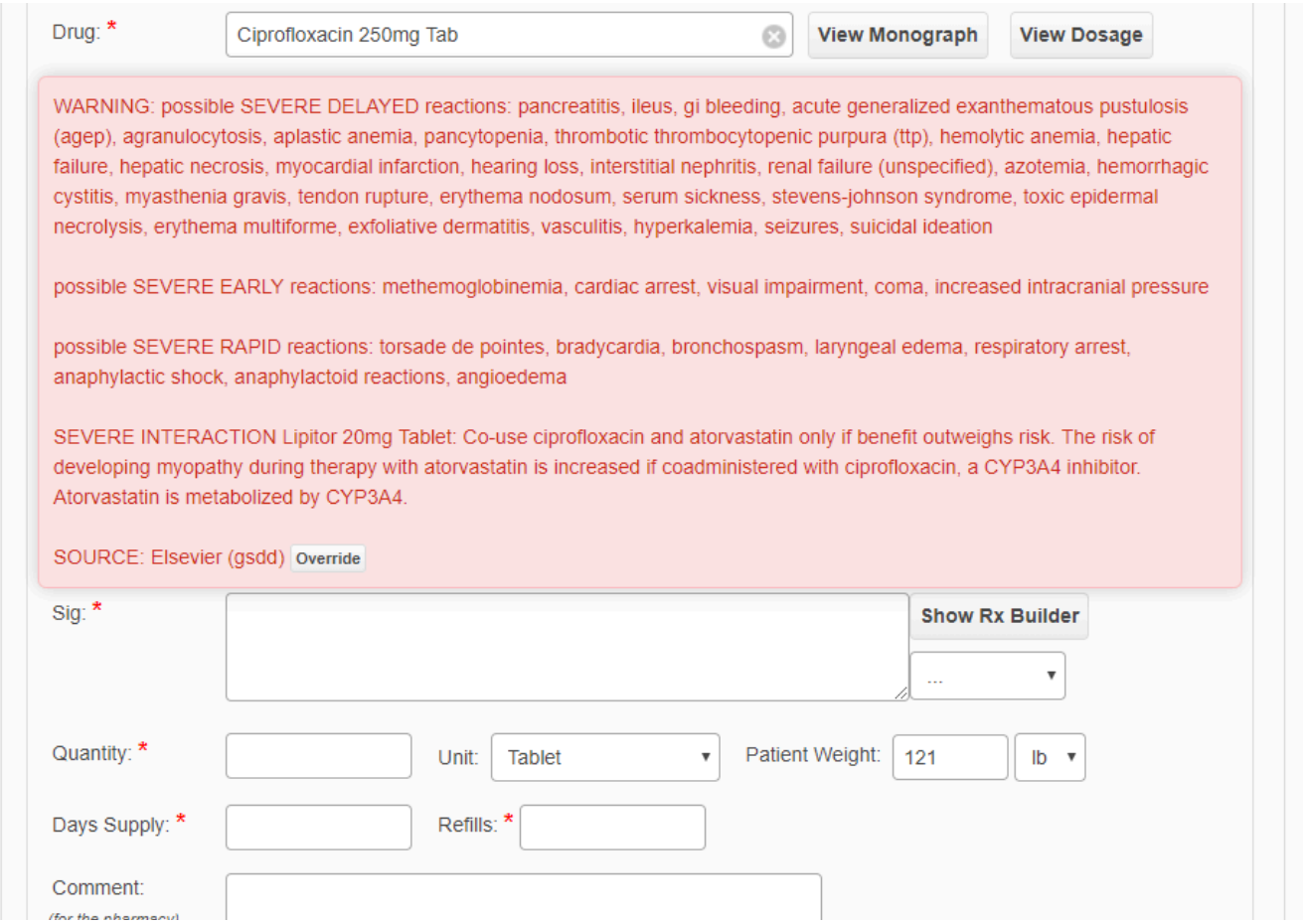
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 9: Prescribe a new medication that would be contraindicated to patient allergy (drug-allergy interaction)

Pre-requisite: Administrator should load patient chart first and patient already has a drug allergy added as "warfarin".

Instructions: The physician tries to prescribe “Ciprofloxacin 250mg Tab”, a drug interaction alert will appear (as shown in screenshot).



Time Allotted: 30 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patient Encounter -> Meds & Allergy-> New e-RX -> Add Drug Detail

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

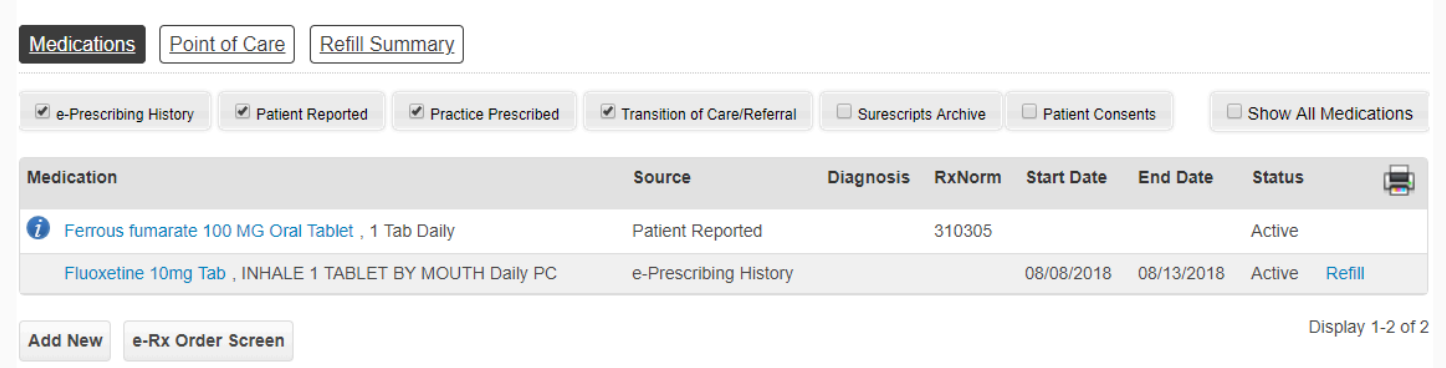
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

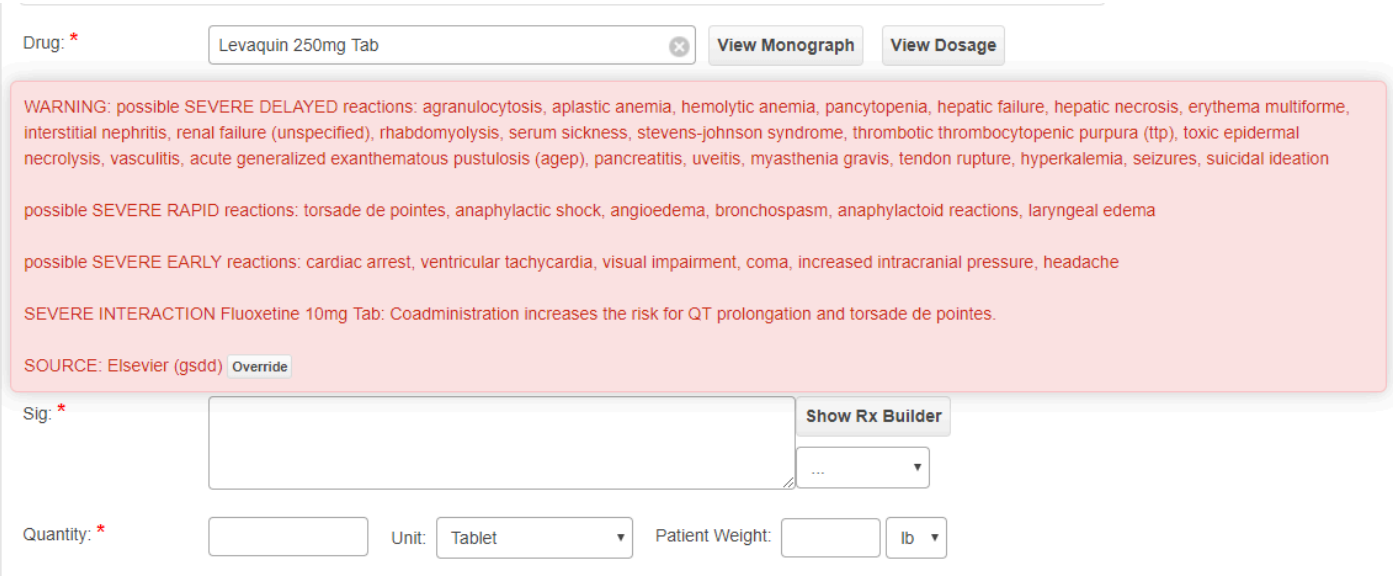
Administrator/Logger Comments:

Task 10: Prescribe a medication that would be contraindicated to the patient medication (drug-to-drug interaction)

Pre-requisite: Administrator should load patient chart first and patient already has a medication added as "Ferrous Fumarate".

Instructions: The physician tries to prescribe "Levaquin 250mg Tab", a drug interaction alert will appear (as shown in screenshot).





Time Allotted: 30 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patient Encounter -> Meds & Allergy-> New e-RX -> Add Drug Detail

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

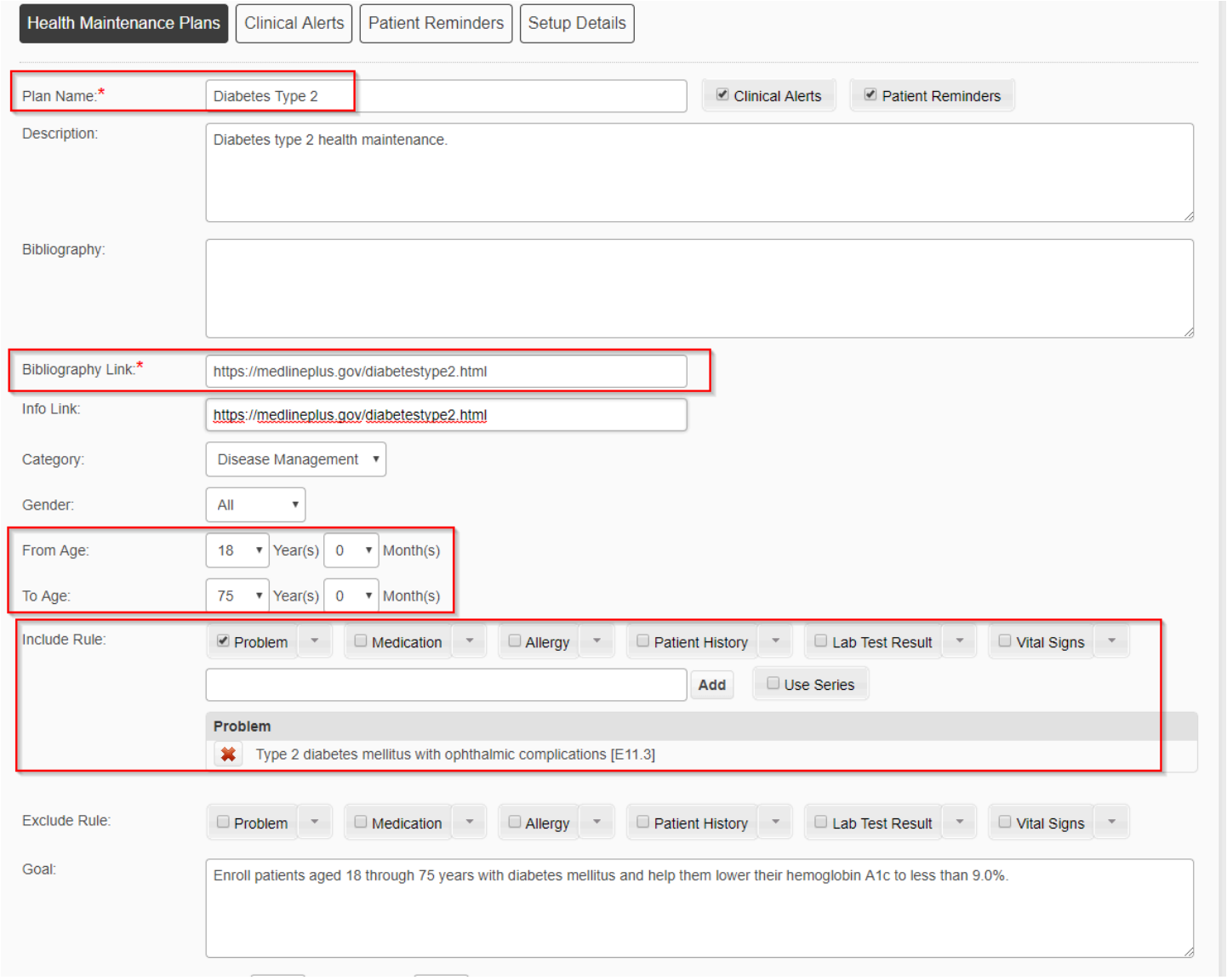
Rating:

Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 11: Configure a health maintenance plan for each or a combination of the following: problem list, medication list, demographics, and/or lab tests and results, vital signs and a combination of two.

Instructions: From the dashboard, access the health maintenance module of the administration menu and create a new plan for patients with a diagnosis of diabetes, and include an action plan to have their Hemoglobin A1c drawn every 3 months. Activate this plan for all patients.



Time Allotted: 180 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Administration Menu -> Health Maintenance -> Health Maintenance Plans -> Add Details (per screenshot) -> Include Rule -> Set Goal -> Set Action Plan -> Save

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

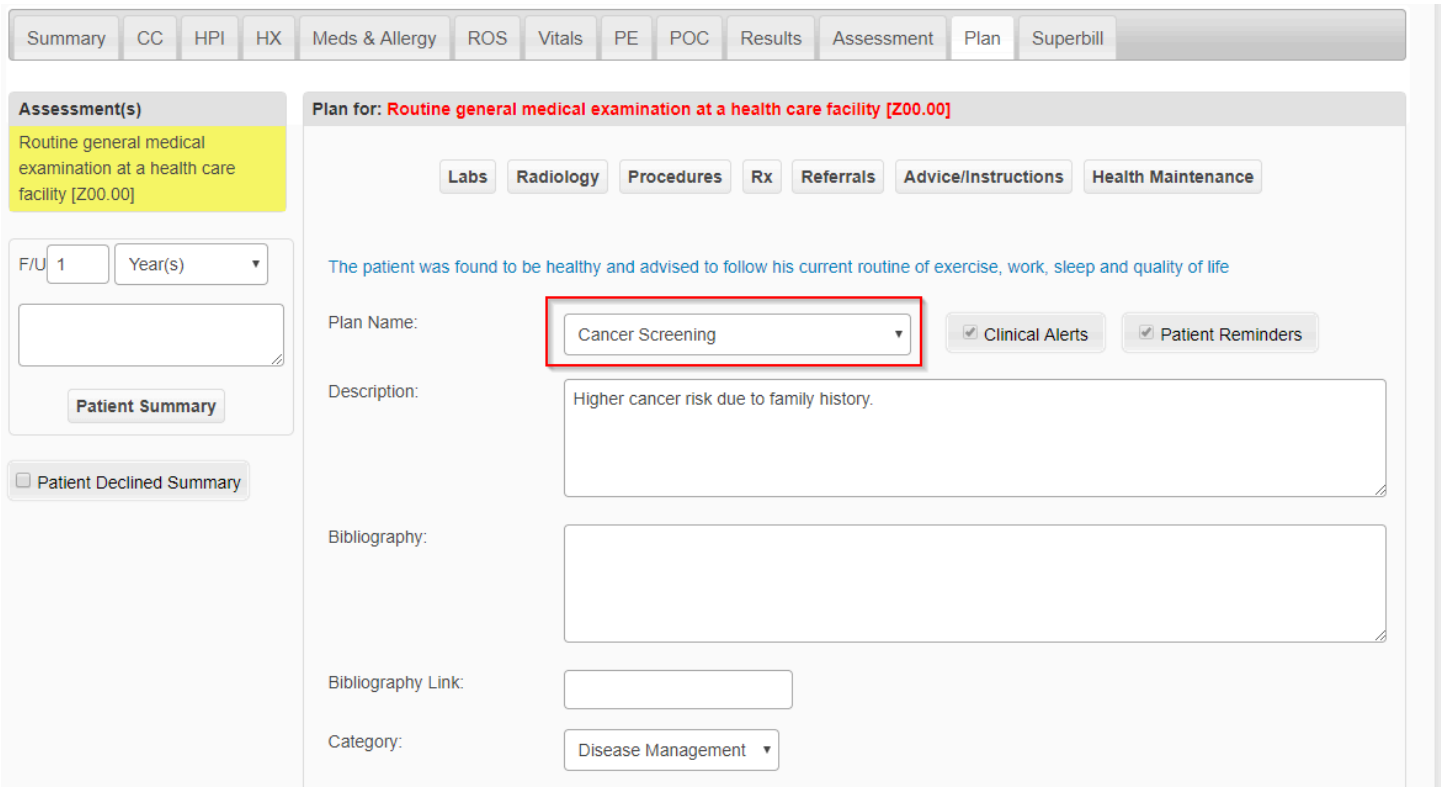
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

<u>Task 12: Enroll a patient in one health maintenance plan based on a diagnosis in their active problem list</u>

Pre-requisite: Load patient chart and enter into patient encounter.

Instructions: Inside the encounter note, go to the plan tab and select the Health Maintenance Plan "Cancer Screening", and enroll the patient in this plan.



Time Allotted: 50 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patient Encounter -> Plan Tab -> Health Maintenance -> Select Plan -> Save

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

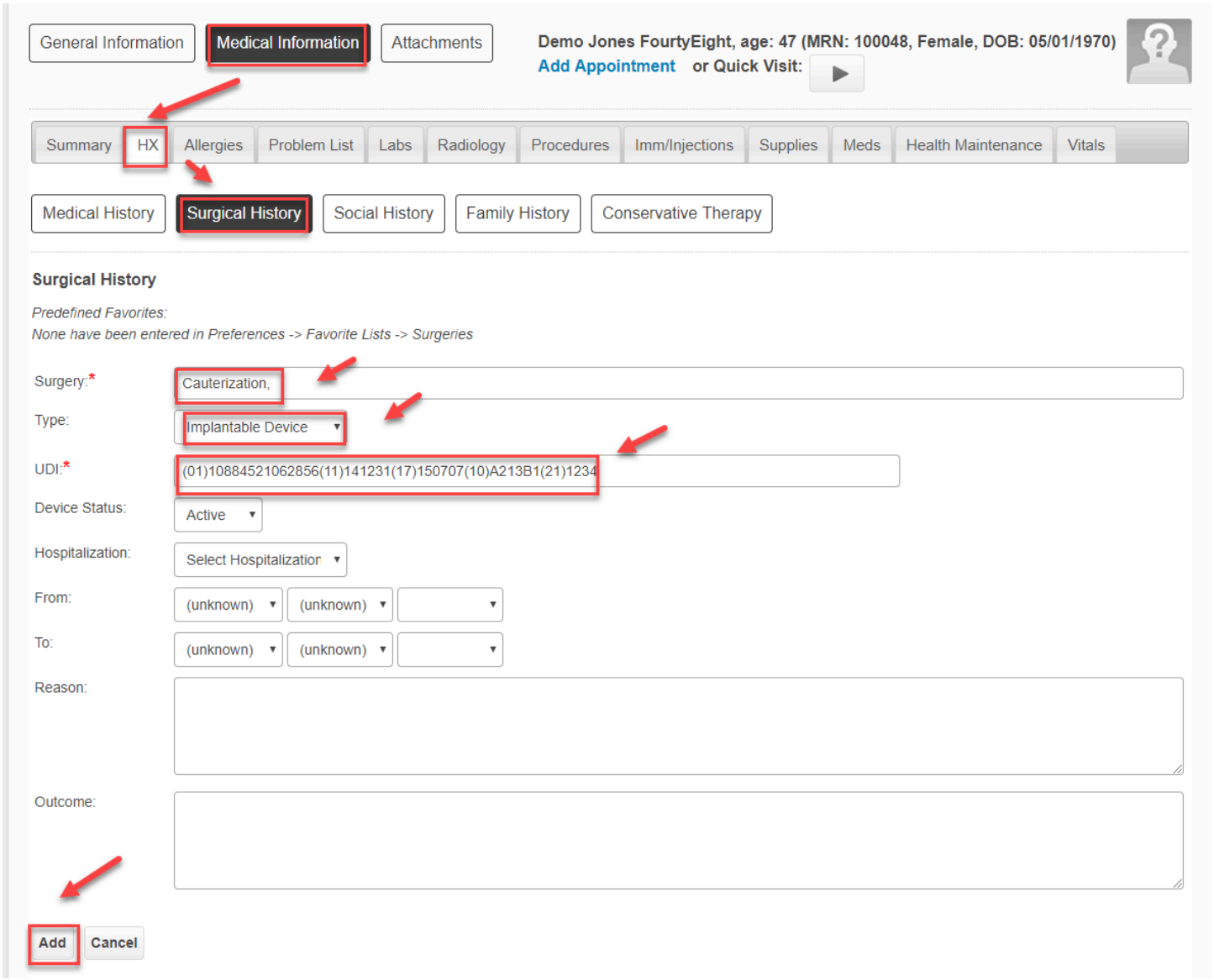
Rating:

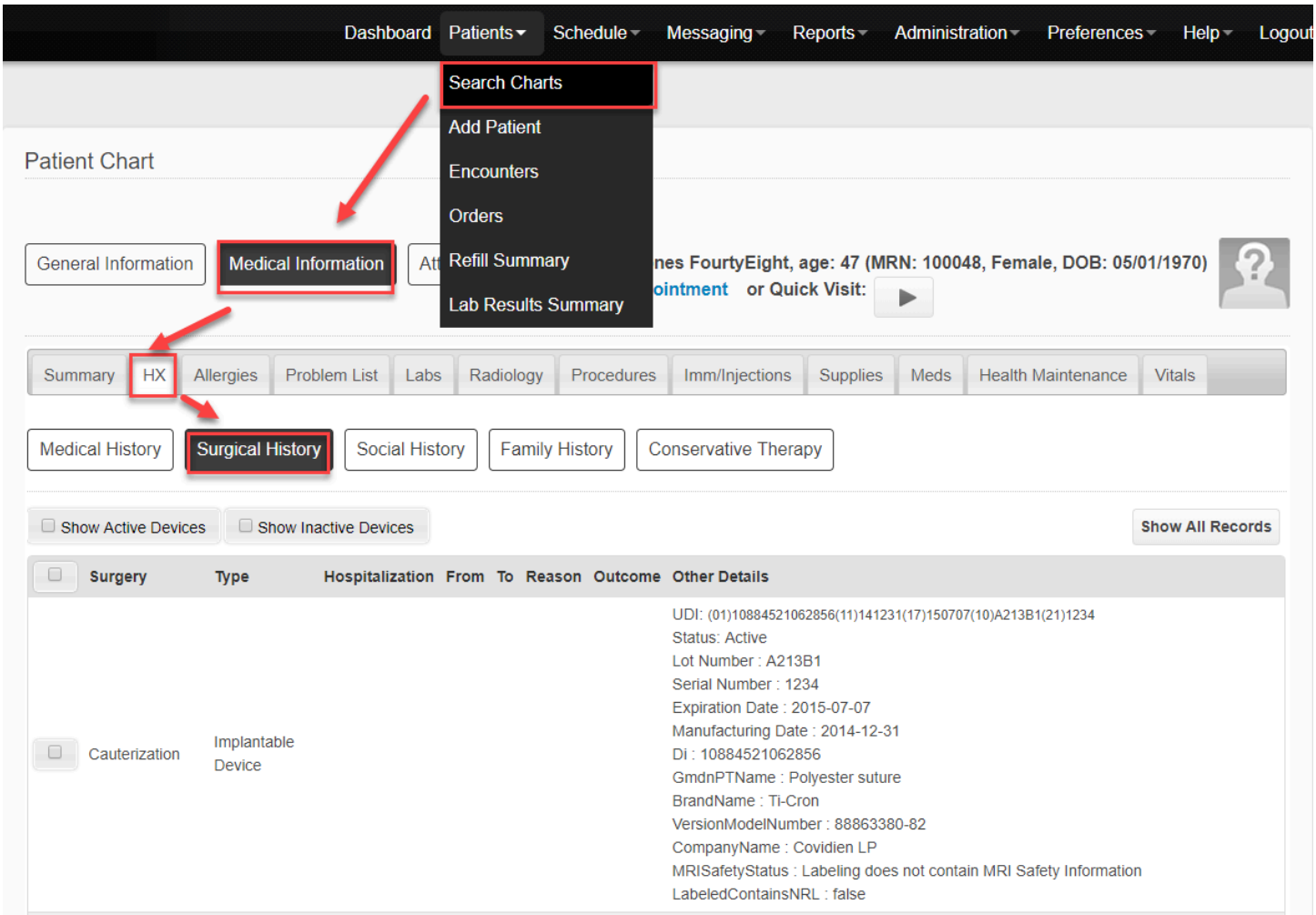
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 13: Record and Parse a UDI in implantable device list

Instructions: Add a new implantable device list into patient chart. Add surgery as “Cauterization” and UDI “(01)10884521062856(11)141231(17)150707(10)A213B1(21)1234”. Click “Add” to save and parse the device information as shows in second screenshot. Review device description, identifiers, and attributes as shown in second screenshot below.





Time Allotted: 60 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patient Chart -> Medical Information -> HX -> Surgical History -> Add New -> Add Details -> Save -> View

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

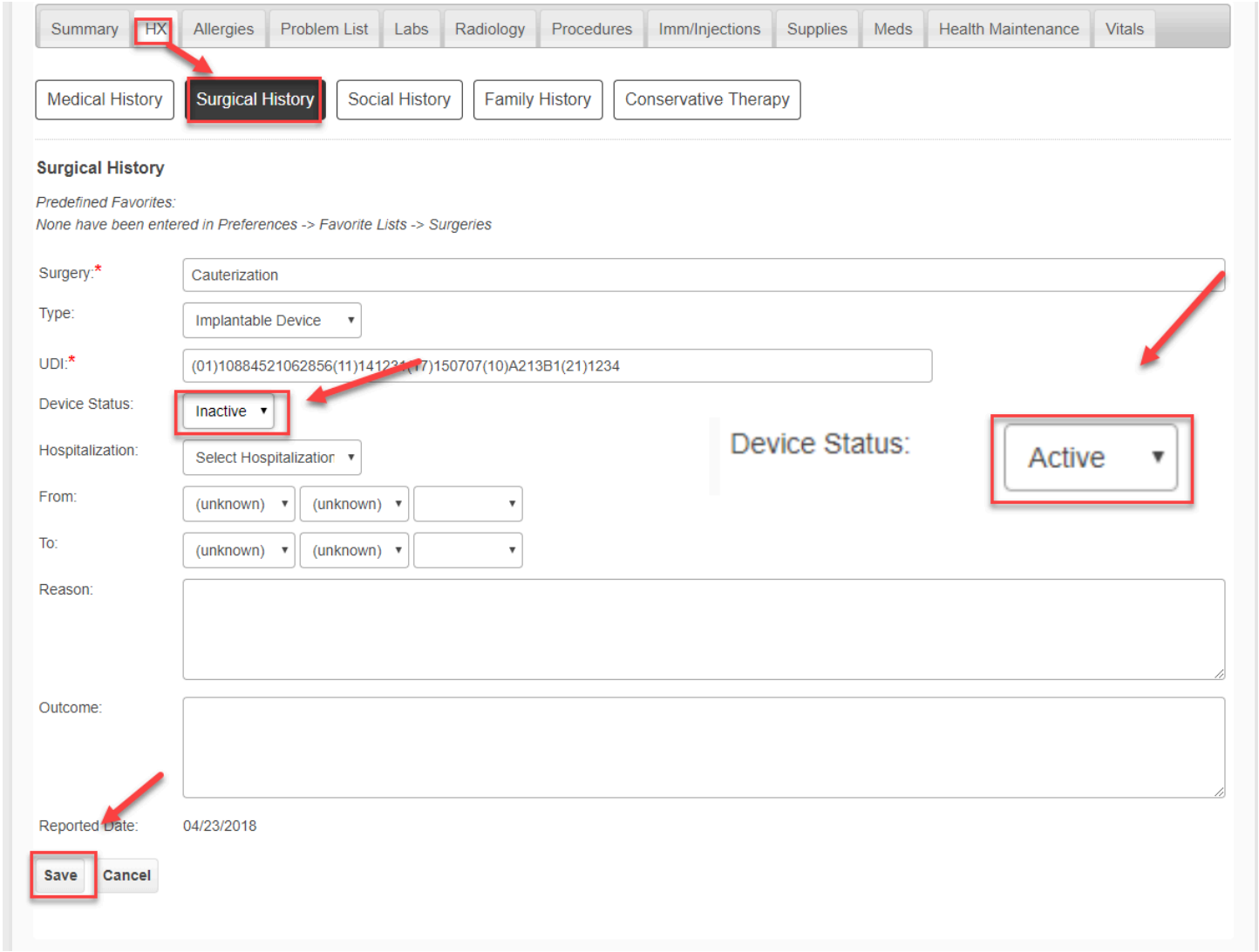
Rating:

Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 14: Access UDI device information and Change device status

Instructions: The implanted device that you entered in the previous task is expired and should no longer classify as "active" Modify the information for the Bone Void Filler so that the Device Status is set to INACTIVE.



Time Allotted: 30 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patient Chart -> Medical Information -> HX -> Surgical History -> Select Device -> Change Device Status -> Save

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

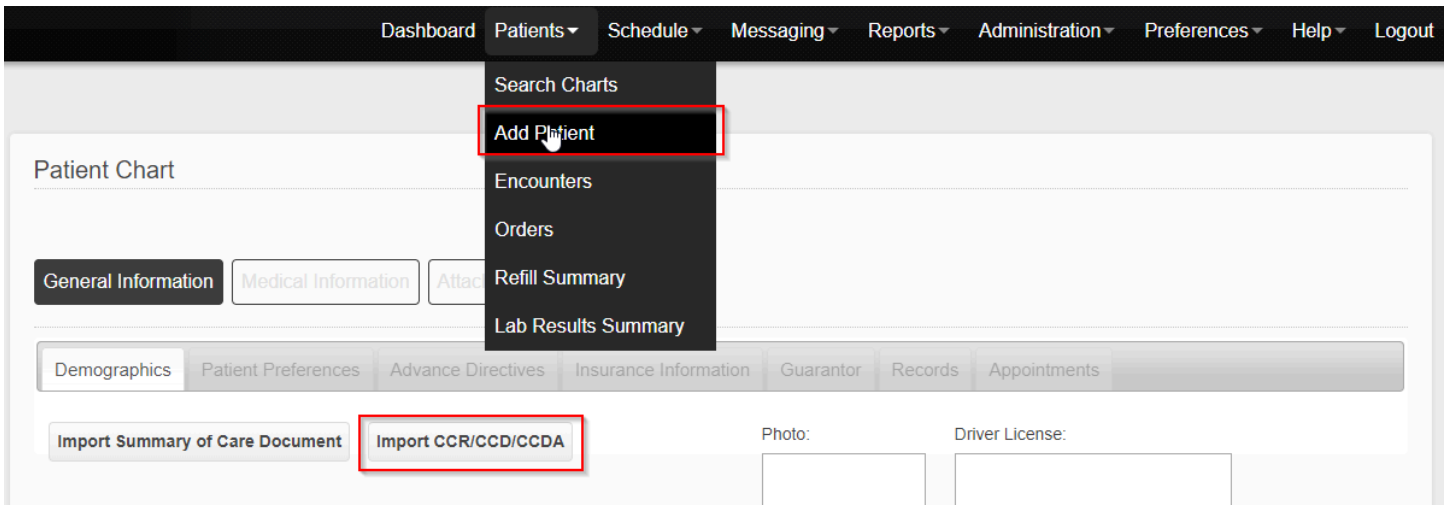
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

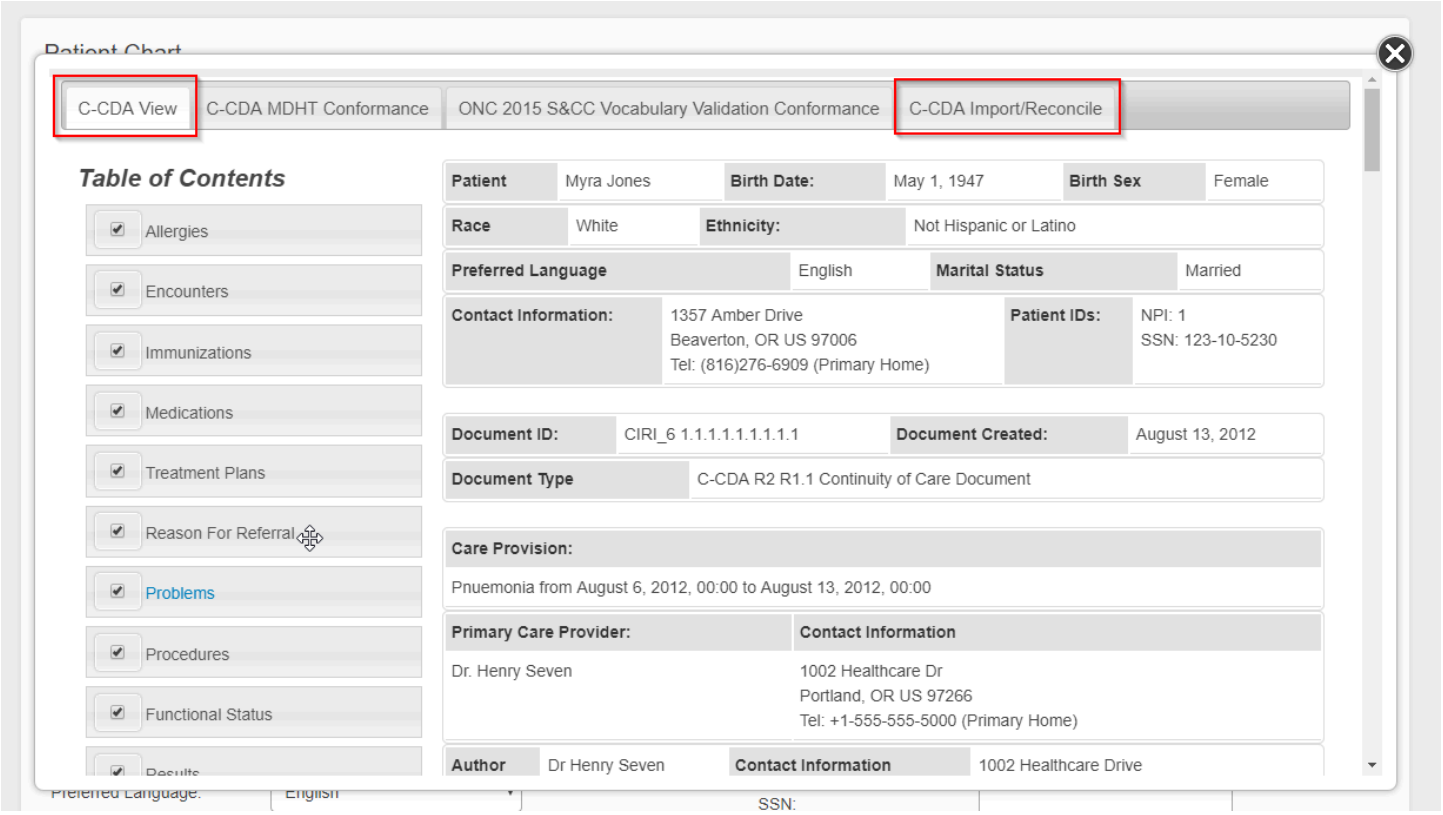
Administrator/Logger Comments:

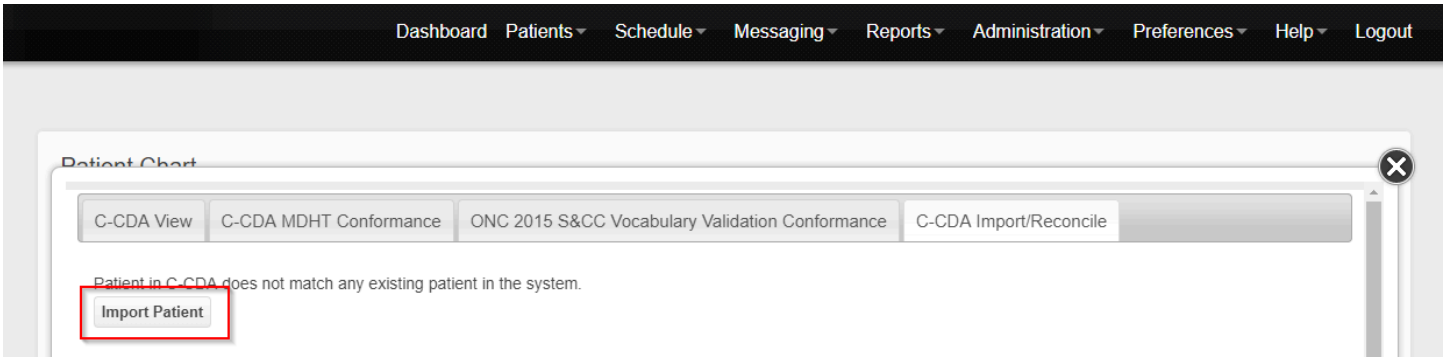
Task 15: Incorporate CCDA to create new patient

Prerequisite: All the users are already give patient CCDA file to import.

Instructions: You received a patient CCDA file from a referring doctor. Patient is not already registered with OneTouch so you are going to import this CCDA to create patient record first (as shown in screenshots below).







Time Allotted: 180 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patients Menu -> Add Patient -> Import CCR/CCD/CCDA -> Choose CCDA File -> View Patient Information -> Go to CCDA Import/Reconcile Tab -> Import Patient -> Patient Chart

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

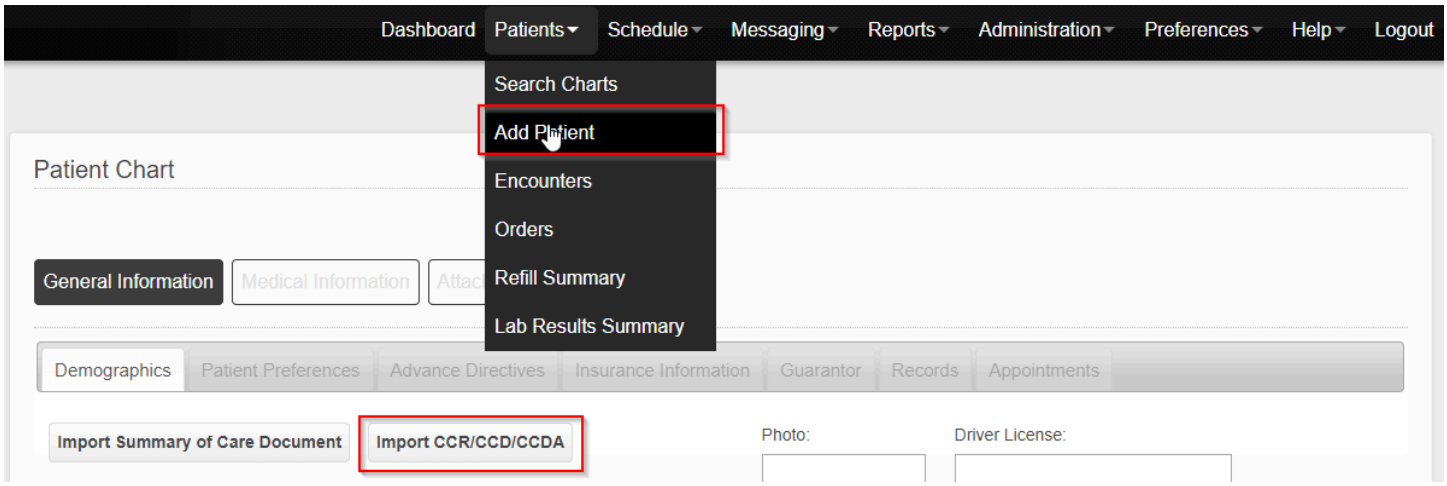
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

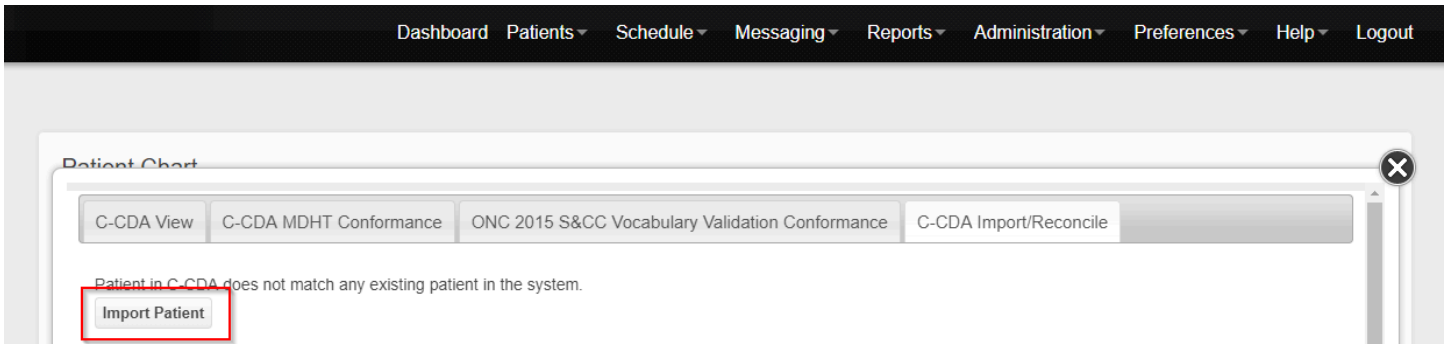
Administrator/Logger Comments:

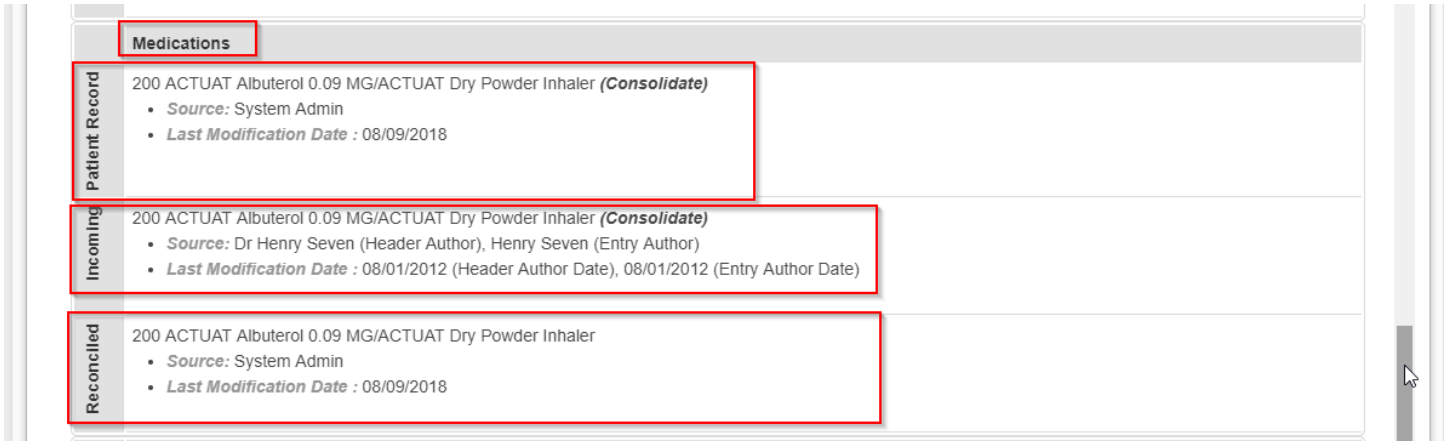
Task 16: Conduct reconciliation of Medication, Allergies and Problems

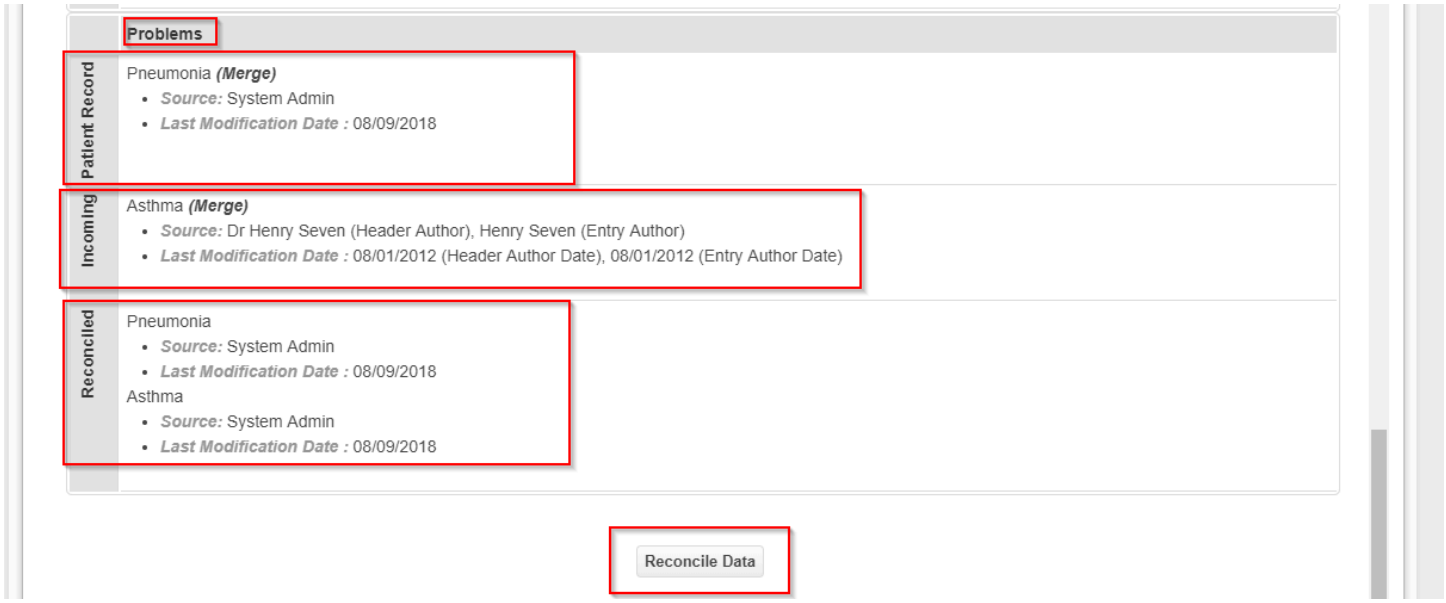
Prerequisite: All the users are already give patient CCDA file to import and reconcile.

Instructions: You created a patient record from CCDA file in previous test. Patient is now already already registered with OneTouch so you are going to import a new CCDA which you recently received from another referring doctor. You are going to import and reconcile Allergies, Medications and Problem for this patient (as shown in screenshots below).









Time Allotted: 180 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patients Menu -> Add Patient -> Import CCR/CCD/CCDA -> Choose CCDA File -> View Matching Patient Information -> Go to CCDA Import/Reconcile Tab -> Review Allergies, Medication and Problems -> Reconcile Data -> Patient Chart

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

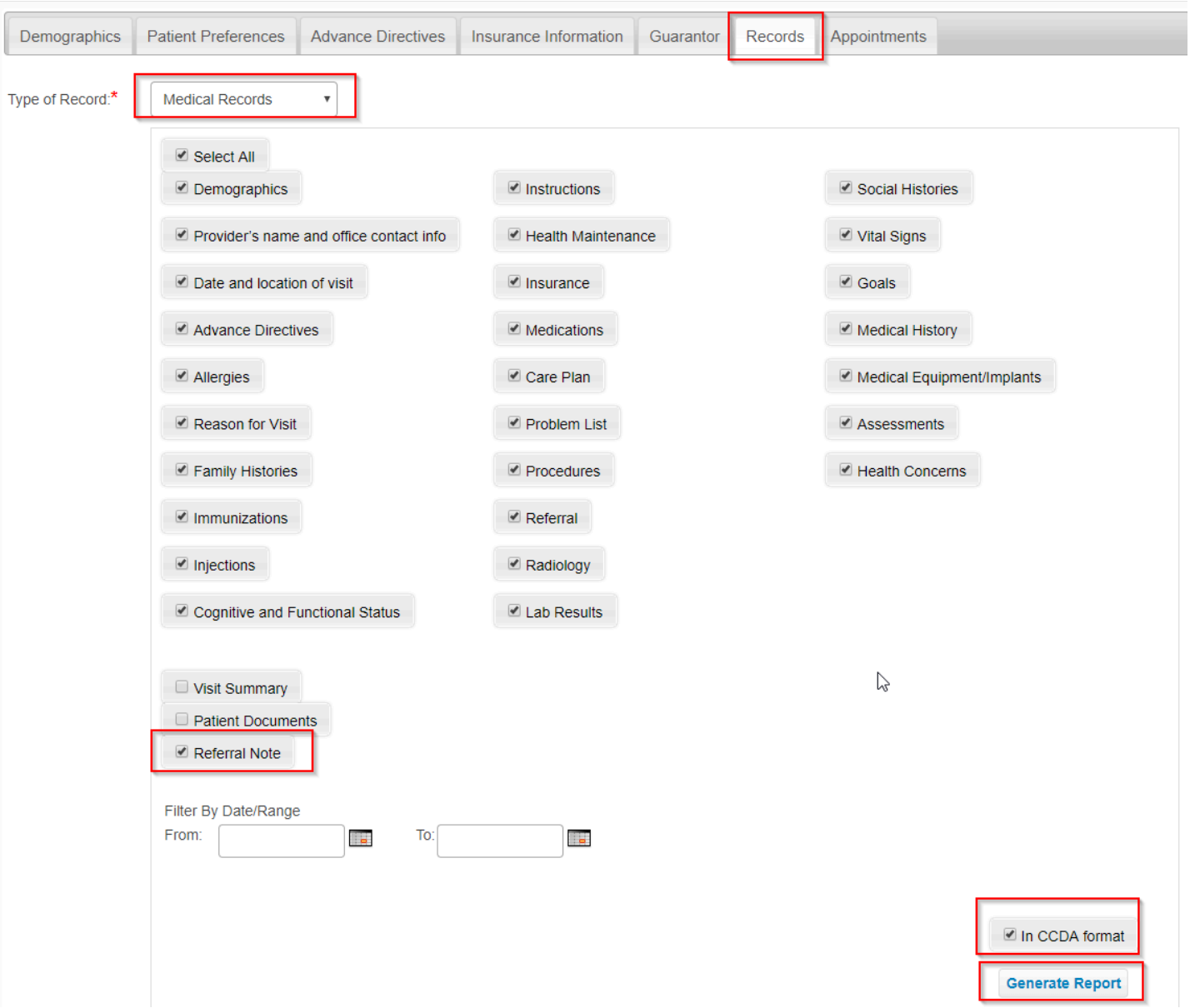
Rating:

Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

<u>Task 17: Generate new CCDA with reconciled data</u>

Instructions: You created and reconciled patient record from CCDA file in previous two tests. Now you are going to export the patient reconciled data in CCDA format to refer to another doctor (as shown in screenshots below).



Time Allotted: 180 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patients Menu -> Search Charts -> Select Patient -> Patient Chart -> Records Tab -> Choose Medical Records -> Select Referral Note -> Check "In CCDA Format -> Generate Report -> Download CCDA

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

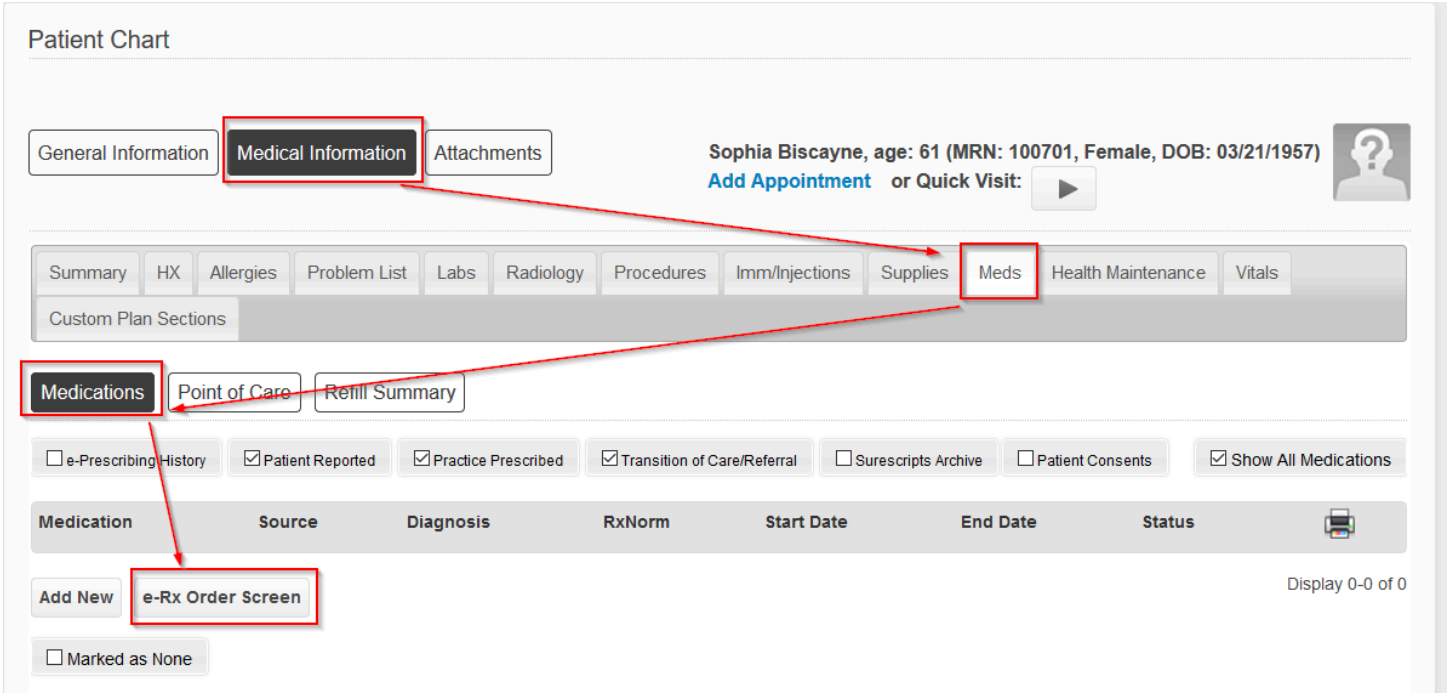
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 18: Create a new Prescription

Pre-requisite: Administrator should load patient chart first

Instructions: Create a new prescription for patient with diagnosis as “Angina pectoris with documented spasm [I20.1]”. Prescribe medicine as “Procardia XL 30 mg tab”, quantity “53”, Supply as “30” with refills “0”. Select the pharmacy as already selected in Pharmacy Preferences of the patient and send. The four scren shots below shows all the desired steps to take to complete the process.



Prescriber: Robert Crawley

Diagnosis: Angina pectoris with documented spasm [I20.1]

Drug preference list

None

Drug: * Procardia XL 30mg Tab **View Monograph** **View Dosage**

Sig: * Take 1 tablet a day by mouth for seven days, then take 2 tablets by mouth once a day. **Show Rx Builder**

Quantity: * 53 Unit: Tablet Patient Weight: lb

Days Supply: * 30 Refills: * 0

Comment: *(for the pharmacy)*

Optional: ☐ Compound (free form Rx--NOT a controlled substance) ☑ Dispense as written ☐ Save as My Favorite

Add to Queue

Add to Queue

Pending Medication(s) - Sophia Biscayne, 991 Monroe Avenue, Port Charlotte, FL, 33952, 941-201-1223

08/11/2018 20:08 PM Procardia XL 30mg Tab - *Take 1 tablet a day by mouth for seven days, then take 2 tablets by mouth once a day.*
53 Tablet, 30 Days Supply, 0 Refills, Dispense as written
Diagnosis: Angina pectoris with documented spasm [I20.1]
Prescriber: Robert Crawley - 718-392-1212

Pharmacy preference list

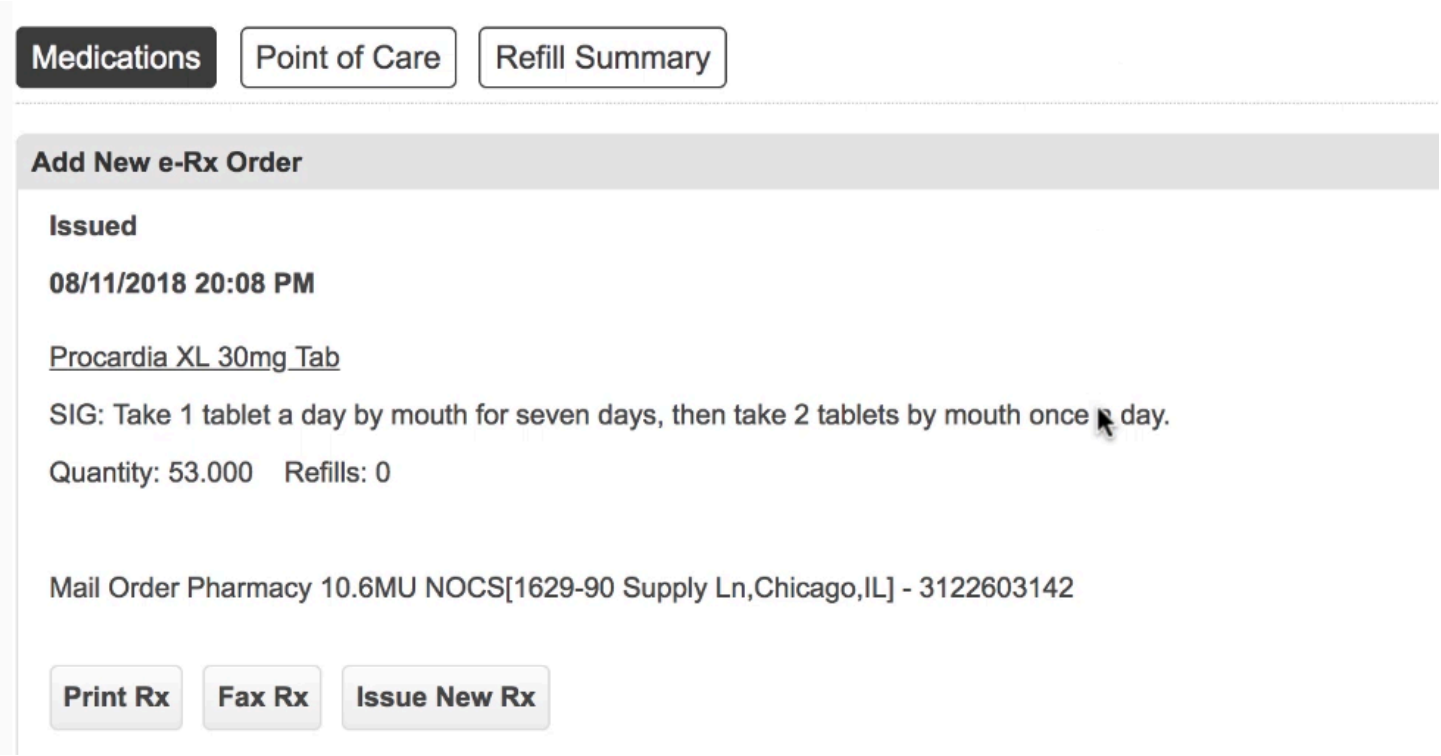
Mail Order Pharmacy 10.6MU NOCS[1629-90 Supply Ln, Chicago, IL] - 3122603142 1629-90 Supply Ln, Chicago, IL, 60622 3122603142 *last used:* 2018-05-03 16:00:17

Sent From: * Clinic One1

Issue Via: * Electronic

Issue To: * Mail Order Pharmacy 10.6MU NOCS[1629-90 Supply Ln,Chicago,IL] - 3122603142

Issue Queued **Cancel**



Time Allotted: 180 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patient Chart -> Medical Information -> Meds -> e-Rx Order Screen-> Enter Details (Diagnosis, Drug, Sig, Quantity, Days Supply, Refill , Dispense as written)->Add to Queue-> Enter Pharmacy Details -> Issue Queued -> Review Order

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

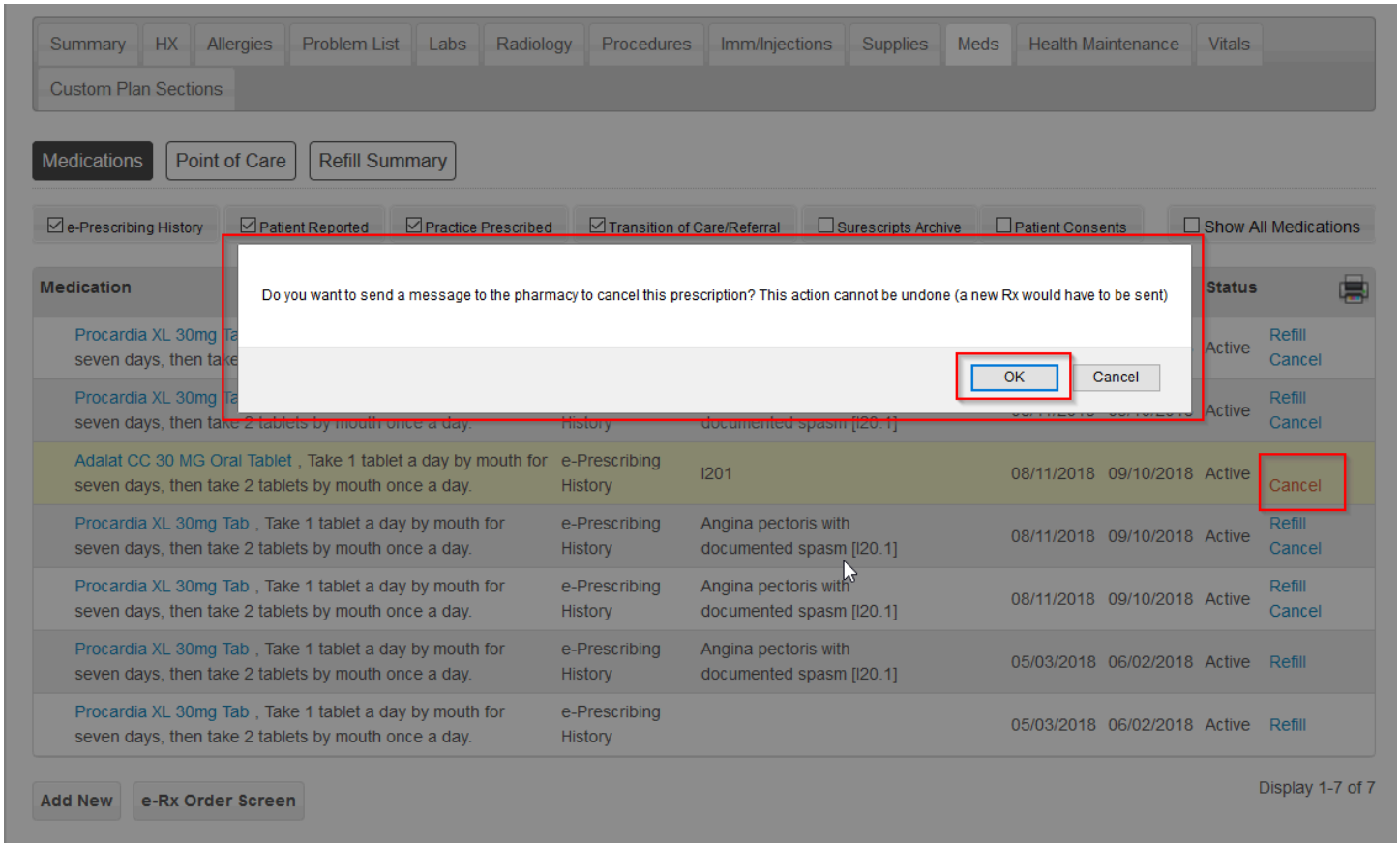
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

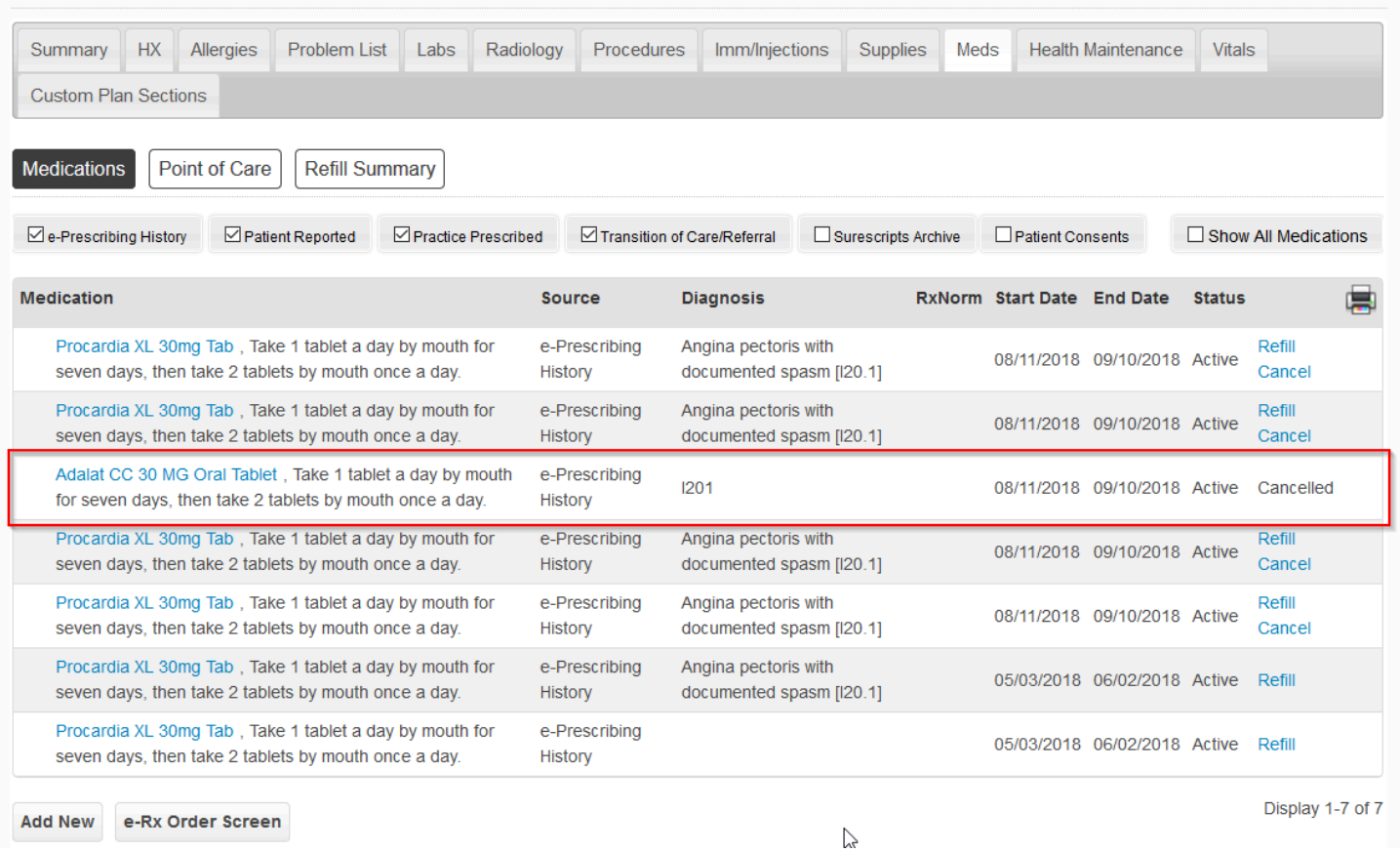
Administrator/Logger Comments:

Task 19: Cancel Prescription

Pre-requisite: Administrator should load patient chart first

Instructions: Prescription created in previous step was a mistake as 0 refills were sent so we have to cancel that prescription.





Time Allotted: 30 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patient Chart -> Medical Information -> Meds -> Highlight prescription to cancel-> Click Cancel Next to Prescription -> Click Ok on the popup box -> Check Status

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

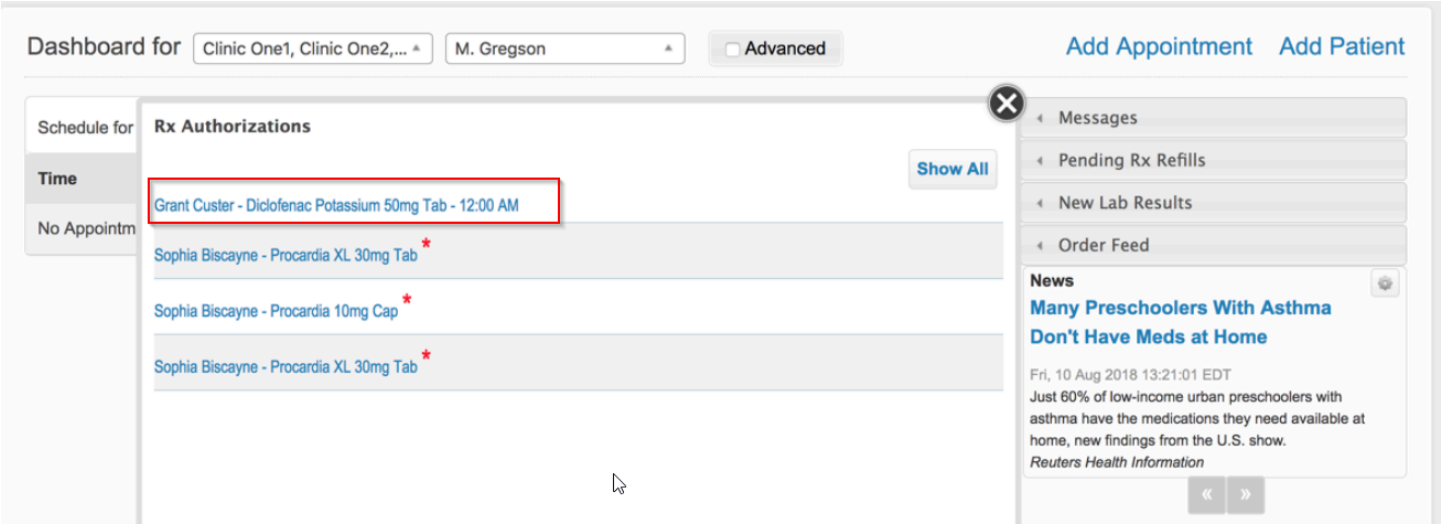
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

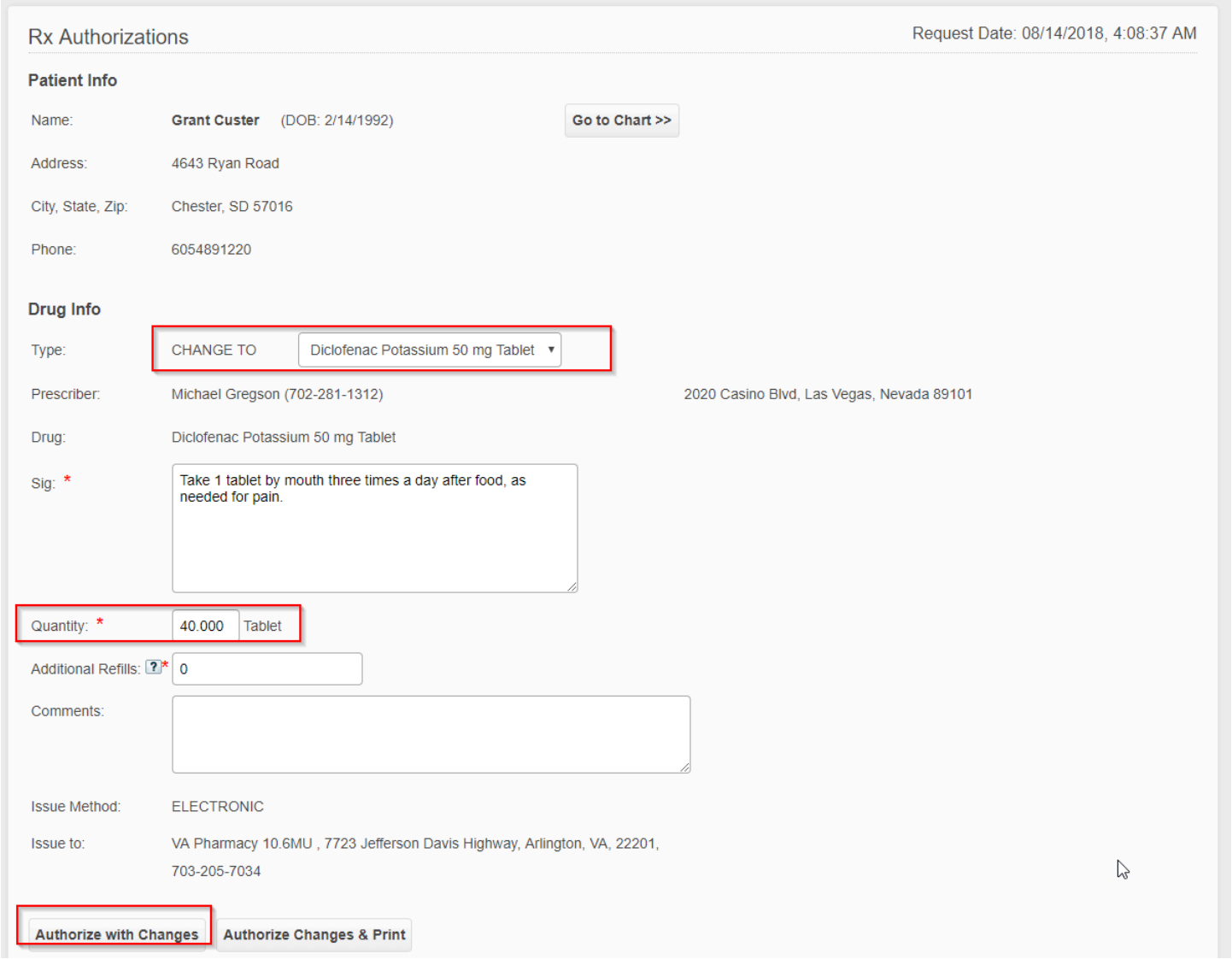
Administrator/Logger Comments:

Task 20: Change Prescription

Pre-requisite: Administrator should load patient chart first and load change prescription message received from pharmacy

Instructions: Change previously sent prescription dosage information which is returned by pharmacy.





Time Allotted: 120 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Dashboard -> Pending Rx Refills -> Click on Rx -> Modify Quantity and Medicine -> Authorize with Changes

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

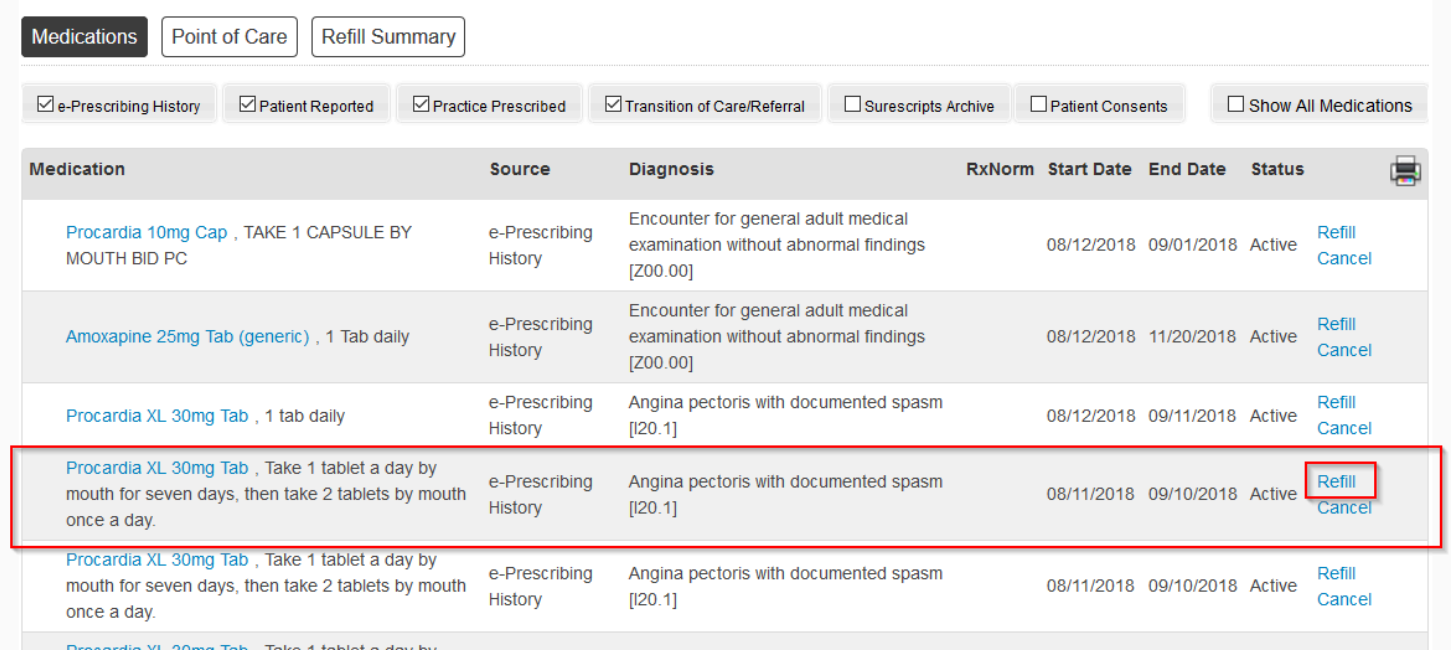
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

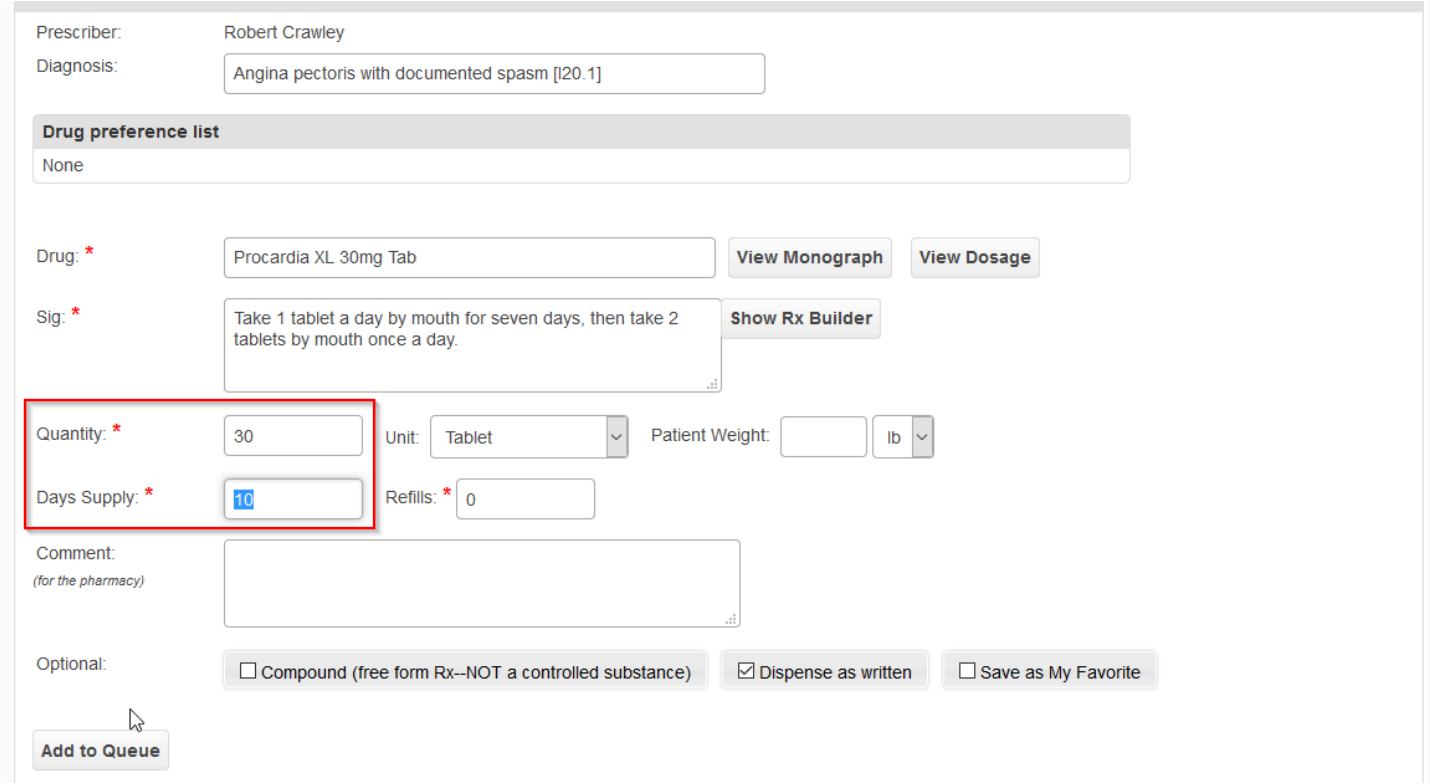
Administrator/Logger Comments:

<u>Task 21: Refill prescription</u>

Pre-requisite: Administrator should load patient chart first

Instructions: Refill the prescription created in previous steps.





Time Allotted: 120 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patient Chart -> Medical Information -> Meds -> Highlight prescription to refill-> Click Refill Next to Prescription -> Change Details (Quantify and Days Supply) -> Add to Queue -> Enter Pharmacy Details -> Issue Queued -> Review Order

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

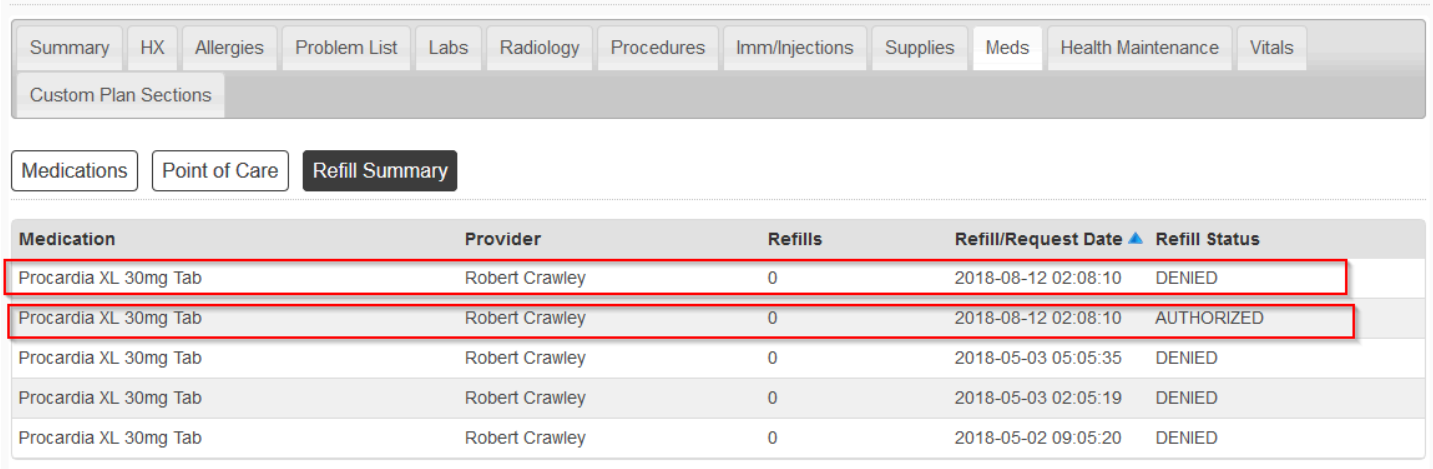
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 22: Receive fill status notification

Pre-requisite: Administrator should load patient chart first

Instructions: After creating and refilling prescriptions in previous steps, now view the Refill Status summary.



Time Allotted: 20 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patient Chart -> Medical Information -> Meds -> Refill Summary -> View Status

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 23: Request and receive medication history information

Pre-requisite: Administrator should load patient chart first

Instructions: Request and receive medication history information.

Summary | HX | Allergies | Problem List | Labs | Radiology | Procedures | Imm/Injections | Supplies | Meds | Health Maintenance | Vitals

Medications | Point of Care | Refill Summary

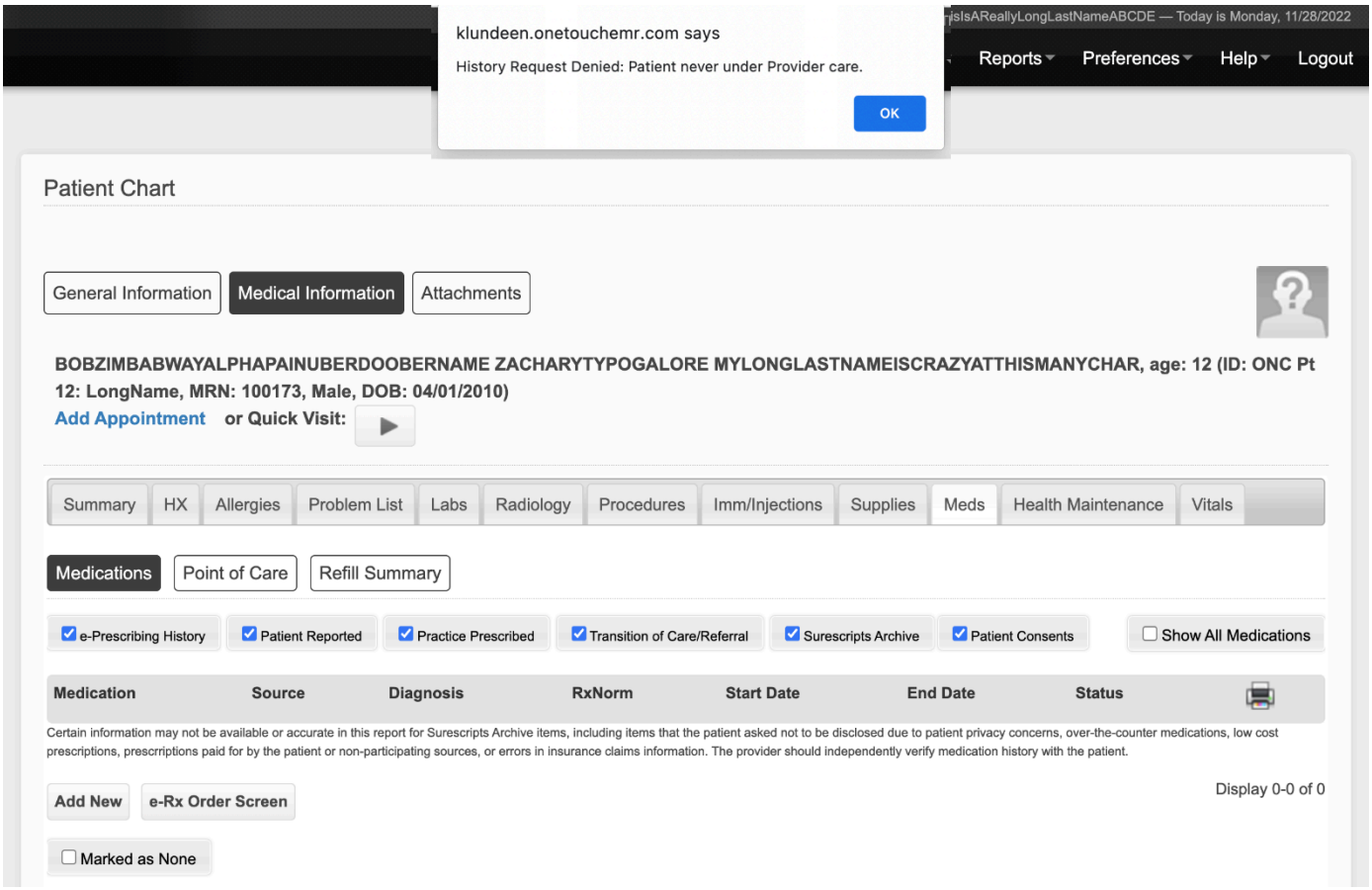
☐ e-Prescribing History ☑ Patient Reported ☑ Practice Prescribed ☑ Transition of Care/Referral ☑ Surescripts Archive ☑ Patient Consents ☐ Show All Medications

Medication	Source	Diagnosis	RxNorm	Start Date	End Date	Status
Vasotec 10 mg oral tablet , 60	Surescripts Archive	I10	858819		02/01/2022	Completed
Lipitor 10 mg oral tablet , 30	Surescripts Archive	E785	617314		02/02/2022	Completed
Avalide 150 mg/12.5 mg oral tablet , 30	Surescripts Archive	I10	823934		04/01/2022	Completed
Crestor 20 mg oral tablet , 30	Surescripts Archive	E785	859753		02/01/2022	Completed
Glucophage 1000 mg oral tablet , 60	Surescripts Archive	E1169	861006		02/01/2022	Completed
Lofibra 160 mg oral tablet , 30	Surescripts Archive	E785	603834		03/01/2022	Completed
Avalide 150 mg/12.5 mg oral tablet , 30	Surescripts Archive	I10	823934		02/01/2022	Completed
Avapro 150 mg oral tablet , 30	Surescripts Archive	I10	153666		02/01/2022	Completed
Vasotec 10 mg tablet , 60	Surescripts Archive	I10	858819		02/01/2022	Completed
Crestor 20 mg oral tablet , 30	Surescripts Archive	E785	859753		04/01/2022	Completed
Amaryl 1 mg oral tablet , 30	Surescripts Archive	E1169	153843		05/01/2022	Completed
Crestor 20 mg oral tablet , 30	Surescripts Archive	E785	859753		05/01/2022	Completed
Crestor 20 mg oral tablet , 30	Surescripts Archive	E785	859753		03/01/2022	Completed
Amaryl 1 mg oral tablet , 30	Surescripts Archive	E1169	153843		03/01/2022	Completed
Lofibra 160 mg oral tablet , 30	Surescripts Archive	E785	603834		02/01/2022	Completed
Vasotec 10 mg oral tablet , 60	Surescripts Archive	I10	858819		04/01/2022	Completed
Lofibra 160 mg oral tablet , 30	Surescripts Archive	E785	603834		05/01/2022	Completed
Lipitor 10 mg oral tablet , 30	Surescripts Archive	E785	617314		05/01/2022	Completed
Glucophage 1000 mg oral tablet , 60	Surescripts Archive	E1169	861006		05/01/2022	Completed
Hydrochlorothiazide 25 mg tablet , 15	Surescripts Archive	I10	310798		05/01/2022	Completed

Certain information may not be available or accurate in this report for Surescripts Archive items, including items that the patient asked not to be disclosed due to patient privacy concerns, over-the-counter medications, low cost prescriptions, prescriptions paid for by the patient or non-participating sources, or errors in insurance claims information. The provider should independently verify medication history with the patient.

Add New | e-Rx Order Screen

Display 1-20 of 37 — 1 2 Next >>



Time Allotted: 30 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patient Chart -> Medical Information -> Meds -> Medications-> SureScripts Archive (check/uncheck)

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

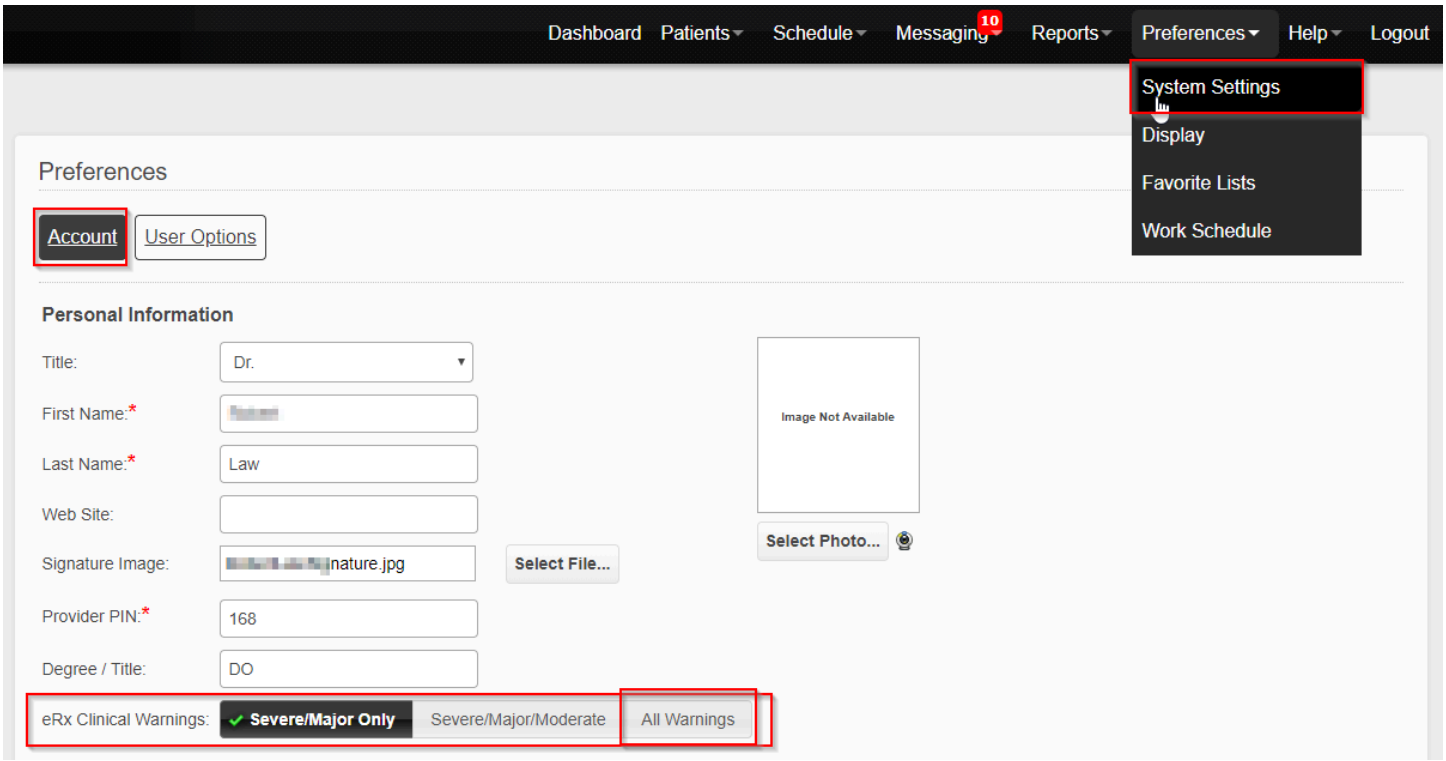
Rating:

Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

<u>Task 24: Adjust the severity level of drug-drug interaction</u>

Instructions: Adjust the severity level of drug-drug interaction by going into user preferences and change it to “All Warnings”.



Time Allotted: 30 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Preferences Menu -> System Settings -> Account -> Change eRX Clinical Warnings (All Warnings -> Save

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

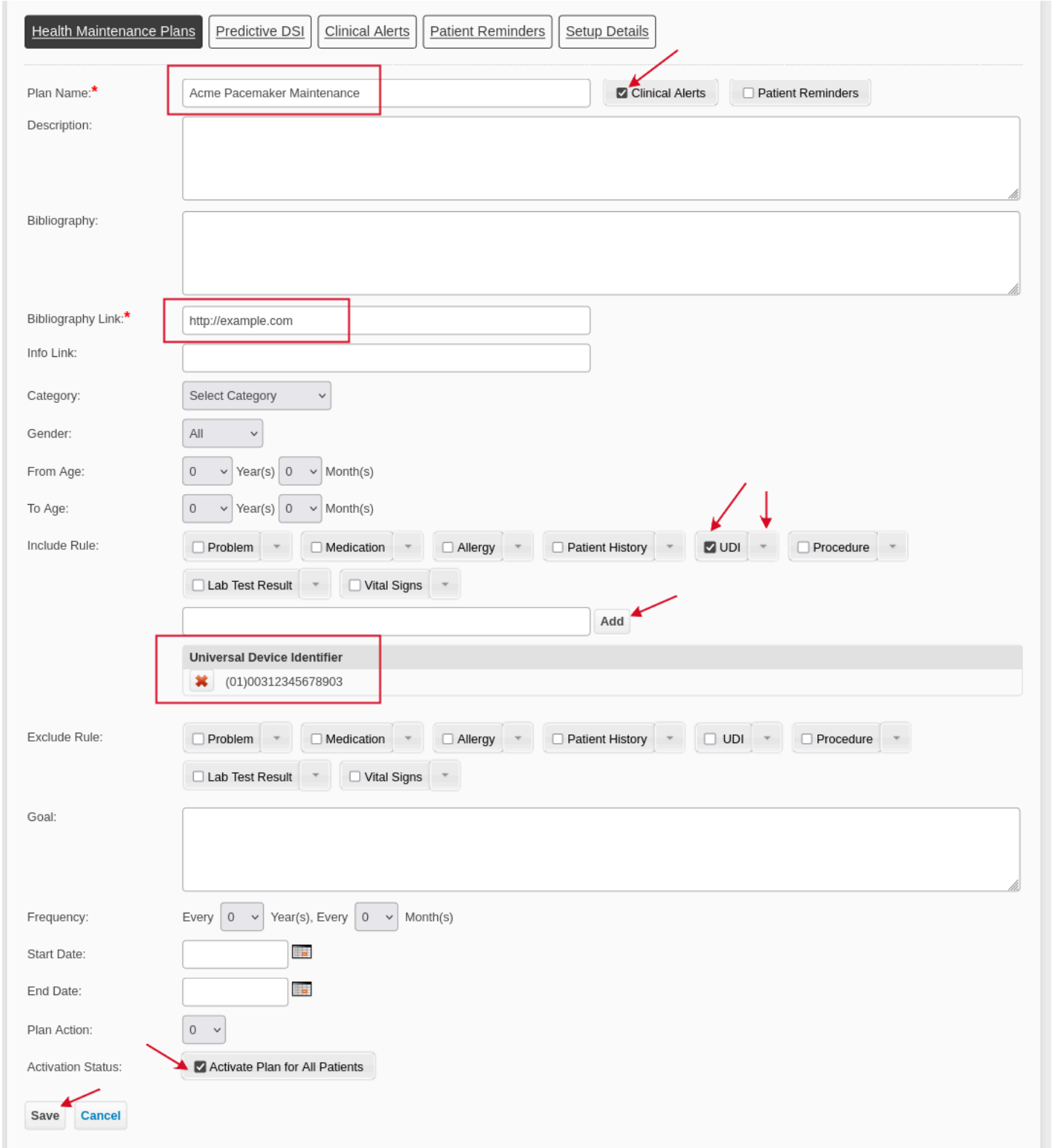
Administrator/Logger Comments:

Use Evidence-Based Decision Support Intervention

Task 25: User selects (activates/adds/enables/configures) evidence-based DSI using any of the required elements alone or in combination

Prerequisite: Logged in user has administrator role (System Administrator, Practice Administrator, etc)

Instructions: Add a new active Health Maintenance Plan that will trigger an alert when a patient is recorded to have a pacemaker of a certain product model with UDI code **(01)00312345678903** as shown below:



Time Allotted: 120 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Administration Menu on Top -> Health Maintenance -> Add New -> Enter Required Data -> Save

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

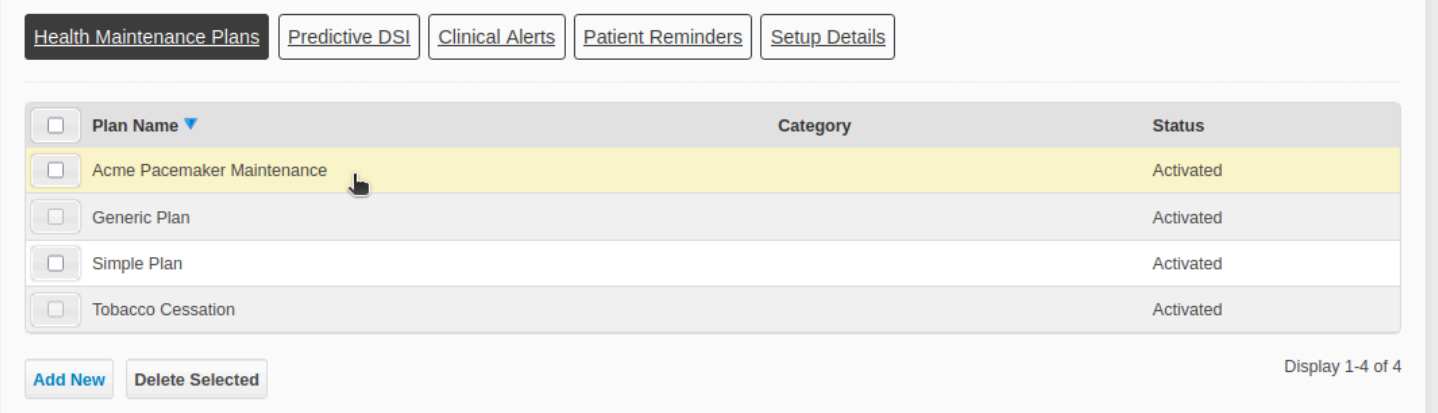
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 26: User records source attributes for evidence-based DSI

Prerequisite: Logged in user has administrator role (System Administrator, Practice Administrator, etc). There should be an existing Health Maintenance Plan for editing.

Instructions: Select an existing Health Maintenance Plan by clicking on it and add a source attribute using Add Source Attribute form provided in the resulting page.



Health Maintenance Plans | Predictive DSI | Clinical Alerts | Patient Reminders | Setup Details

Plan Name:* Acme Pacemaker Maintenance ☑ Clinical Alerts ☐ Patient Reminders

Description:

Bibliography:

Bibliography Link:* http://example.com

Info Link:

Category: Select Category

Gender: All

From Age: 0 Year(s) 0 Month(s)

To Age: 0 Year(s) 0 Month(s)

Include Rule: ☐ Problem ☐ Medication ☐ Allergy ☐ Patient History ☑ UDI ☐ Procedure ☐ Lab Test Result ☐ Vital Signs

Exclude Rule: ☐ Problem ☐ Medication ☐ Allergy ☐ Patient History ☐ UDI ☐ Procedure ☐ Lab Test Result ☐ Vital Signs

Goal:

Frequency: Every 0 Year(s), Every 0 Month(s)

Start Date:

End Date:

Plan Action: 0

Activation Status: ☑ Activate Plan for All Patients

Save Cancel

Source Attributes

☐	Name	Value
	No source attributes	

Add Source Attribute

Developer of the intervention

Value:

ACME Corporation

Add

Time Allotted: 30 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Administration Menu on Top -> Health Maintenance -> Click on an existing plan in the table ->Add Source Attribute -> Save

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

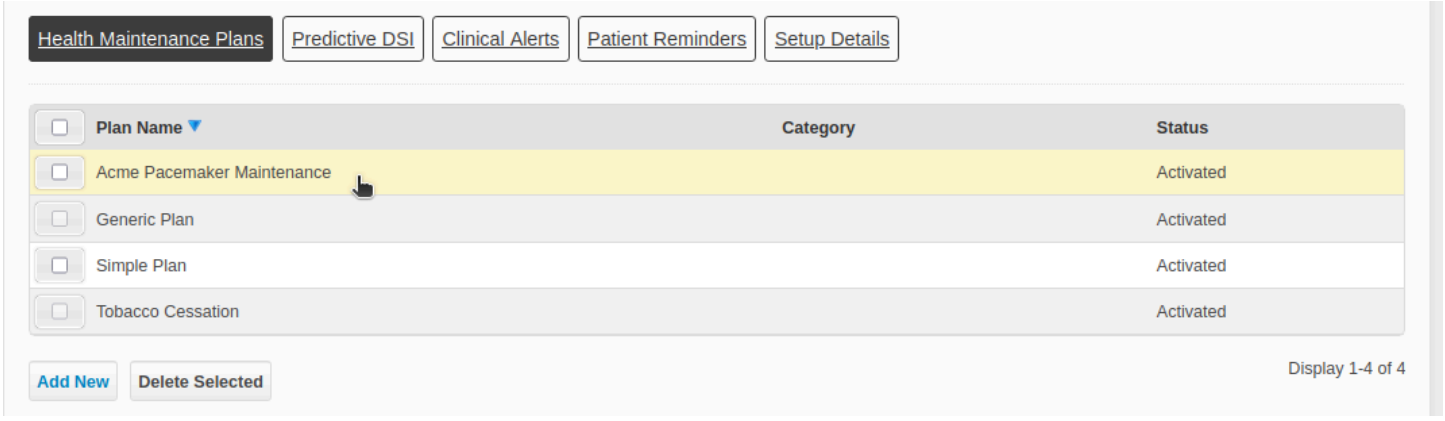
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 27: User changes source attributes for evidence-based DSI

Prerequisite: Logged in user has administrator role (System Administrator, Practice Administrator, etc). There should be an existing Health Maintenance Plan for editing, and also have existing source attributes

Instructions: Select an existing Health Maintenance Plan and make changes to any of its existing source attributes by clicking on it.



Health Maintenance Plans | Predictive DSI | Clinical Alerts | Patient Reminders | Setup Details

Plan Name:* Acme Pacemaker Maintenance ☑ Clinical Alerts ☐ Patient Reminders

Description:

Bibliography:

Bibliography Link:* http://example.com

Info Link:

Category: Select Category

Gender: All

From Age: 0 Year(s) 0 Month(s)

To Age: 0 Year(s) 0 Month(s)

Include Rule: ☐ Problem ☐ Medication ☐ Allergy ☐ Patient History ☑ UDI ☐ Procedure ☐ Lab Test Result ☐ Vital Signs

Exclude Rule: ☐ Problem ☐ Medication ☐ Allergy ☐ Patient History ☐ UDI ☐ Procedure ☐ Lab Test Result ☐ Vital Signs

Goal:

Frequency: Every 0 Year(s), Every 0 Month(s)

Start Date:

End Date:

Plan Action: 0

Activation Status: ☑ Activate Plan for All Patients

Save Cancel

Source Attributes

	Name	Value
☐	Developer of the intervention	ACME Corporation

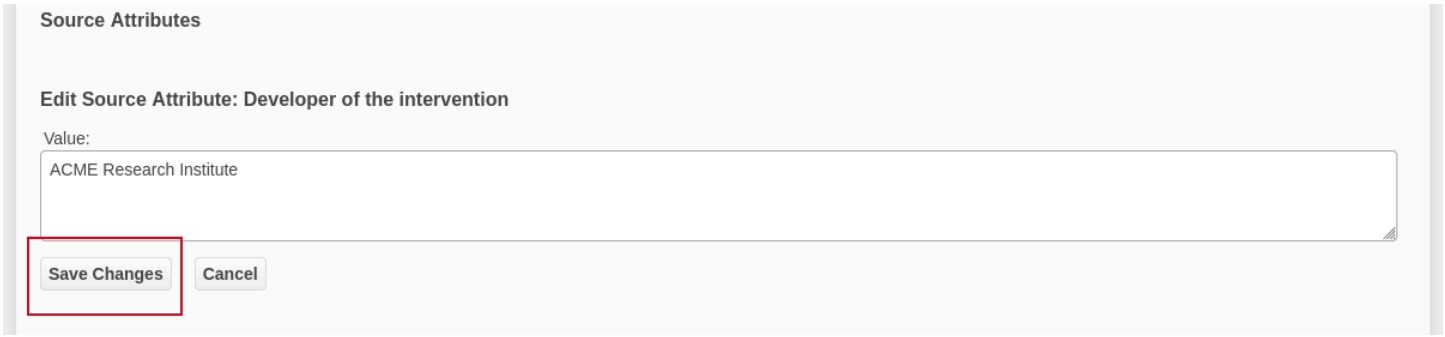
Delete Selected

Add Source Attribute

Bibliographic citation

Value:

Add



Time Allotted: 60 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Administration Menu on Top -> Health Maintenance -> Click on an existing plan in the table -> Click on a Source Attribute -> Make Changes using the Form -> Click Save Changes

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

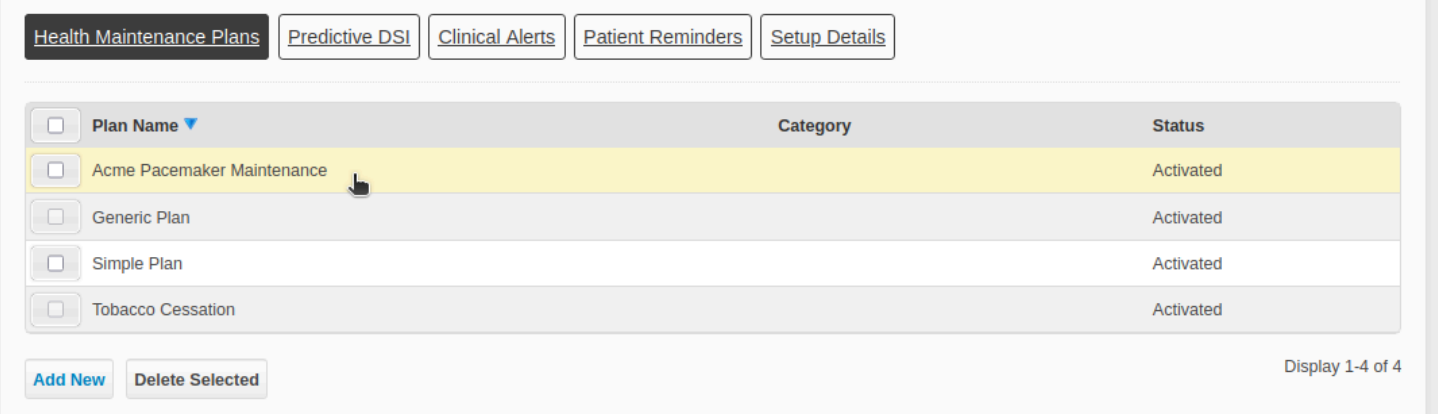
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 28: User accesses source attributes for evidence-based DSI.

Prerequisite: Logged in user has administrator role (System Administrator, Practice Administrator, etc). There should be an existing Health Maintenance Plan for editing, and also have existing source attributes

Instructions: Select an existing Health Maintenance Plan and view its source attributes.



Health Maintenance Plans | Predictive DSI | Clinical Alerts | Patient Reminders | Setup Details

Plan Name:* Acme Pacemaker Maintenance ☑ Clinical Alerts ☐ Patient Reminders

Description:

Bibliography:

Bibliography Link:* http://example.com

Info Link:

Category: Select Category

Gender: All

From Age: 0 Year(s) 0 Month(s)

To Age: 0 Year(s) 0 Month(s)

Include Rule: ☐ Problem ☐ Medication ☐ Allergy ☐ Patient History ☑ UDI ☐ Procedure ☐ Lab Test Result ☐ Vital Signs

Exclude Rule: ☐ Problem ☐ Medication ☐ Allergy ☐ Patient History ☐ UDI ☐ Procedure ☐ Lab Test Result ☐ Vital Signs

Goal:

Frequency: Every 0 Year(s), Every 0 Month(s)

Start Date:

End Date:

Plan Action: 0

Activation Status: ☑ Activate Plan for All Patients

Save Cancel

Source Attributes

	Name	Value
☐	Developer of the intervention	ACME Research Institute

Delete Selected

Add Source Attribute

Bibliographic citation

Value:

Time Allotted: 20 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Administration Menu on Top -> Health Maintenance -> Click on an existing plan in the table -> Source Attributes

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

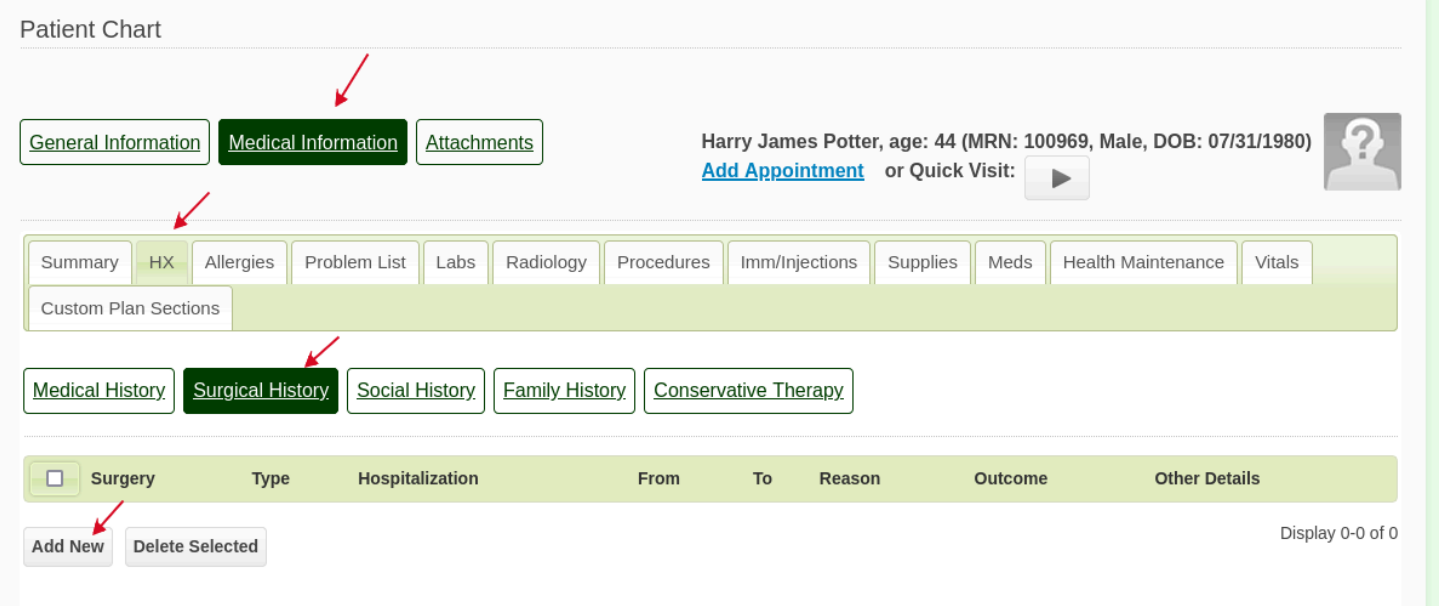
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 29: User triggers Decision Support Intervention(s) based on any of the required elements alone or in combination.

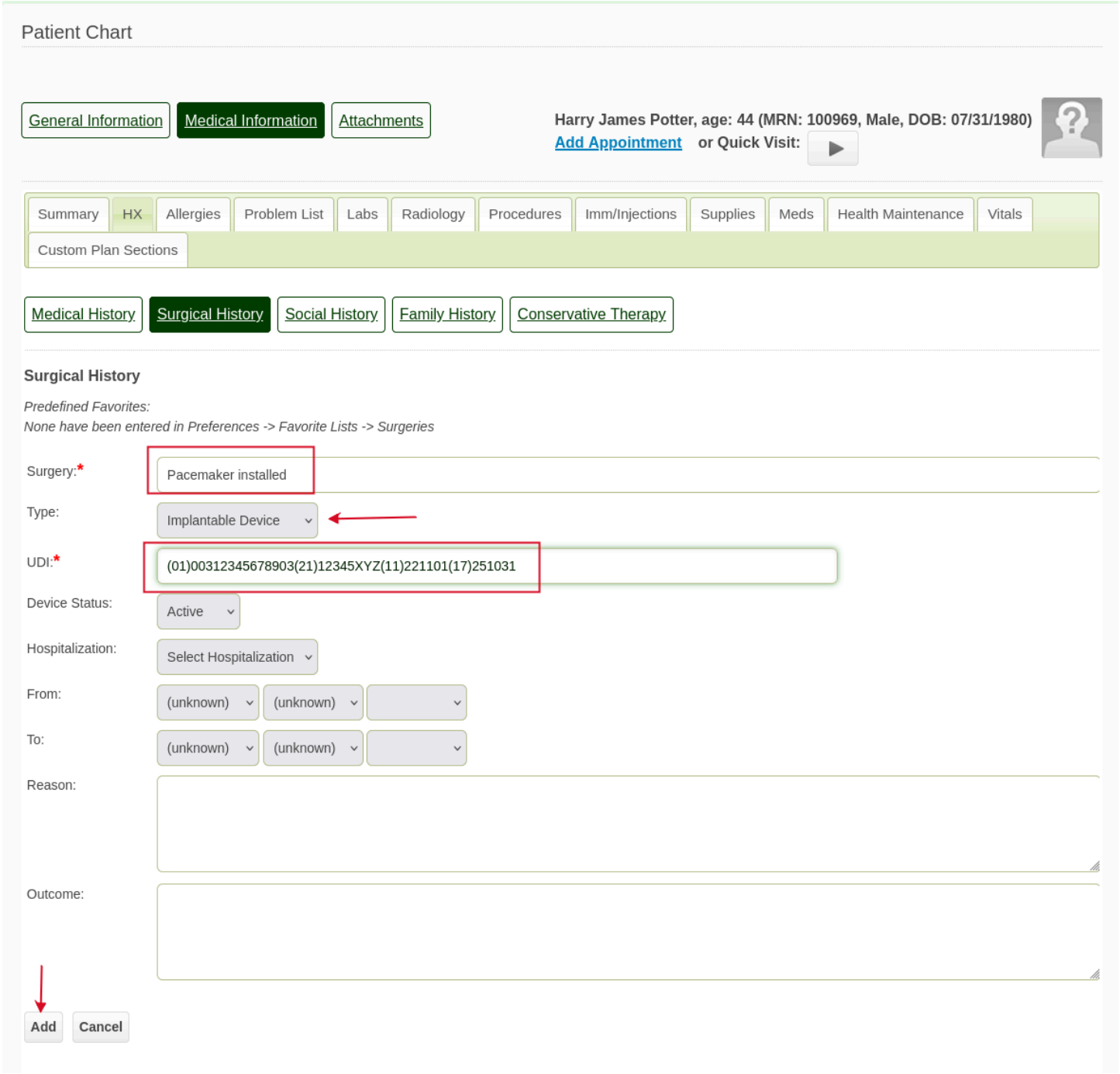
Prerequisite: The Health Maintenance Plan created from Task #25 is active/exists. User is logged in with a clinician role (provider or nurse practitioner).

Instructions: Search for any patient with an existing encounter for testing and go to that Patient's Chart. Navigate to the patient's medical information for surgical hx.

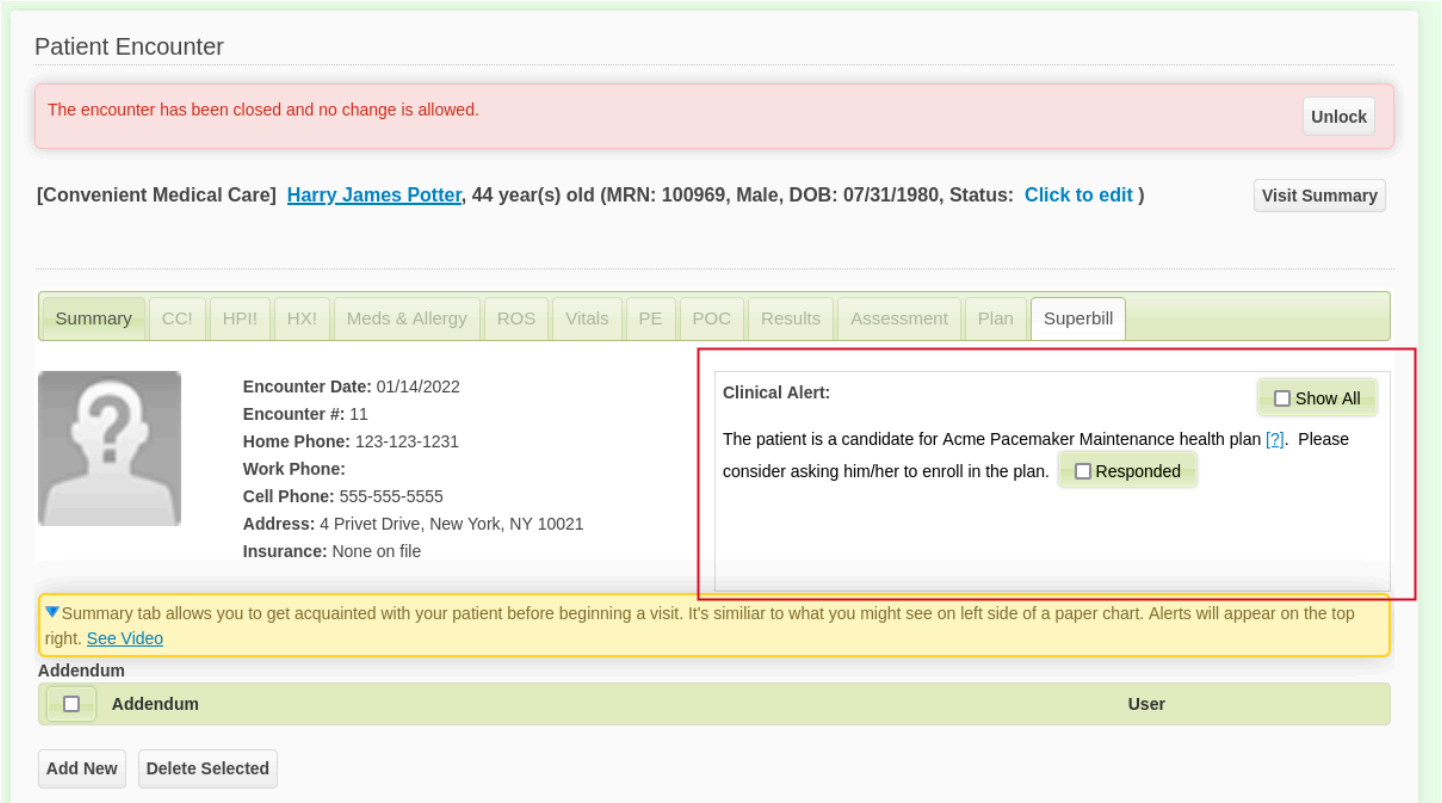


Add a new history entry of Implantable Device Type.

For UDI code use: **(01)00312345678903(21)12345XYZ(11)221101(17)251031**



Validation/Confirmation: Navigate to any existing encounters for the test patient. In the encounter summary, there should be a clinical alert for Acme Pacemaker Maintenance health plan.



Time Allotted: 180 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patients Menu -> Encounters -> Click on an Encounter -> Click on the Patient's Name to go the Medical Information of the Patient Charts -> HX tab -> Surgical History -> Add New -> Save

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

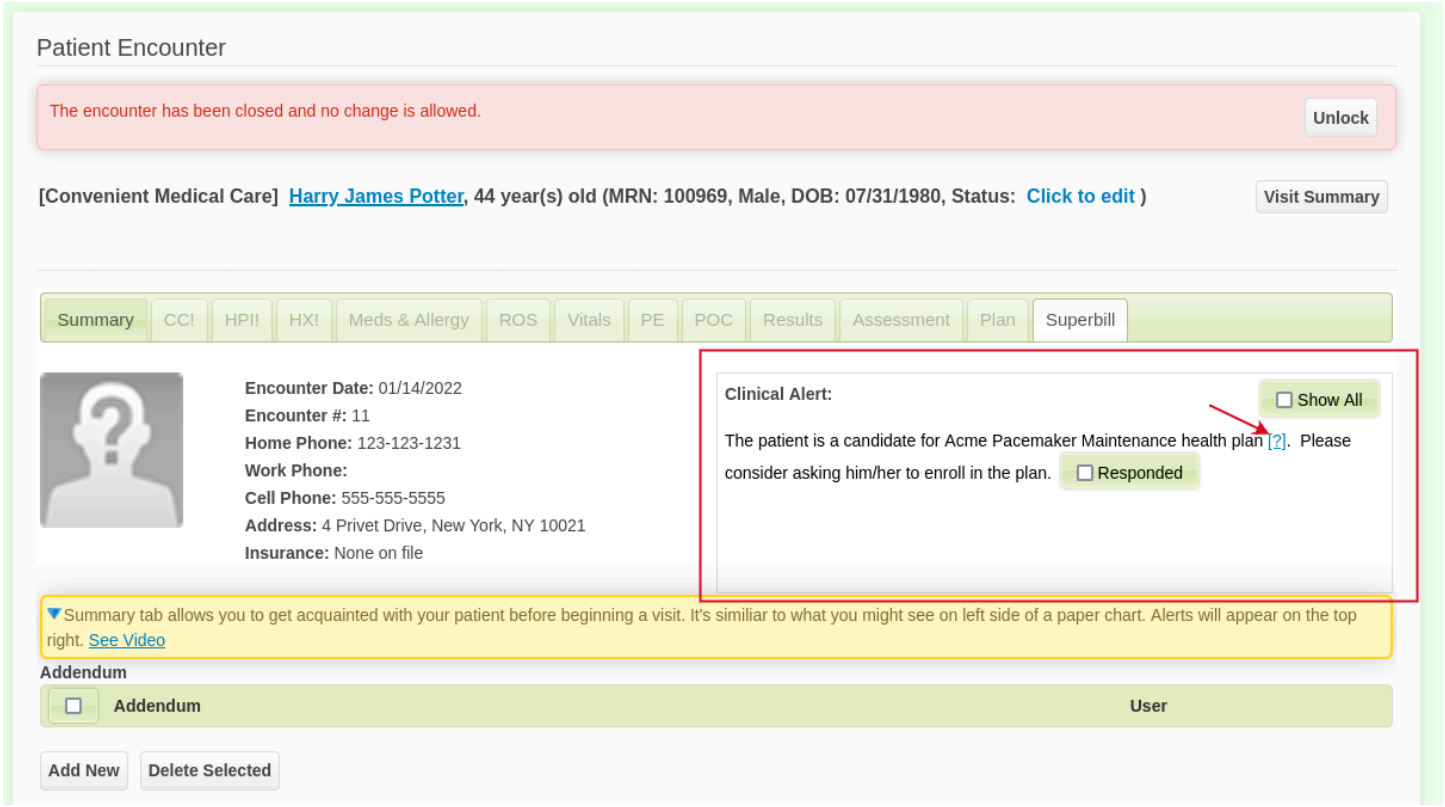
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

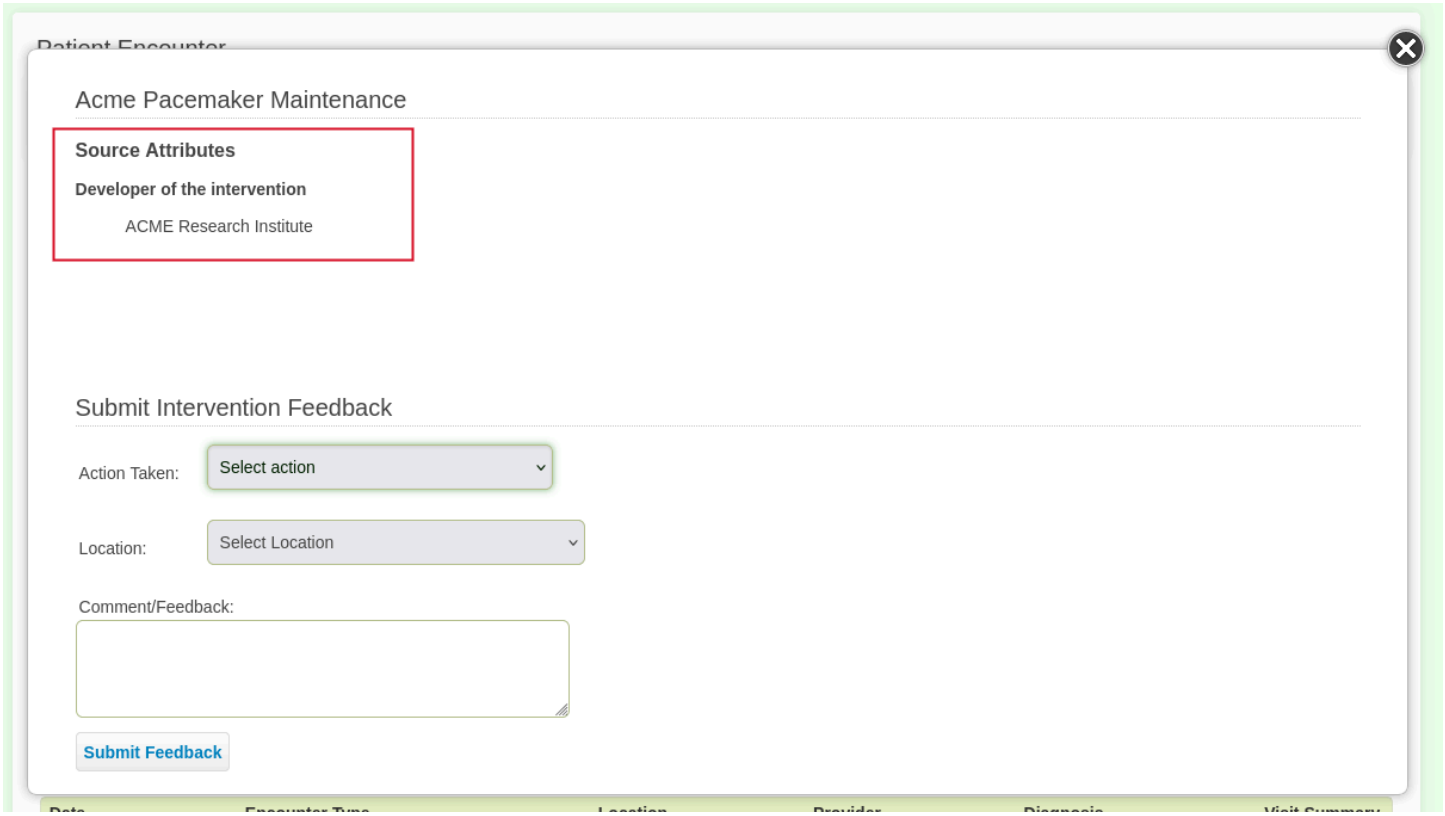
Administrator/Logger Comments:

<u>Task 30: User accesses source attributes for triggered evidence-based DSI</u>

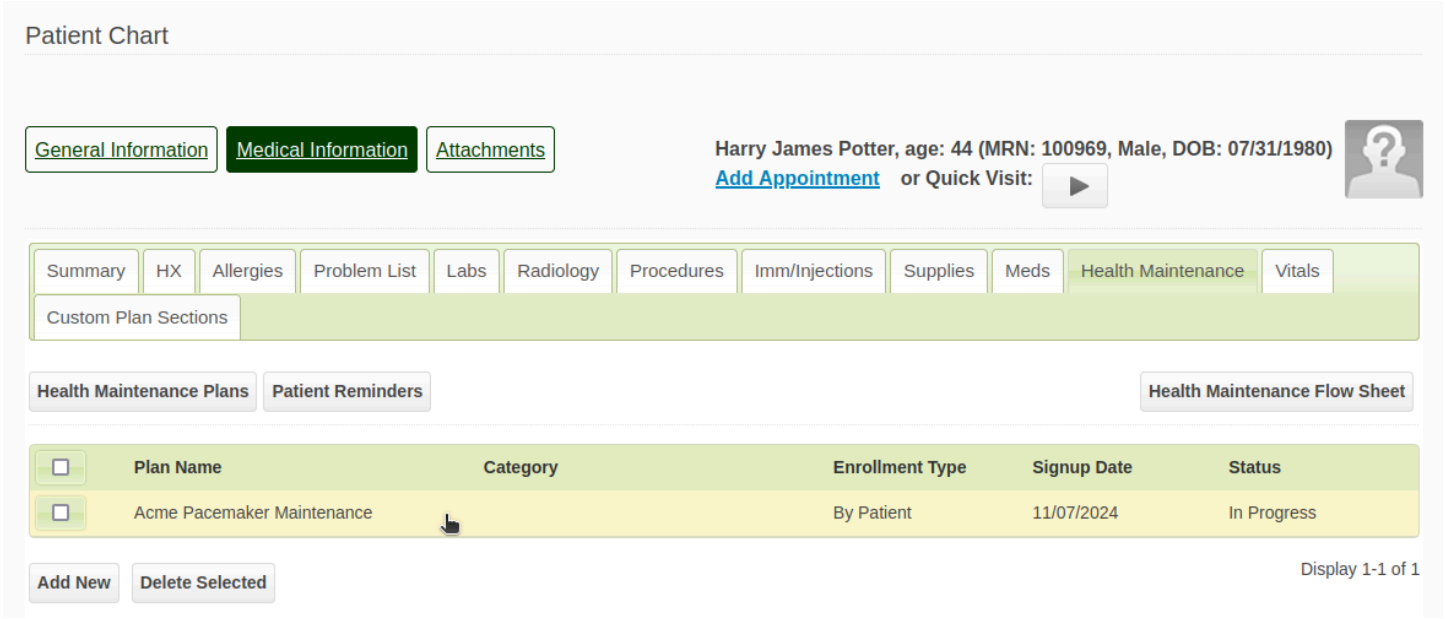
Prerequisite: Patient with evidence-based DSI triggered from Task #29

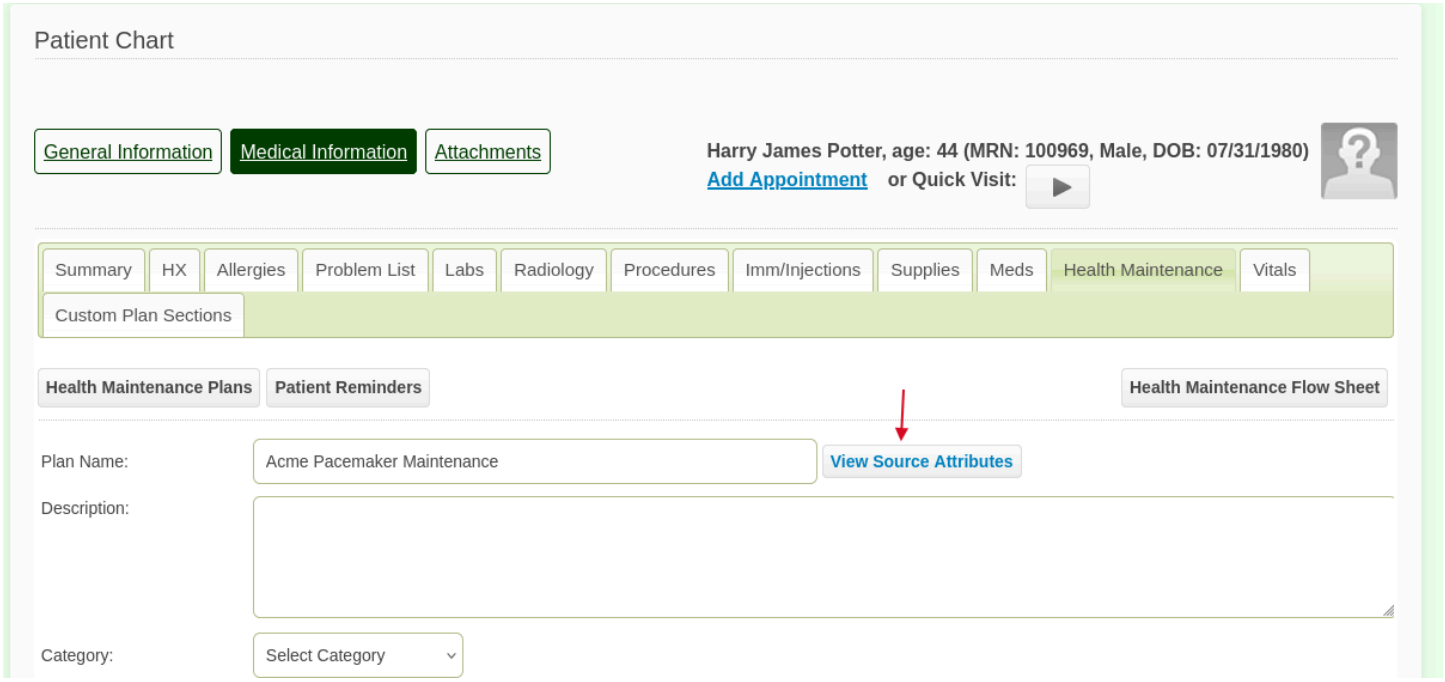
Instructions: Go to one of the patient's encounters. Inside the Summary tab, click on the question mark located beside the health maintenance plan name in the Clinical Alerts Section





Alternatively, if a Health Maintenance Plan is already created for the patient, go to the Medical Information section of the Patient Chart, click on the Health Maintenance tab, and click a plan. Then click on the View Source Attributes beside the text field for the Health Maintenance Plan name.





Time Allotted: 20 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patients Menu -> Encounter -> Click on the Patient's encounter -> Click on the question mark in the Clinical Alerts box

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

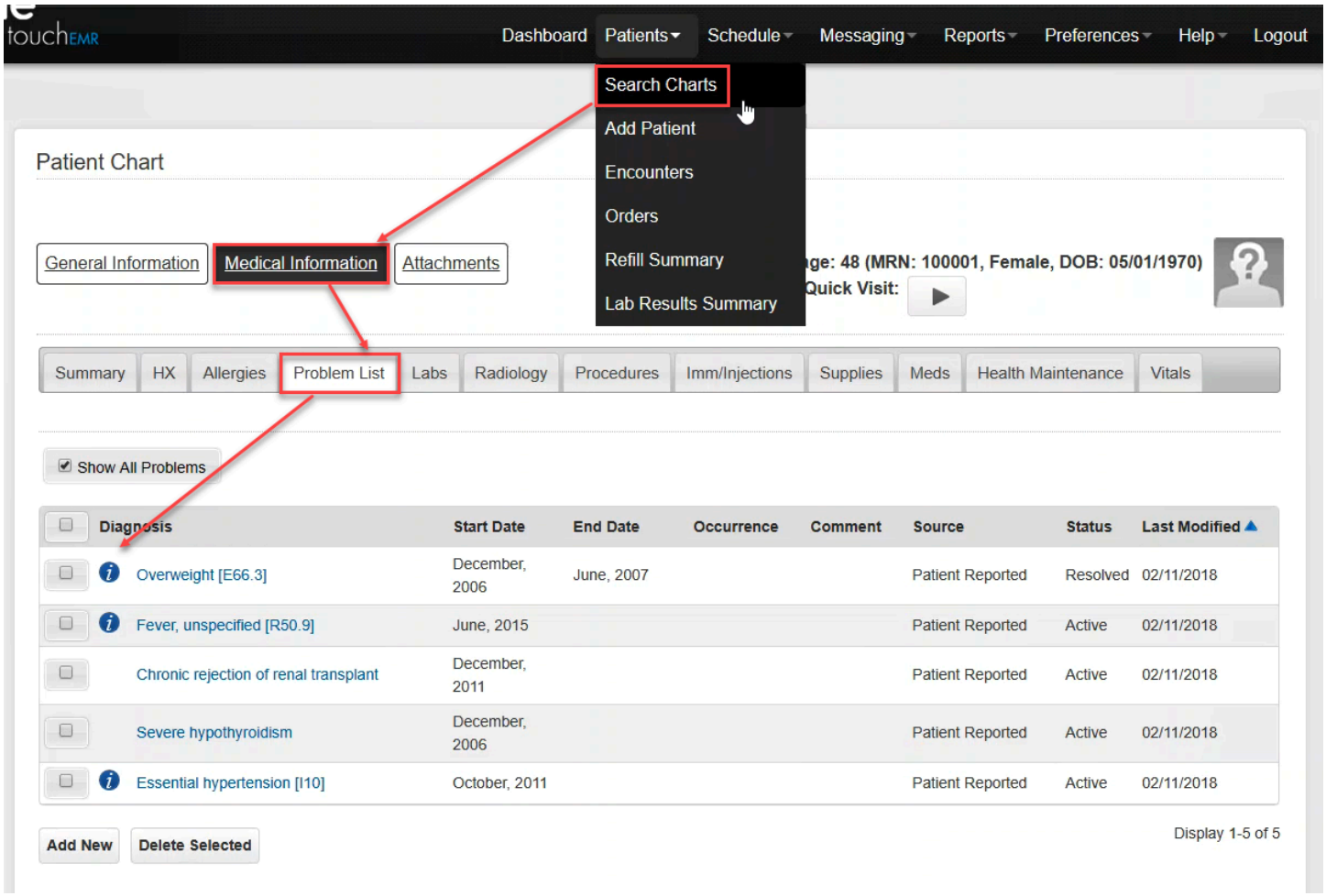
Administrator/Logger Comments:

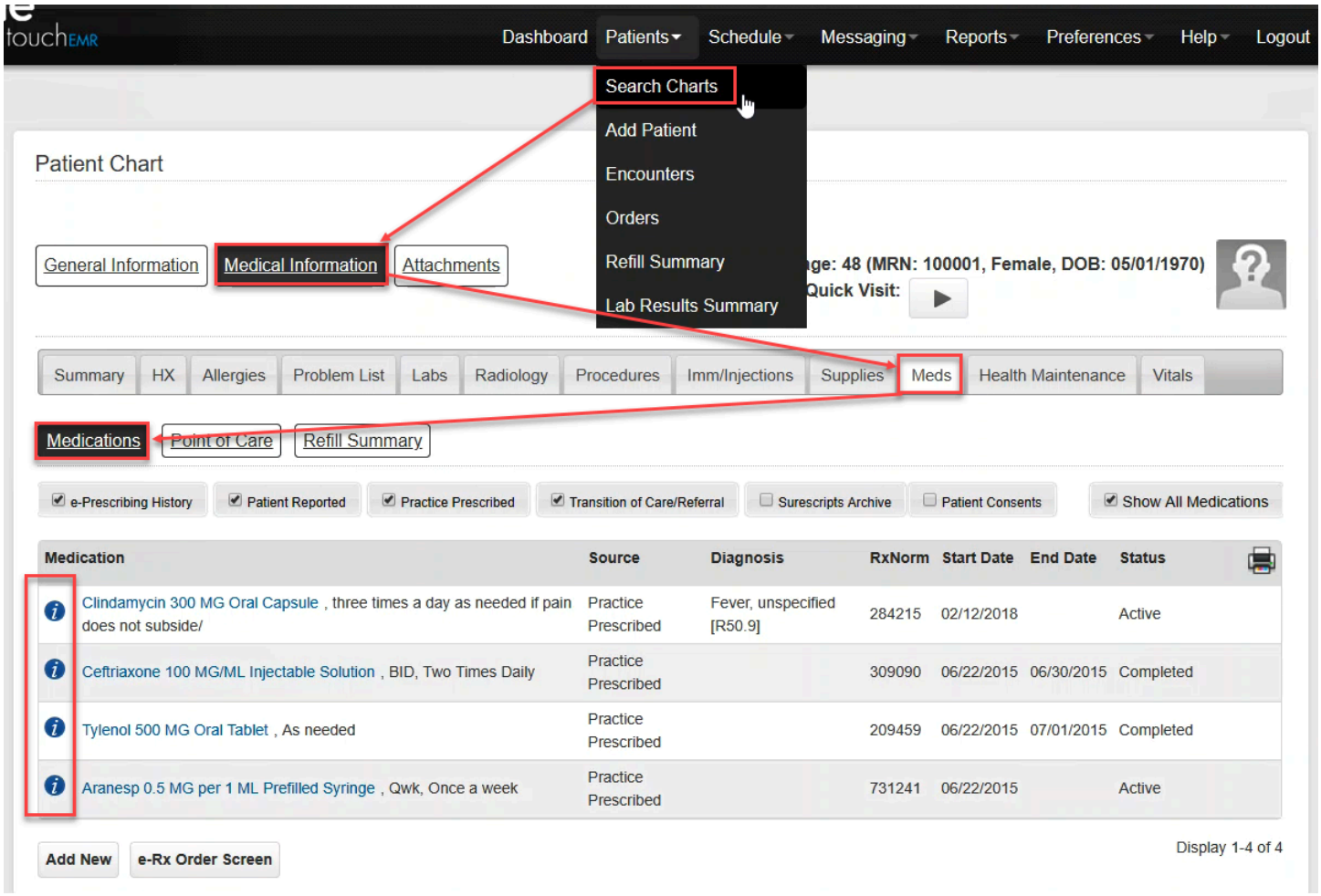
<u>Task 31: User triggers Decision Support Intervention(s) based on the problems, medications, allergies and intolerances incorporated from a transition of care/referral summary C-CDA file using (b)(2) functionality (if applicable)</u>

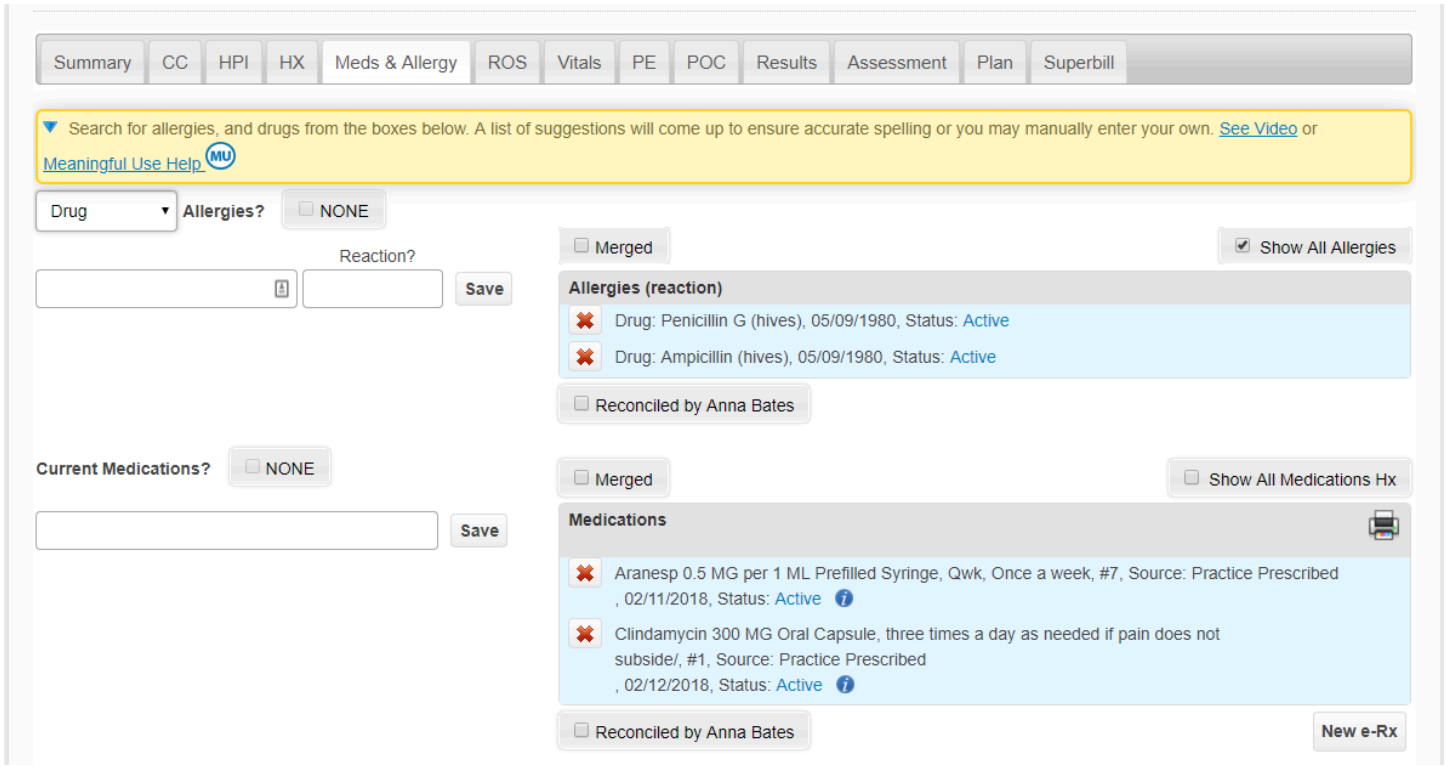
<u>Prerequisite:</u> Administrator clears the existing data from the system first. All the users are already give patient CCDA file to import trigger CDS intervention and view resource information using info button

Instructions: Trigger the CDS interventions/resources based on data elements in the problem list, medication list, and medication allergy list by incorporating patient information from a transition of care/referral summary. First, as per task 24, import a CCDA to create a patient in OneTouch. Then go to patient chart in each of the following sections to view the CDS interventions (as show in three screen shots below) and click on info button next to data elements to view the resource information:

- Problems List
- Medication List
- Medication Allergy List


touchEMR
Dashboard
Patients
Schedule
Messaging
Reports
Preferences
Help
Logout
Search Charts
Add Patient
Encounters
Orders
Refill Summary
Lab Results Summary
Patient Chart
General Information
Medical Information
Attachments
ge: 48 (MRN: 100001, Female, DOB: 05/01/1970)
Quick Visit:
Summary
HX
Allergies
Problem List
Labs
Radiology
Procedures
Imm/Injections
Supplies
Meds
Health Maintenance
Vitals
Show All Problems
Diagnosis
Start Date
End Date
Occurrence
Comment
Source
Status
Last Modified
Overweight [E66.3]
December, 2006
June, 2007
Patient Reported
Resolved
02/11/2018
Fever, unspecified [R50.9]
June, 2015
Patient Reported
Active
02/11/2018
Chronic rejection of renal transplant
December, 2011
Patient Reported
Active
02/11/2018
Severe hypothyroidism
December, 2006
Patient Reported
Active
02/11/2018
Essential hypertension [I10]
October, 2011
Patient Reported
Active
02/11/2018
Add New
Delete Selected
Display 1-5 of 5





Time Allotted: 60 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patients Menu -> Search Charts -> Patient Chart -> View (Problems List) -> View Medication List -> View Allergies List -> Click Info Button

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

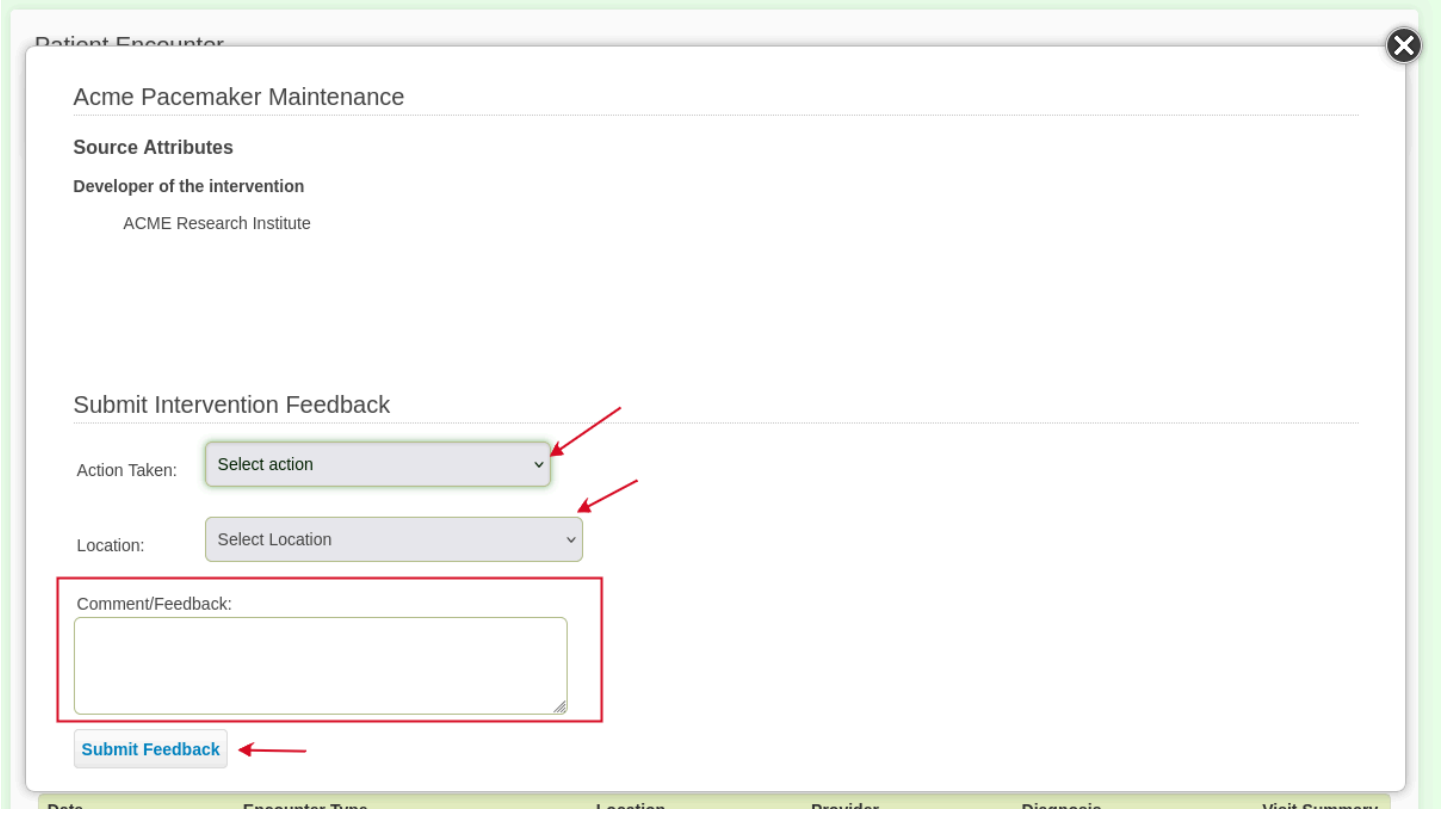
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 32: User provides feedback for a triggered evidence-based DSI.

Prerequisite: Patient with evidence-based DSI triggered from Task #29

Instructions: Submit feedback for the health maintenance plan that was triggered and sent a clinical alert



Time Allotted: 30 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Patients Menu -> Encounter -> Click on the Patient's encounter -> Click on the question mark in the Clinical Alerts box -> Submit Intervention Feedback

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

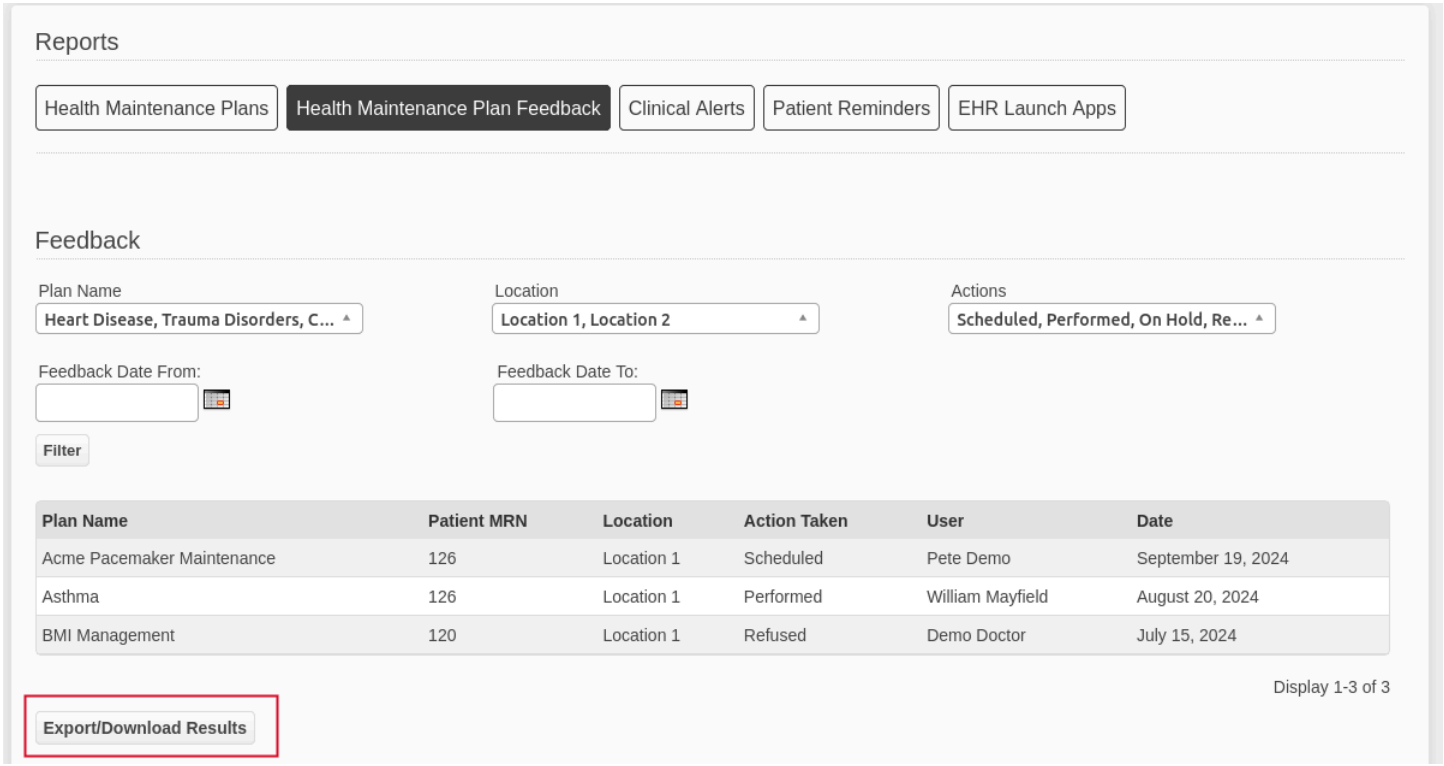
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 33: User exports feedback data in a computable format, including the data identified in (b)(11)(ii)(C) at a minimum (intervention, action taken, user feedback provided (if applicable), user, date, and location).

Prerequisite: User logged in as a clinician (provider or nurse practitioner) or administrator. Existing health maintenance plan feedback.

Instructions: Export report for Health Maintenance Feedback



Time Allotted: 30 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Reports Menu -> Health Maintenance -> Health Maintenance Plan Feedback -> Export/Download Results

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

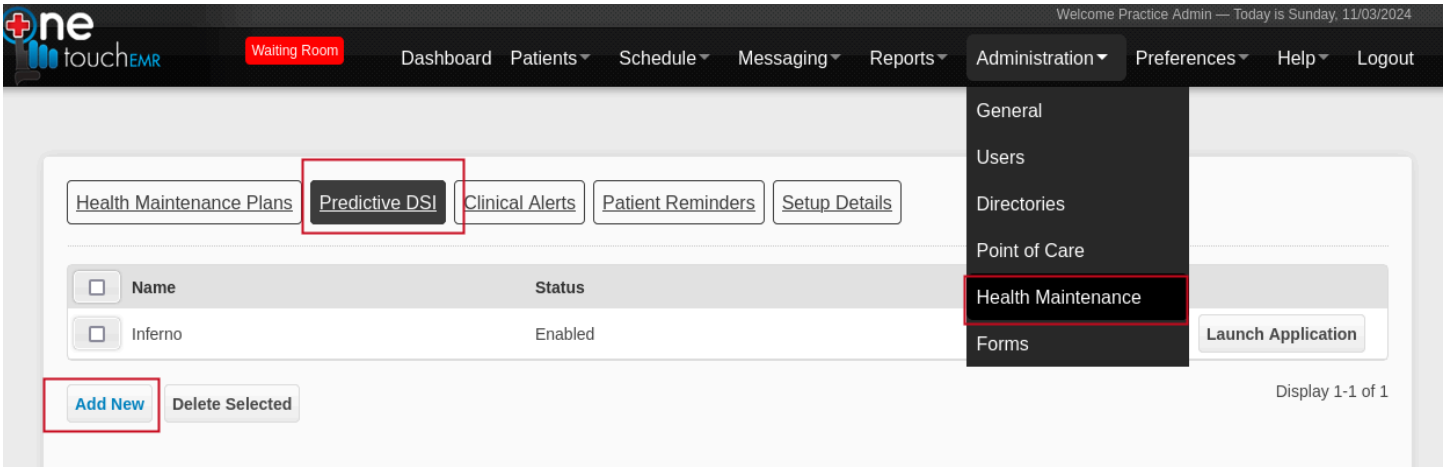
Administrator/Logger Comments:

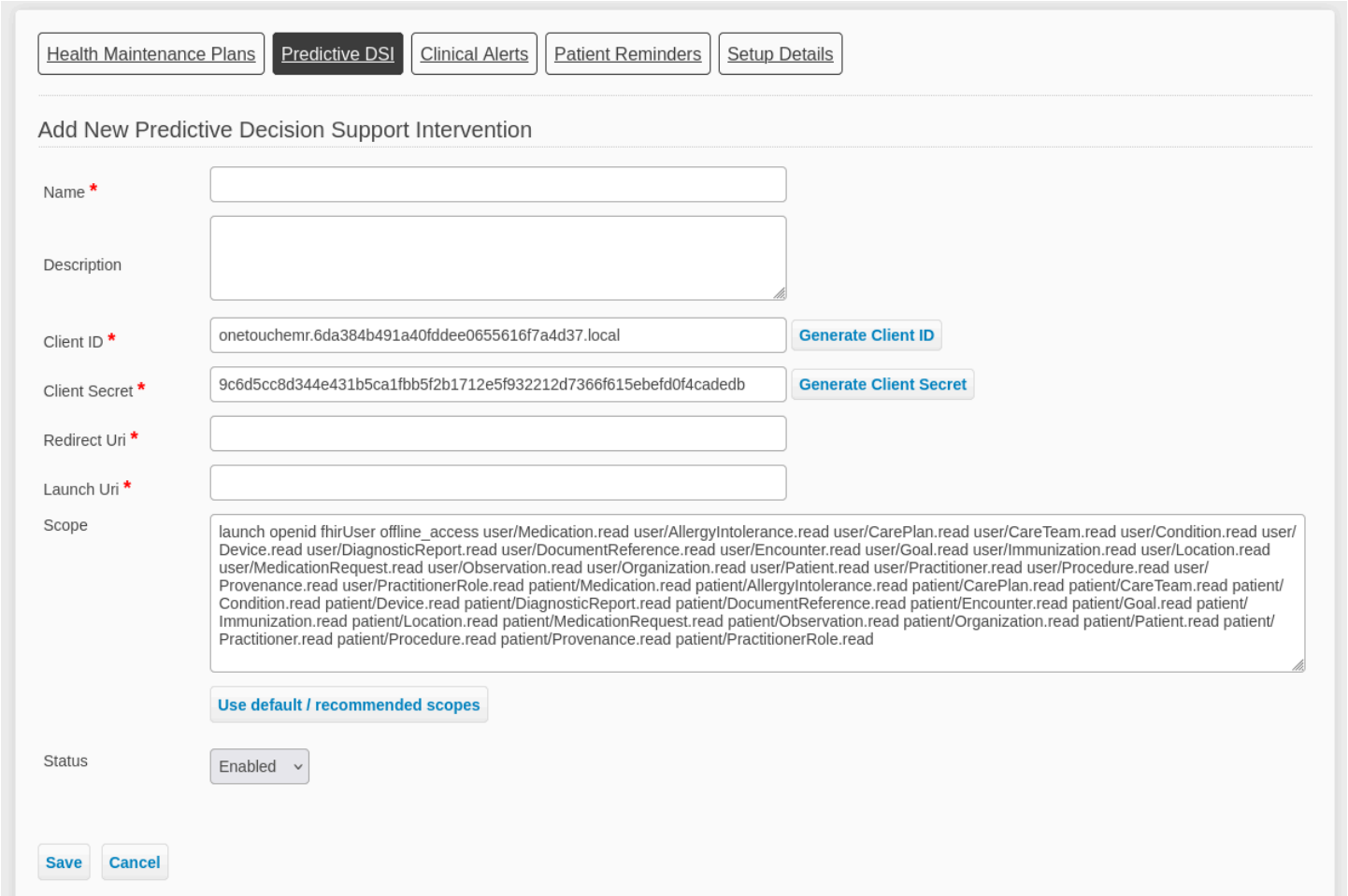
User-Supplied Predictive Decision Support Intervention

Task 34: User selects (activates/adds/enables/configures) Predictive DSI using the required USCDI data elements

Prerequisite: Logged in user has administrator role (System Administrator, Practice Administrator, etc).

Instructions: Add a new Predictive DSI as shown below. Refer to the third-party application for Redirect and Launch URI details.





Time Allotted: 120 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Administration Menu on Top -> Health Maintenance -> Predictive DSI -> Add New -> Save

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

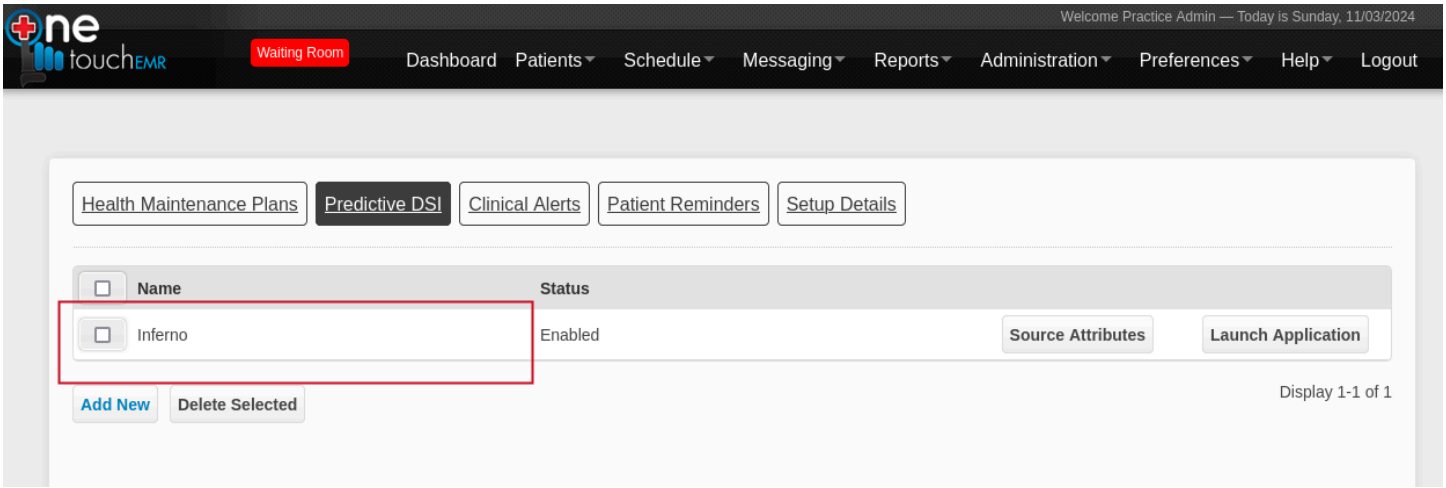
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 35: User records user-defined source attributes for a Predictive DSI

Prerequisite: Logged in user has administrator role (System Administrator, Practice Administrator, etc). An existing Predictive DSI app is available for editing.

Instructions: Select an existing Predictive DSI and add a Source Attribute named “Pricing” which does not belong to any existing source attribute category (i.e. Other category)



Health Maintenance Plans | Predictive DSI | Clinical Alerts | Patient Reminders | Setup Details

Edit Predictive Decision Support Intervention

Name *: Inferno

Description: A sample Predictive DSI application for testing.

Client ID *: onetouchemr.02a56aa5777b4414f886e2224d765d95.local — Generate Client ID

Client Secret *: adcaaf384b218d05297063300670187ee33a2acf3be40ad2de0f09e2efec420c — Generate Client Secret

Redirect Uri *: https://inferno.healthit.gov/suites/custom/smart/redirect

Launch Uri *: https://inferno.healthit.gov/suites/custom/smart/launch

Scope: launch openid fhirUser offline_access user/Medication.read user/AllergyIntolerance.read user/CarePlan.read user/CareTeam.read user/Condition.read user/Device.read user/DiagnosticReport.read user/DocumentReference.read user/Encounter.read user/Goal.read user/Immunization.read user/Location.read user/MedicationRequest.read user/Observation.read user/Organization.read user/Patient.read user/Practitioner.read user/Procedure.read user/Provenance.read user/PractitionerRole.read patient/Medication.read patient/AllergyIntolerance.read patient/CarePlan.read patient/CareTeam.read patient/Condition.read patient/Device.read patient/DiagnosticReport.read patient/DocumentReference.read patient/Encounter.read patient/Goal.read patient/Immunization.read patient/Location.read patient/MedicationRequest.read patient/Observation.read patient/Organization.read patient/Patient.read patient/Practitioner.read patient/Procedure.read patient/Provenance.read patient/PractitionerRole.read

Use default / recommended scopes

Status: Enabled

Save | Cancel

Source Attributes

	Category	Name	Value
☐	External validation process	Party that conducted the external testing	cvcvc

Delete Selected

Display 11-11 of 11 — << Previous 1 2

Select Other for user-defined source attributes

Add Source Attribute

Other

Name:

Enter Attribute name

Value:

Add

Time Allotted: 30 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Administration Menu on Top -> Health Maintenance -> Predictive DSI -> Click an item from the list -> Add Source Attribute -> Select "Other" for Category

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

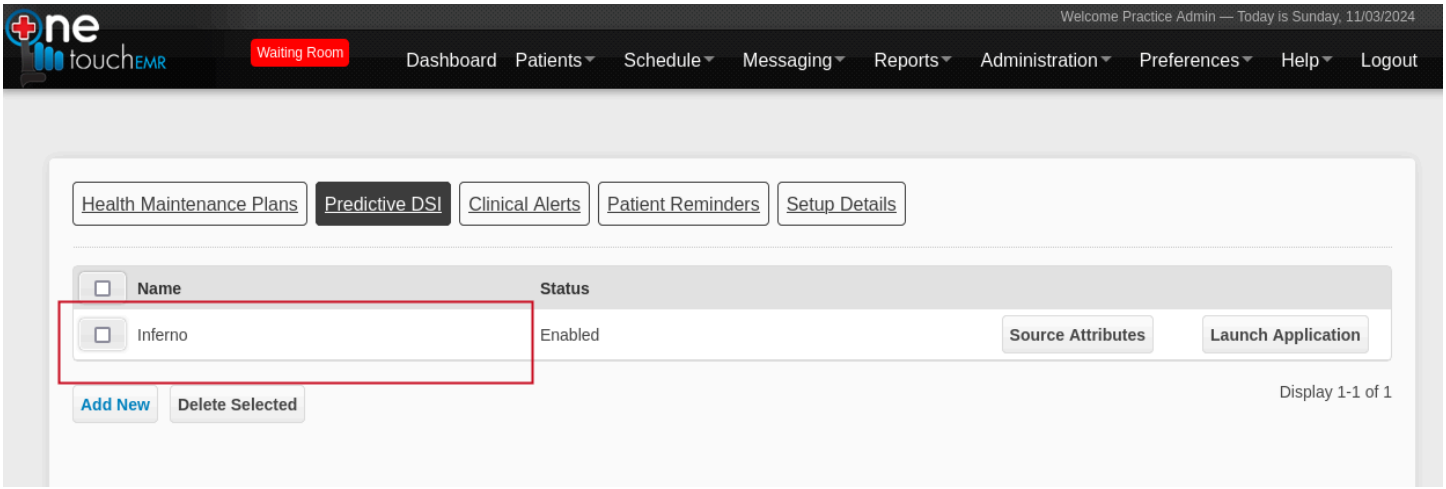
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

<u>Task 36: User changes user-defined source attributes for a Predictive DSI</u>

<u>Prerequisite:</u> Logged in user has administrator role (System Administrator, Practice Administrator, etc). An existing Predictive DSI app is available for editing with existing user-defined source attributes.

Instructions: Edit an existing user-defined source attribute for a Predictive DSI and change its value.



Health Maintenance Plans | Predictive DSI | Clinical Alerts | Patient Reminders | Setup Details

Edit Predictive Decision Support Intervention

Name *: Inferno

Description: A sample Predictive DSI application for testing.

Client ID *: onetouchemr.02a56aa5777b4414f886e2224d765d95.local — Generate Client ID

Client Secret *: adcaaf384b218d05297063300670187ee33a2acf3be40ad2de0f09e2efec420c — Generate Client Secret

Redirect Uri *: https://inferno.healthit.gov/suites/custom/smart/redirect

Launch Uri *: https://inferno.healthit.gov/suites/custom/smart/launch

Scope: launch openid fhirUser offline_access user/Medication.read user/AllergyIntolerance.read user/CarePlan.read user/CareTeam.read user/Condition.read user/Device.read user/DiagnosticReport.read user/DocumentReference.read user/Encounter.read user/Goal.read user/Immunization.read user/Location.read user/MedicationRequest.read user/Observation.read user/Organization.read user/Patient.read user/Practitioner.read user/Procedure.read user/Provenance.read user/PractitionerRole.read patient/Medication.read patient/AllergyIntolerance.read patient/CarePlan.read patient/CareTeam.read patient/Condition.read patient/Device.read patient/DiagnosticReport.read patient/DocumentReference.read patient/Encounter.read patient/Goal.read patient/Immunization.read patient/Location.read patient/MedicationRequest.read patient/Observation.read patient/Organization.read patient/Patient.read patient/Practitioner.read patient/Procedure.read patient/Provenance.read patient/PractitionerRole.read

Use default / recommended scopes

Status: Enabled

Save | Cancel

Source Attributes

	Category	Name	Value
☐	External validation process	Party that conducted the external testing	cvcvc
☐	Other	Pricing	$15.00 per evaluation

Delete Selected

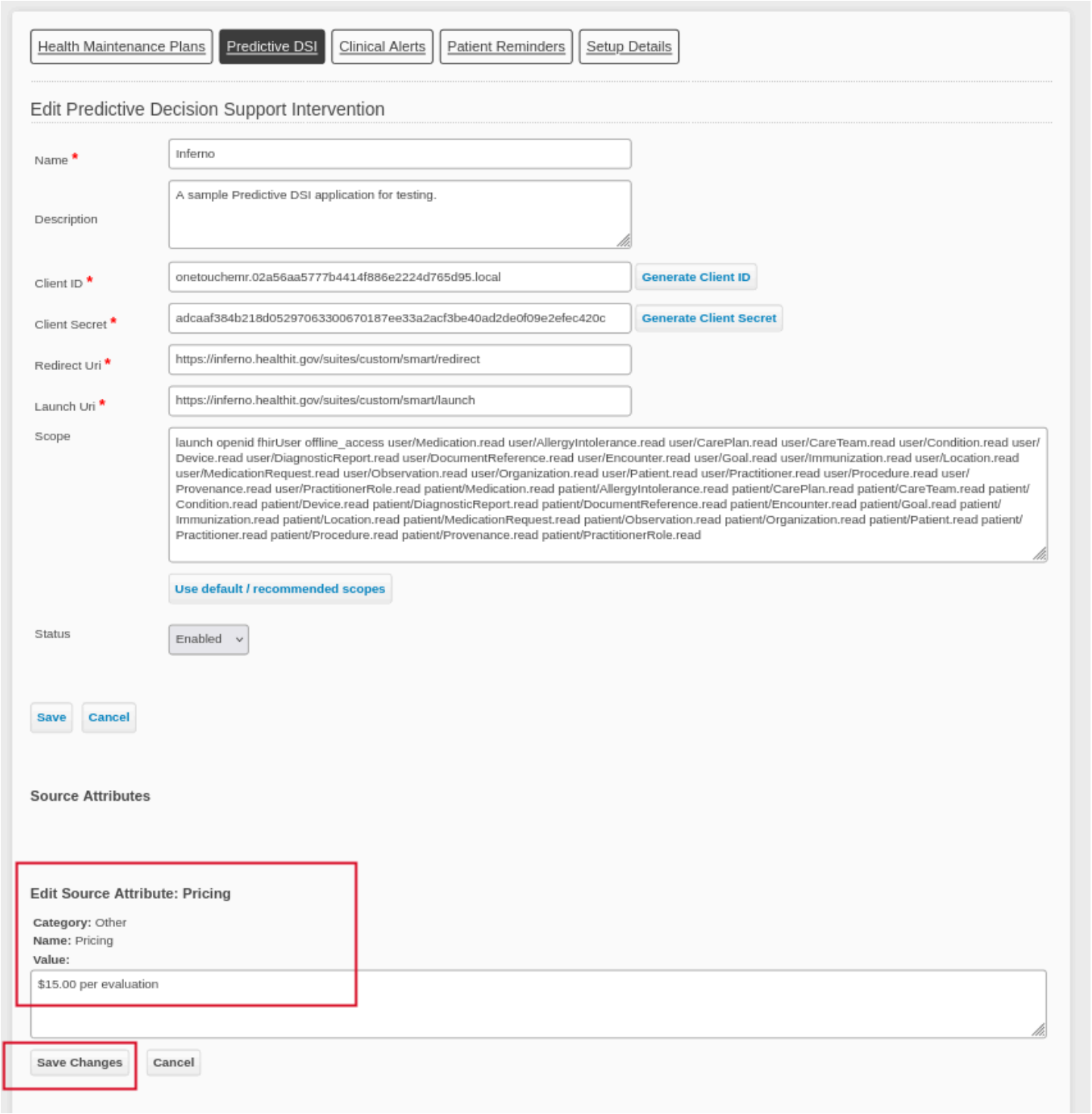
Display 11-12 of 12 — << Previous 1 2

Add Source Attribute

Select Source Attribute Category

Value:

Add



Time Allotted: 60 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Administration Menu on Top -> Health Maintenance -> Predictive DSI -> Click an item from the list -> Source Attributes -> Select an item from the Source Attribute List -> Edit the value -> Save

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

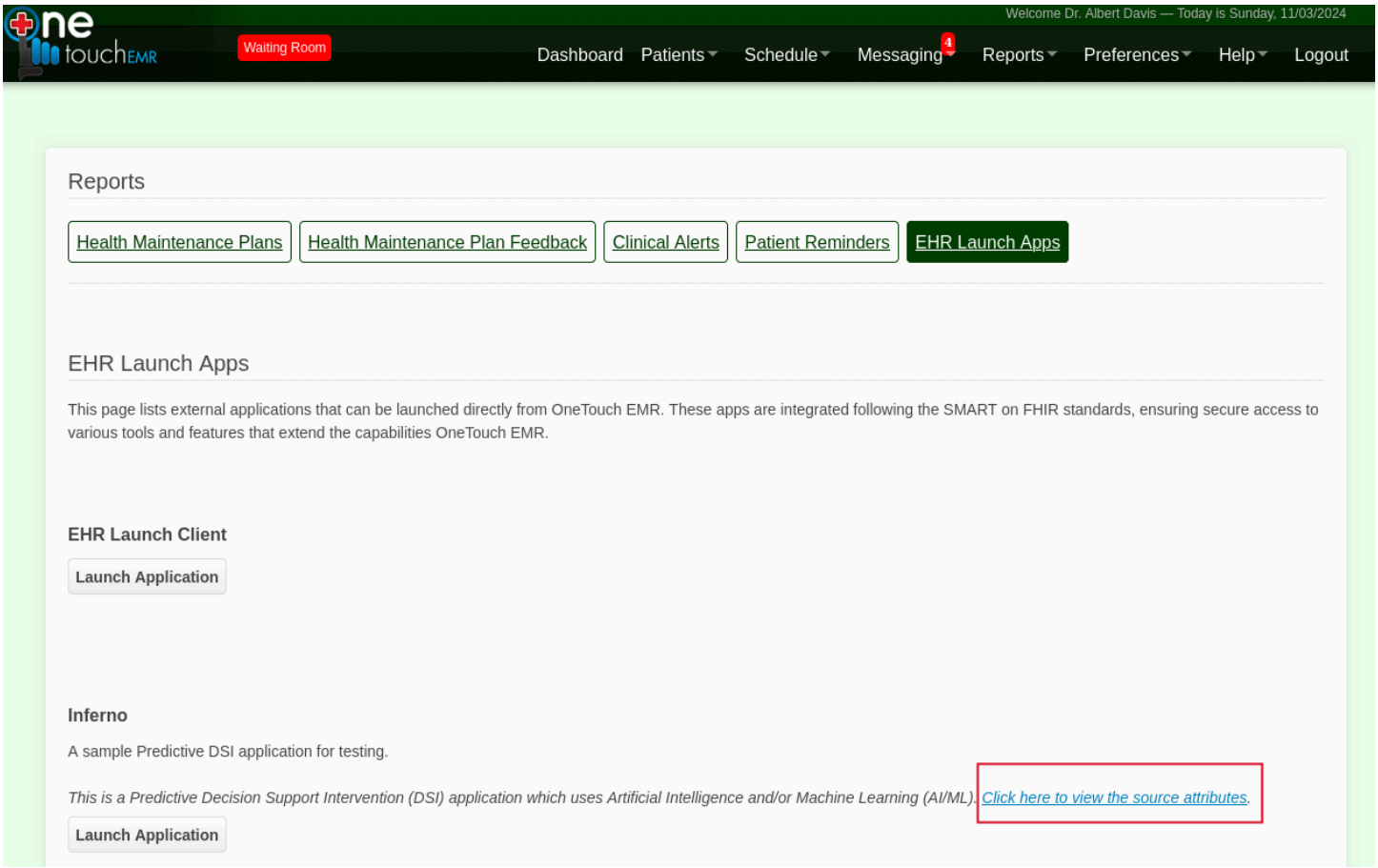
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

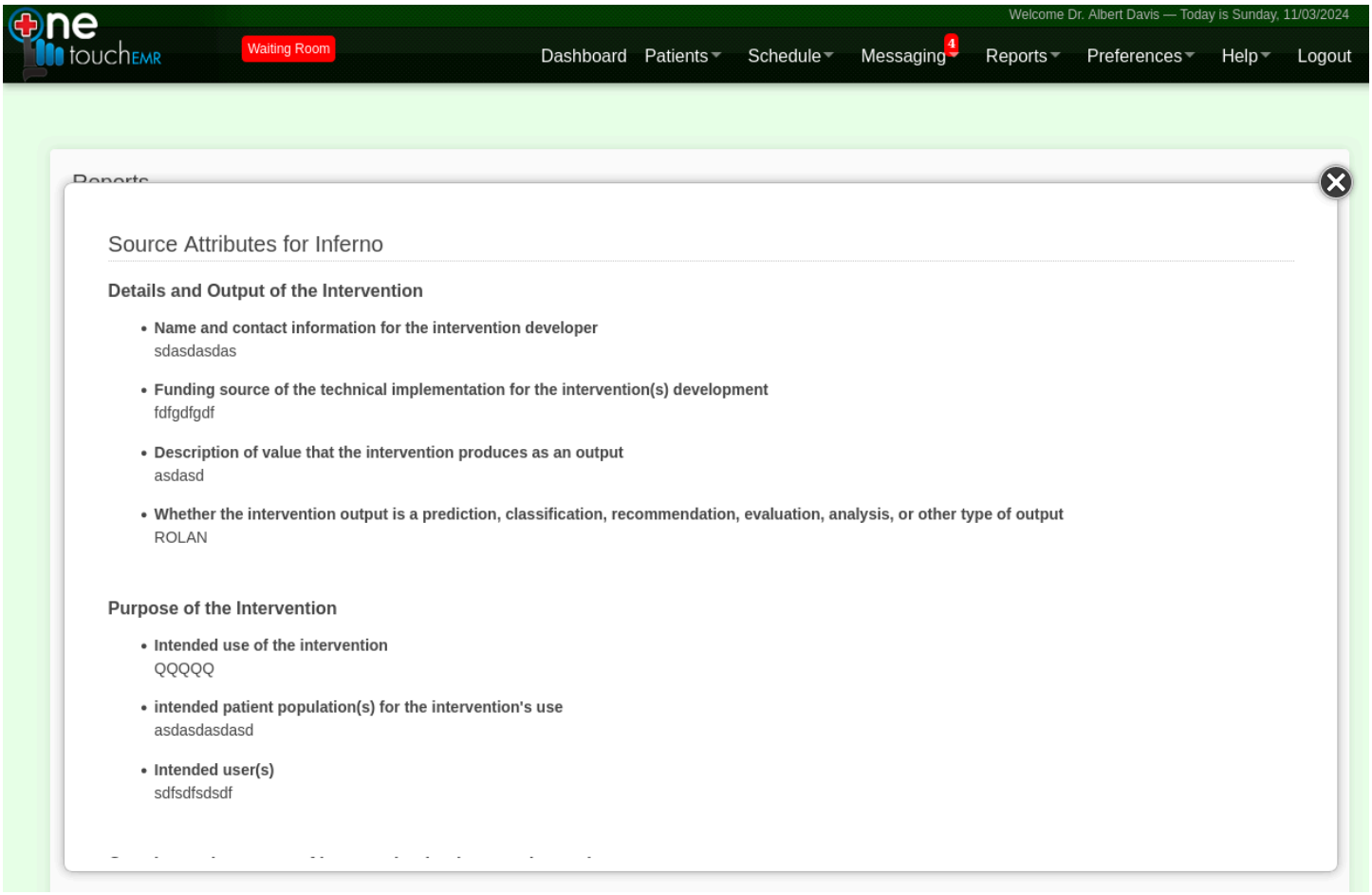
Administrator/Logger Comments:

<u>Task 37: User accesses user-defined source attributes for a Predictive DSI</u>

<u>Prerequisite:</u> User logged in as clinician role (provider or nurse practitioner). At least one Predictive DSI application is enabled.

Instructions: Access the list of available EHR Launch apps under the Report -> Health Maintenance Menu. Select a Predictive DSI application among the list and view the source attributes.





Time Allotted: 20 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Reports Menu on Top -> Health Maintenance -> EHR Launch Apps -> Navigate to any Predictive DSI application -> View Source Attributes

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

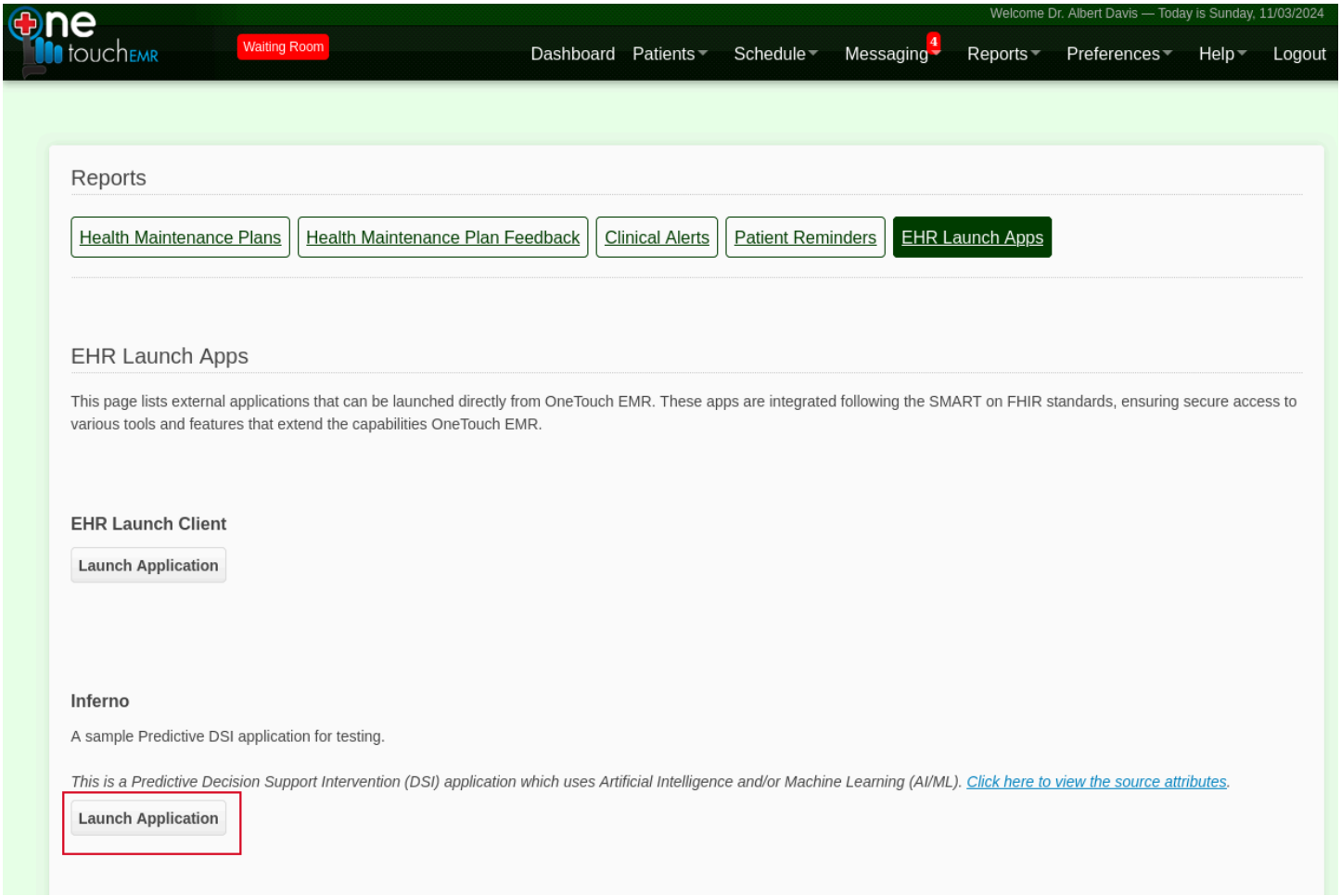
Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

Task 38: User triggers a user-supplied Predictive DSI

Prerequisite: User logged in as clinician role (provider or nurse practitioner). At least one Predictive DSI application is enabled.

Instructions: Access the list of available EHR Launch apps under the Report -> Health Maintenance Menu. Select a Predictive DSI application among the list and click Launch Application. Follow the instructions, this includes selecting a patient.



Time Allotted: 20 Seconds

Task Time:

Success:

Easily Completed:	Completed with Difficult or Help:	Not Completed:	Comments:

Optimal Path: Reports Menu on Top -> Health Maintenance -> EHR Launch Apps -> Navigate to any Predictive DSI application -> Launch Application

Correct:	Minor Deviations:	Major Deviations:	Comments:

Observed Errors and Verbalizations:

Rating:

Very Difficult (1)	Difficult (2)	Normal (3)	Easy (4)	Very Easy(5)

Administrator/Logger Comments:

5.3.Appendix C – System Usability Questionnaire

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I think that I would like to use this system frequently	1	2	3	4	5
2. I found the system unnecessarily complex	1	2	3	4	5
3. I thought the system was easy to use	1	2	3	4	5
4. I think that I would need the support of a technical person to be able to use this system	1	2	3	4	5
5. I found the various functions in this system were well integrated	1	2	3	4	5
6. I thought there was too much inconsistency in this system	1	2	3	4	5
7. I would imagine that most people would learn to use this system very quickly	1	2	3	4	5
8. I found the system very cumbersome to use	1	2	3	4	5
9. I felt very confident using the system	1	2	3	4	5
10. I needed to learn a lot of things before I could get going with this system	1	2	3	4	5

5.4.Appendix D – Tasks Performed

Task	Time	Optimal Path
Record a Patient Demographic information	180	4
Modify and Display Patient Demographic Information	150	7
Use CPOE to record Medication	60	5
Use CPOE to change and display Medication	60	6
Use CPOE to record new Lab order	50	6
Use CPOE to change and display Lab order	60	7
User CPOE to record Imaging order	50	6
User CPOE to change and display Imaging order	60	7

Prescribe a new medication that would be contraindicated to patient allergy (drug-allergy interaction)	30	4
Prescribe a medication that would be contraindicated to the patient medication (drug-to-drug interaction)	30	4
Configure a health maintenance plan for each or a combination of the following: problem list, medication list, demographics, and/or lab tests and results, vital signs and a combination of two.	180	8
Enroll a patient in one health maintenance plan based on a diagnosis in their active problem list	50	5
Record and Parse a UDI in implantable device list	60	8
Access UDI device information and Change device status	30	7
Incorporate CCDA to create new patient	180	8
Conduct reconciliation of Medication, Allergies and Problems	180	11
Generate new CCDA with reconciled data	180	10
Create a new Prescription	180	9
Cancel Prescription	30	6
Change Prescription	120	6
Refill prescription	120	10
Receive fill status notification	20	4
Request and receive medication history information	30	5
Adjust the severity level of drug-drug interaction	30	6
User selects (activates/adds/enables/configures) evidence-based DSI using any of the required elements alone or in combination	120	5
User records source attributes for evidence-based DSI	30	5
User changes source attributes for evidence-based DSI	60	6
User accesses source attributes for evidence-based DSI	20	4
User triggers Decision Support Intervention(s) based on any of the required elements alone or in combination	180	8
User accesses source attributes for triggered evidence-based DSI	20	4
User triggers Decision Support Intervention(s) based on the problems, medications, allergies and intolerances incorporated from a transition of care/referral summary C-CDA file using (b)(2) functionality (if applicable)	60	7
User provides feedback for a triggered evidence-based DSI	30	5
User exports feedback data in a computable format, including the data identified in (b)(11)(ii)(C) at a minimum (intervention, action taken, user feedback provided (if applicable), user, date, and location)	30	4
User selects (activates/adds/enables/configures) Predictive DSI using the required USCDI data elements	120	5
User records user-defined source attributes for a Predictive DSI	30	6
User changes user-defined source attributes for a Predictive DSI	60	8
User accesses user-defined source attributes for a Predictive DSI	20	5
User triggers a user-supplied Predictive DSI	20	5