Common Industry Format

For Electronic Health Record Usability Testing

PCE Care Management, Version 9.3

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Common Industry Format for Usability Test Reports

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1. Executive Summary

A usability test of PCE Care Management, version 9.3 was conducted between the dates of September 4, 2017 through September 22, 2017. The test was conducted in either live sessions or over an internet teleconference (JoinMe), depending on the location of the testing subject. The purpose of this test was to test and validate the usability of the current user interface, and to provide evidence of usability in the EHR Under Test (EHRUT). During the usability test, 10 system users matching the target demographic criteria served as participants and used the EHRUT in simulated, but representative tasks.

The study collected performance data on the following tasks typically conducted in the EHRUT:

- Computerized Provider Order Entry (CPOE)
    - Medications
    - Labs
    - Diagnostic Imaging
- Drug-Drug and Drug-Allergy Interaction Checks
- Demographics
- Problem List
- Medication List
- Medication Allergy List
- Clinical Decision Support
- Implantable Device List
- Clinical Information Reconciliation
- Electronic Prescribing

During the one-on-one usability test (lasting no more than 2 hours total), each participant was greeted by an administrator and asked to review and sign an informed consent/release form (included in Appendix B); they were instructed that they could withdraw at any time. Participants did have prior experience with versions of the EHR, and were trained in the standard manner in which training is conducted by the vendor. Additional, brief demonstration-based training was performed for certain user tasks that are not typically performed by certain tasks, or for new functionality that was not in previous versions of the system. Users used a generic system, rather than a system that was customized for each user's particular agency.

The administrator introduced the test, and instructed participants to complete a series of tasks (given one at a time) using the EHRUT. During the testing, the administrator timed the test and recorded user performance data. The administrator did not give participants 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
- Participant's verbalizations
- Participant's satisfaction ratings of the system

All participant data was de-identified—no correspondence could be made from the identity of the participant to the data collected. Following conclusion of the testing, participants were asked to complete a post-test interview. Participants were not compensated for their time. The following is a summary of the performance and rating data collected on the EHRUT.[1]

	Task Success	Task Time	Path Deviation	Task Rating (Likert)
	Mean	Mean % of Target[2]	Mean Steps Above Optimal	Mean
Search for Consumer Record	100%	90.73%	0	5.0
CPOE Medications (a1)	100%	84.94%	0.3	5.0
CPOE Labs (a2)	100%	96.20%	0.1	5.0
CPOE Imaging (a3)	100%	130.28%	0.1	5.0
Drug-Drug / Drug Allergy Interactions (a4)	100%	70.23%	0.4	5.0
Demographics (a5)	100%	79.84%	0.3	4.9
Problem List (a6)	100%	104.95%	0.2	5.0
Medication List (a7)	100%	94.17%	0.2	4.9
Medication Allergy List (a8)	100%	88.13%	0.1	5.0
Clinical Decision Support (a9)	100%	75.34%	0.5	4.9
Implantable Device List (a14)	100%	110.69%	0.4	4.7
Clinical Information Reconciliation (b2)	100%	103.88%	0.5	4.6
e-Prescribing (b3)	100%	104.20%	0.7	4.9

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[1] Note: This table summarizes and averages data from the multiple tasks within each category.
[2] Target is 1.33x Optimal Time

2. **Introduction**

The EHRUT tested for this study was PCE Care Management, version 9.3 ("PCM" or "EHRUT"). PCM was designed to present behavioral health and physical health medical information to health care providers in an ambulatory and managed-care setting. The usability testing attempted to represent realistic exercises and conditions. The target community is primarily behavioral health.

The purpose of this study was to test and validate the usability of the current user interface, and provide evidence of usability in the EHRUT. To this end, measures of effectiveness, efficiency, and user satisfaction were captured during the usability testing. This included task time, task success rate, path deviation, and the participant's subjective impressions of EHR usability.

3. **Method**

Participants

A total of 10 participants were tested on the EHRUT. Participants in the test were three prescribers, one nurse, and six project manager or system analysts. Participants were recruited by PCE and were not compensated for their time. Participants were given the same orientation and level of training as typical end users would have received. For new tasks that were unfamiliar to the users (e.g., new functions), additional, brief training was provided.

Recruited participants had a mix of backgrounds and demographic characteristics. The following is a table of participants by characteristics, including demographics, professional experience, computing experience, and product experience. Participant names were replaced with participant IDs so that an individual's data cannot be tied back to individual identities.

Participant ID	Gender	Age Group	Education	Occupation / Role	Computer Experience in Years	Product Experience in Years	Assistive Technology Needs
PID-01	Female	30-39	Doctorate	Physician	15	5	None
PID-02	Male	30-39	Doctorate	Physician	20	1	None
PID-03	Female	40-49	Master's Degree	Nurse Practitioner	30	7	None
PID-04	Female	30-39	Bachelor's Degree	Nurse	15	6	None
PID-05	Female	40-49	Master's Degree	Project Manager	25	8	None
PID-06	Male	30-39	Bachelor's Degree	System Analyst	25	10	None
PID-07	Female	40-49	Bachelor's Degree	Project Manager	20	9	None
PID-08	Male	30-39	Bachelor's Degree	System Analyst	20	10	None
PID-09	Male	30-39	Bachelor's Degree	System Analyst	25	6	None
PID-10	Male	40-49	Bachelor's	System	30	11	None

			Degree	Analyst			

Participants were scheduled for one-hour sessions at their convenience during the testing schedule. Time between sessions varied based on participant schedules. A summary of the demographics of participants is in Appendix A.

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 one EHR. Each participant used the system in a quiet room, free from distraction during the entire session, 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 in the allotted time without assistance
- Time to complete tasks
- Number of steps per task
- Number and types of errors
- Path deviations
- Participant's comments
- Participant's satisfaction ratings of the system

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, including:

1. Search for and access a patient's record
2. CPOE – Meds, Trigger Drug-Drug / Drug Allergy Warnings, Trigger CDS, ePrescribe
3. CPOE – Labs
4. CPOE – Diagnostic Imaging
5. Demographics
6. Problem List
7. Medication list
8. Medication allergy list
9. Implantable Device List
10. Clinical Information Reconciliation and Incorporation

Tasks were selected based on frequency of use, criticality of function, and in accordance with the 2015 ONC EHR Certification Program. Miscellaneous administrative functions were not included in the testing as such tasks have lower relevance to clinical functions that are the focus of this testing and the Safety Enhanced Design of the system.

Procedures

Upon arrival, participants were greeted; their identity was verified and matched with a name on the participant schedule. Participants were then assigned a participant ID. The usability testing staff conducting the test was a qualified data system administrator familiar with the requirements of this testing process. Each participant reviewed and signed an informed consent and release form (See Appendix B). 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, and
- Without using a "think aloud" technique, except where a verbalization is requested in the instructions.

Task timing began once the administrator finished reading the task description and stated "Begin." Task timing ended when the participant indicated they had successfully completed the task by stating "Done." Scoring is discussed below in the Data Scoring section.

Following the session, the administrator gave the participant an opportunity to provide commentary that was recorded by the administrator. Participants were then thanked for their participation and the session was ended.

Participants' demographic information, task success rate, time on task, total steps to complete, deviations, errors, verbal comments, and post-test questionnaire were recorded into a spreadsheet.

Test Location

All participants were tested in a secure, quiet room with minimal distractions, equipped with a computer that could connect to the EHRUT and provide remote teleconferencing through WebEx. The administrator and/or data logger and the participant were the only people on the teleconference.

Test Environment

The EHRUT would typically be used in a healthcare office or facility. In this instance, the testing was conducted in a healthcare or similar (non-clinical) office setting. For testing, the participant used a standard Windows workstation that accessed the EHRUT using Internet Explorer. The participants used a mouse and keyboard to interact with the EHRUT. The application was set up according to vendor's documentation and recommended configuration. The application itself was running on a Linux web platform using a training database on a LAN connection. 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.

Test Forms and Tools

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

- Informed Consent
- Moderator's Guide

Examples of these documents can be found in Appendices B and C.

Participant Instructions

The administrator reads the following instructions aloud to each participant:

> Thank you for participating in this study. Your input is very important. Our session today will last about 120 minutes. During that time you will use an instance of an electronic health record. I will ask you to complete a few tasks using this system and answer some questions. You should complete the tasks as quickly as possible making as few errors as possible. Please try to complete the tasks on your own following the instructions very closely. Please note that we are not testing you, we are testing the system. Therefore if you have difficulty, all this means is that something needs to be improved with the system. I will be here in case you need specific help, but I am not able to instruct you or provide help on how to use the application.
>
> Overall, we are interested in how easy or difficult this system is to use, what in it would be useful to you, and how we could improve it. Please be honest with your opinions. Should you feel it necessary, you are able to withdraw at any time during the testing.

Following the procedural instructions, participants were shown the EHRUT, the administrator gave the participant control of the keyboard through the teleconferencing software, and the administrator gave the following instructions:

For each task, I will read the description to you and say "Begin." At that point, please perform the task and say "Done" once you believe you have successfully completed the task. I would request that you not talk aloud or comment while you are doing the tasks, unless I specifically ask that you do so to indicate that you have reviewed or completed a specific step. I will ask your impressions about the task once you are done.

Overall, we are interested in how easy or difficult this system is to use, what in it would be useful to you, and how we could improve it. Please be honest with your opinions. Should you feel it necessary, you are able to withdraw at any time during the testing.

Participants were then given the tasks outlined in this document to complete. Tasks are listed in the moderator's guide in Appendix C.

Usability Metrics

According to the NIST Guide to the Processes Approach for Improving the Usability of Electronic Health Records, EHRs 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 this test were to assess:

1. Effectiveness of EHRUT by measuring participant success rates and errors.
2. Efficiency of EHRUT by measuring the average task time and path deviations
3. Satisfaction with EHURT by measuring ease of use ratings

Measure	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 for the task. The total number of successes were calculated for each task and then divided by the total number of times the task was attempted. The results are provided as a percentage. Task times were recorded for successes.
Effectiveness (Task Failures)	If the participant abandoned the task, did not reach the correct answer, or performed it incorrectly, or reached the end of the allotted time before successful completion, the task was counted as a "Failure." No task times were recorded for errors.
Efficiency (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.
Efficiency (Task Time)	Each task was timed when the administrator said "Begin" until the participant said, "Done." If he or she failed to say "Done," the time was stopped when the participant stopped performing the task. Only task times for tasks that were successfully completed were included in the average task time analysis. Average time per task was calculated for each task. These were compared to target task times defined as 1.33 times the amount of time it would take for an expert to complete the same task.
Satisfaction (Task Rating)	Participant's subjective impression of the ease of use of the application was measured by administering a simple post-task questionnaire. The participant was asked to rate the overall difficulty of a task using a Likert scale on a scale of 1 (very difficult) to 5 (very easy). To measure participants' confidence in and likeability of the EHRUT overall, the testing team administered the System Usability Scale (SUS) post-test questionnaire. Questions included, "I think I would like to use this system frequently," "I thought the system was easy to use," and "I would imagine that most people would learn to use this system very quickly."

4. <u>Results</u>

Data Analysis and Recording

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 data excluded from the analyses. The usability testing results for the EHRUT are detailed below. The results should be seen in light of the objectives and goals outlined in Section 3.2 Study Design. The data should yield actionable results that, if corrected, yield material, positive impact on user performance.

Task	Task Success	Task Time	Path Deviation	Task Rating (Likert)
	Mean	Mean % of Target	Mean Steps Above Optimal	Mean
1. Access patient record				
1.a Search for and Access Patient	100%	90.73%	0.0	5.0
2. CPOE Meds (a1), Drug-Drug / Drug-Allergy Checks (a4), CDS Rules (a9), eRx (b3)				
2.a. Record, Trigger Drug-Drug / Drug-	100%	70.23%	0.4	5.0

Allergy Interactions and CDS Rules (a1, a4, a9)				
2.b. eRx Create (b3)	100%	108.27%	0.6	4.9
2.c. CDS Source Information (a9)	100%	80.45%	0.6	4.8
2.d. Change (a1)	100%	125.94%	0.5	5.0
2.e. Send Change (b3)	100%	110.15%	0.6	5.0
2.f. Display (a1)	100%	58.65%	0.0	5.0
2.g. Cancel (b3)	100%	94.74%	0.6	5.0
2.h. Refill (b3)	100%	77.69%	1.4	4.6
2.i. Fill Status (b3)	100%	146.37%	0.7	5.0
2.j. Med History (b3)	100%	87.97%	0.1	5.0
3. CPOE Labs (a2)				
3.a. Record (a2)	100%	101.13%	0.2	5.0
3.b. Change (a2)	100%	80.70%	0.1	5.0
3.c. Display (a2)	100%	106.77%	0.0	5.0
4. CPOE Imaging (a3)				
4.a. Record (a3)	100%	153.76%	0.4	5.0
4.b. Change (a3)	100%	103.26%	0.0	5.0
4.c. Display (a3)	100%	133.83%	0.0	5.0
5. Demographics (a5)				
5.a. Record (a5)	100%	81.95%	0.8	4.7
5.b. Change (a5)	100%	82.37%	0.0	5.0
5.c. Display (a5)	100%	75.19%	0.0	5.0
6. Problem List (a6)				
6.a. Record (a6)	100%	91.23%	0.4	4.9
6.b. Change (a6)	100%	96.99%	0.2	5.0
6.c. Display (a6)	100%	120.30%	0.1	5.0
6.d. History (a6)	100%	111.28%	0.2	5.0
7. Medication List (a7)				
7.a. Record (a7)	100%	79.45%	0.2	4.8
7.b. Change (a7)	100%	103.26%	0.0	5.0
7.c. Display (a7)	100%	91.73%	0.0	5.0
7.d. History (a7)	100%	102.26%	0.5	4.8
8. Medication Allergies (a8)				
8.a. Record (a8)	100%	94.36%	0.1	5.0
8.b. Change (a8)	100%	85.21%	0.1	5.0
8.c. Display (a8)	100%	82.71%	0.0	5.0
8.d. History (a8)	100%	90.23%	0.2	5.0
9. Implantable Device List (a14)				
9.a. Record (a14)	100%	73.68%	0.0	5.0
9.b. Change (a14)	100%	152.13%	1.3	4.2
9 c. Access (a14)	100%	106.27%	0.0	5.0
10. Clinical Information Reconciliation (b2)				
10.a. Incorporate (b2)	100%	111.90%	0.6	4.2
10.b. Generate (b2)	100%	95.86%	0.3	5.0

Discussion of the Findings

1. Effectiveness

The system was found to be effective in that nearly all participants were successful in completing the tasks within the allotted time. The path deviation data shows that most tasks were able to be completed without any significant

deviation, and most deviation occurred when a user "mis-clicked" a link. More significant path deviations were found in areas where users were less familiar due to the fact that they either did not typically use the function or the functionality was new to them. This included creating Imaging Orders (which most users do not do), some of the new electronic prescribing functionality (such as fill status and refill), and implantable devices. It was further found that once users found the area they were looking for in the system, the usage of the functionality resulted in fewer deviations. In addition, users noted that while they were slower in using unfamiliar functionality, those functions were generally welcome and users expressed a general positive overall satisfaction with the function. Overall, the system appears to have a high level of effectiveness for the users accomplishing the designated tasks, and particularly those usually performed by users on a day-to-day basis. Additional training, especially on new functionality, should be implemented.

2. Efficiency

Based on the observations of task time and deviation data, task times indicated a reasonable level of conformance to the chosen measure for measuring efficiency. The measure for efficiency is the ratio of Actual Task Time vs. Optimal Task Time x 1.3. Based on this measure, the total average ratio was 98.81% of Target. It is worth noting that some users used workflow patterns that were more efficient than the "standard workflow." This occurred, for example, in the View Allergy step, where users viewed the Allergies through the header, rather than through the typical list. Based on User feedback, it was determined that users were least efficient in the areas of the system that were (1) outside of their normal workflow, (2) were differently implemented in their "own" system, or (3) were new to them (i.e., recording implantable device information). It was noted, with the implantable devices, that using a barcode scanner on a real example would create significant additional efficiencies. Overall, the results indicate that the product allows users to complete the indicated tasks in an efficient manner. It is expected that efficiency will increase with training and additional familiarity with new functions.

3. Satisfaction

Based on the individual task ratings, as well as participant verbal responses and commentary, most users indicated a high level of satisfaction with the system overall. Most tasks were found to be easy to use on the 1-5 scale provided (1=hard, 5=easy), with an average score of 4.916. The highest levels of frustration related to those areas of the system that were not typically used by the participants in their day-to-day workflows, and those areas of the system that were new to the users.

4. Major Findings

Overall, this study found that the majority of participants found the system easy to use, and effective and efficient in performing the tasks examined, particularly the system functions that were related to delivering clinical services within the workflows they were familiar with. Participants also commented that although some functions were more difficult to use, once they were familiarized with those areas, the overall experience was that their usage was intuitive. Users commented on the straightforward design of clinical forms and integration of functions into clinical documentation.

5. Areas for Improvement

Participants commented that certain functions could be easier to perform and easier to find, including the clinical information reconciliation, and certain of the history elements. The implantable device listing also received commentary that while easy to use, was not necessarily intuitive, especially where users were required to manually enter UDIs. In addition, participants recommended that training and/or "quick start" guides be developed to help users navigate new workflows and functions that are unfamiliar to existing users. These items, and miscellaneous other comments have been taken back to the design team for review and development.

Appendix A – Participant Demographics

Gender
Male   5
Female   5

Age Group
30-39   6
40-49   4

Occupation / Role
Physician   2
Nurse Practitioner   1
Nurse   1
Project Manager   2
System Analyst   4

Computer Experience
0-5 years   0
6-10 years   0
11-15 years   2
16-20 years   3
21-25 years   3
26-30 years   2
30-35 years   0

Product Experience
0-2 years   1
3-5 years   1
6-8 years   4
9+ years   4

Appendix B – Informed Consent Form

INFORMED CONSENT

PCE Systems would like to thank you for participating in this study. The purpose of this study is to evaluate an electronic health records system. If you decide to participate, you will be asked to perform several tasks using the prototype and give your feedback. The study will last about 120 minutes.

Agreement

I understand and agree that as a voluntary participant in the present study conducted by PCE Systems, I am free to withdraw consent or discontinue participation at any time. I understand and agree to participate in the study conducted by PCE Systems.

I understand that my actions in the system may be recorded and that information is for research purposes only, and that my name and image will not be used for any purpose other than this study. I relinquish any rights to the recording and understand that any recording may be copied and used by PCE Systems for the research purposes stated herein without further permission.

I understand and agree that the purpose of this study is to make software applications more useful and usable in the future.

I understand and agree that if any data collected from this study is shared outside of PCE Systems, that data confidentiality is assured because only de-identified data will be used in the analysis and reporting of results.

I agree to immediately raise any concerns or areas of discomfort with the study administrator. I understand that I can leave at any time.

Please check one of the following:

[ ]   YES, I have read the above statement and agree to be a participant.
[ ]   NO, I choose not to participate in this study.

Signature: _____ Date: _____

Appendix C – Moderator's Guide

Prior to Testing
- Confirm schedule with participants
- Ensure EHRUT test environment is running properly
- Ensure equipment is running properly

Prior to each participant
- Reset application
- Configure user and functional authority
- Start session with JoinMe

Prior to each task
- Reset application to starting point for next task

After each participant
- Obtain satisfaction ratings
- Solicit feedback
- Thank participant

Orientation

Thank you for participating in this study. Your input is very important. Our session today will last about 120 minutes. During that time you will use an instance of an electronic health record. I will ask you to complete a few tasks using this system and answer some questions. You should complete the tasks as quickly as possible making as few errors as possible. Please try to complete the tasks on your own following the instructions very closely. Please note that we are not testing you, we are testing the system. Therefore if you have difficulty, all this means is that something needs to be improved with the system. I will be here in case you need specific help, but I am not able to instruct you or provide help on how to use the application.

Overall, we are interested in how easy or difficult this system is to use, what in it would be useful to you, and how we could improve it. Please be honest with your opinions. Should you feel it necessary, you are able to withdraw at any time during the testing.

Preliminary Questions

- What age group do you fall into, 20-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80-89)?
- Rate your experience with computer systems and electronic health records on a scale from 1 to 5, 1 being "very little" and 5 being "very high".

Tasks

TASK	INSTRUCTIONS	TIME TO COMPLETE	TOTAL NUMBER OF STEPS (DEVIATIONS)	SATISFACTION (LIKERT 1-5)	NOTES
1. Access patient record					
1.a Search for and Access Patient	Please access the Consumer Medical Chart for John Doe (MRN #11)				
2. CPOE Meds (a1), Drug-Drug / Drug-Allergy Checks (a4), CDS Rules (a9), eRx (b3)					
2.a. Record, Trigger Drug-Drug / Drug-Allergy Interactions and CDS Rules (a1, a4, a9)	Place a medication order for Abilify 2 MG Tablet. The SIG should be for the consumer to take 2 by mouth once daily. Verbally note to the proctor each of the following: (1) any drug-drug interactions, (2) any drug-allergy interactions, and (3) any other Clinical Decision Support rules that were triggered				
2.b. eRx Create (b3)	Electronically prescribe the order you entered. Stop just prior to sending to the pharmacy.				
2.c. CDS Source Information (a9)	View the bibliographic or source information relating to the Clinical Decision Support rule that was triggered				
2.d. Change (a1)	Modify the medication order for Abilify to 5 MG. The SIG will remain the same.				
2.e. Send Change (b3)	Electronically request the change. Stop just prior to sending to the pharmacy.				
2.f. Display (a1)	Display the revised medication order				
2.g. Cancel (b3)	Electronically cancel the order. Stop just prior to sending to the pharmacy.				
2.h. Refill (b3)	Review the currently outstanding refill requests in the system, and refill the Zyprexa. Stop just prior to sending to the pharmacy.				
2.i. Fill Status (b3)	Review the fill status of the Zyprexa.				
2.j. Med History (b3)	Review the pharmacy medication history for this consumer.				
3. CPOE Labs (a2)					
3.a. Record (a2)	Place a lab order for CBC with Differential / Platelets				
3.b. Change (a2)	Modify the lab order to be a CBC without Differential / Platelets				

3.c. Display (a2)	Display the revised lab order				
4. CPOE Imaging (a3)					
4.a. Record (a3)	Place an order for a Chest X-Ray, 2 views				
4.b. Change (a3)	Modify the Chest X-Ray order to 4 views				
4.c. Display (a3)	Display the revised Chest X-Ray order				
5. Demographics (a5)					
5.a. Record (a5)	Create a new record for John Smith with the following demographics: • DOB: 01/01/1990 • Birth Sex: Male • Race: White • Ethnicity: Not Hispanic or Latino • Sexual Orientation: Heterosexual • Gender Identity: Male				
5.b. Change (a5)	Modify John Smith's demographics to the following: • DOB: 01/01/1991 • Birth Sex: Female • Race: Asian / Pacific Islander • Ethnicity: Hispanic or Latino • Sexual Orientation: Homosexual Gender Identity: Female				
5.c. Display (a5)	Display the updated demographics for John Smith				
6. Problem List (a6)					
6.a. Record (a6)	Use the Diagnosis Update Form to add a diagnosis of Bipolar Disorder / Currently Hypomanic				
6.b. Change (a6)	Use the Diagnosis Update form to change a diagnosis to Bipolar Disorder / Currently manic without psychotic features				
6.c. Display (a6)	Display the current diagnosis				
6.d. History (a6)	Display the consumer's diagnosis history				
7. Medication List (a7)					
7.a. Record (a7)	Add a self-reported medication record for Lipitor				
7.b. Change (a7)	Change the Lipitor record to Crestor				
7.c. Display (a7)	Display the current medication list				
7.d. History (a7)	Display the medication list history				
8. Medication Allergies (a8)					
8.a. Record (a8)	Add an allergy to penicillin with a severity of mild				
8.b. Change (a8)	Modify the allergy to penicillin to a severity of moderate				
8.c. Display (a8)	Display the consumer's allergies				
8.d. History (a8)	Display the consumer's allergy history				
9. Implantable Device					

List (a14)					
9.a. Record (a14)	Add a new implantable device with the following Information: UDI: (01)10884521062856(11)141231(17)150707(10)A21 3B1(21)1234 Status: Active Implanted Date: 01/01/2010 Removal Date: (Leave Blank) Use the system to parse the UDI information and verbally indicate the Brand Name of the device				
9.b. Change (a14)	Change the implantable device to Inactive with a removal date of 02/01/2010				
9 c. Access (a14)	View the implantable device information				
10. Clinical Information Reconciliation (b2)					
10.a. Incorporate (b2)	Review the medication, diagnosis, and allergy information in the following CCD, and reconcile it with the information contained in this consumer's record.				
10.b. Generate (b2)	Generate a new CCD with the reconciled list				