Part 1: UCD Process Applied

NIST 7741 UCD processes was used during the creation of the software for the applicable criteria.

Name: (NISTIR 7741) NIST Guide to the Processes Approach for Improving the Usability of Electronic Health Records

Description: NIST guide to the processes approach for improving the usability of electronic health records. One of the main purposes of this guide is to provide practical guidance on methods relating to UCD and usability testing. The intended audiences of this document are those with a role in determining the features and functions contained in the EHR and how those are represented in the user interface.

Citation: InSchumacher, Schumacher, Lowry, & Information Technology Laboratory (National Institute of Standards and Technology), 2010, p. xx

References:
Schumacher, R. M., Schumacher, R. M., Lowry, S. Z., & Information Technology Laboratory (National Institute of Standards and Technology). (2010). NIST guide to the processes approach for improving the usability of electronic health records.

EHR Usability Test Report of eMedicalPractice 2.0

Report based on ISO/IEC 25062:2006 Common Industry Format for Usability Test Reports
eMedicalPractice 2.0
Date of Usability Test: [05/16/2017]
Date of Report: [05/24/2017]
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1   Executive summary

A usability test of eMedicalPractice 2.0, and ambulatory EHR was conducted on 02/12/14 in Delray Beach, FL by Normsoftware QA team. The purpose of this test was to test and validate the usability of the current user interface, and provide evidence of usability in the EHR under Test eMedicalPractice. During the usability test, 10 healthcare professionals matching the target demographic criteria served as participants and used the EMEDICALPRACTICE in simulated, but representative tasks.

This study collected performance data on 12 measures typically conducted on an EHR:

o § 170.315 (a)(1) Computerized provider order entry – medications
o § 170.315 (a)(2) Computerized provider order entry – laboratory
o § 170.315 (a)(3) Computerized provider order entry – diagnostic imaging
o § 170.315 (a)(4) Drug-drug, drug-allergy interaction checks
o § 170.315 (a)(5) Demographics
o § 170.315 (a)(6) Problem list
o § 170.315 (a)(7) Medication list
o § 170.315 (a)(8) Medication allergy list
o § 170.315 (a)(9) Clinical decision support
o § 170.315 (a)(14) Implantable device list
o § 170.315 (b)(2) Clinical information reconciliation and incorporation
o § 170.315 (b)(3) Electronic prescribing

During the 60 minutes one-on-one usability test, each participant was greeted by the administrator and asked to review and sign an informed consent/release form, they were instructed that they could withdraw at any time. Participants have prior experience with the EHR

Participant screens, head shots and audio were recorded for subsequent analysis. The following types of data were collected for each participant:

• Number of tasks successfully completed within the allotted time without assistance:16

• Time to complete the tasks: 35

• Number and types of errors: 0, None

• Path deviations: None

• Participant's verbalizations: Few suggestions

• Participant's satisfaction ratings of the system: 5

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

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asked to complete a post-test questionnaire and were compensated with $0 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 the EMEDICALPRACTICE. Following is a summary of the performance and rating data collected on the EMEDICALPRACTICE.

2 Introduction

The EMEDICALPRACTICE tested for this study was eMedicalPractice 2.0 and Ambulatory. Designed to present medical information to healthcare providers in outpatient clinics, the EMEDICALPRACTICE consists of Ambulatory EHR system. The usability testing attempted to represent realistic exercises and conditions.

The purpose of this study was to test and validate the usability of the current user interface, and provide evidence of usability in the EHR Under Test (EMEDICALPRACTICE). To this end, measures of effectiveness, efficiency and user satisfaction, such as ease of use and time taken, were captured during the usability testing.

3 Method

This section outlines all methods.

3.1 PARTICIPANTS

A total of 10 participants were tested on the EMEDICALPRACTICE. Participants in the test were a Medical Biller and EHR customer support engineer. Participants were recruited by NormSoftware LLc and were not compensated for their time. 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 a recruitment screener used to solicit potential participants; an example of a screener is provided in Appendix [1].

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.

Part ID	Gender	Age	Education	Occupation/Role	Professional Experience	Computer Experience	Product Experience	Assistive Technology Needs
1	F	30-39	Some College, no degree	Medical Assistant	96 months	96 months	36 months	N
2	M	60-69	Some College, no degree	Admin Staff	36 months	36 months	36 months	N

3	F	50-59	Associate Degree	Admin Staff	120 months	120 months	8-9 months	N
4	F	20-29	HighSchool graduate with MA Diploma	Medical Assistant	60 months	60 months	36 months	N
5	F	20-29	HighSchool graduate with MA Diploma	AdminStaff	48 months	48 months	53 months	N
6	F	30-39	M.D Doctorate degree	Physician	120 months	120 months	60 months	N
7	F	30-39	Associate Degree	AdminStaff	48 months	48 months	24 months	N
8	F	20-29	HighSchool graduate with MA Diploma	AdminStaff	48 months	48 months	36 months	N
9	F	30-39	HighSchool graduate with MA Diploma	Medical Assistant	72 months	72 months	72 months	N
10	F	40-49	M.D Doctorate degree	Physician	120 months	120 months	120 months	N

10 participants (matching the demographics in the section on Participants) were recruited and 10 participated in the usability test. None of the participants failed to show for the study. Participants were scheduled for 60 minutes sessions with 9:00Am-2:00Pm in between each session for debrief by the administrator(s) and data logger(s), and to reset systems to proper test conditions. A spreadsheet was used to keep track of the participant schedule, and included each participant's demographic characteristics as provided by the recruiting firm. This section outlines all methods.

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.

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During the usability test, participants interacted with EHR. 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

• Participant's verbalizations (comments)

• Participant's satisfaction ratings of the system

Additional information about the various measures can be found in Section 3.9 on Usability Metrics.

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, including:

Task-1: Demographics
Task-2: Computerized provider order entry – medications
Task-3: Computerized provider order entry – laboratory
Task-4: Computerized provider order entry – diagnostic imaging
Task-5: Problem list
Task-6: Medication list
Task-7: Medication allergy list
Task-8: Implantable device list
Task-9: Clinical decision support
Task-10: Clinical information reconciliation and incorporation
Task-11: Electronic prescribing
Task-12: Drug-drug, drug-allergy interaction checks

Tasks were selected based on their frequency of use, criticality of function, and those that may be most troublesome for users.

3.4 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.

To ensure that the test ran smoothly, two staff members participated in this test, the usability administrator and the data logger. The usability testing staff conducting the test was experienced usability practitioners with each participant reviewed and signed an informed consent and release form (See Appendix 3). A representative from the test team witnessed the participant's signature.

• 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.

For each task, the participants were given a written copy of the task. 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. Scoring is discussed below in Section 3.9.

Following the session, the administrator gave the participant the post-test questionnaire (e.g., the System Usability Scale, see Appendix 5), thanked each individual for their participation. Participants' demographic information, task success rate, time on task, errors, deviations, verbal responses, and post-test questionnaire were recorded into a spreadsheet.

Participants were thanked for their time and compensated.

3.5 TEST LOCATION

The test facility included a waiting area and a quiet testing room with a table, computer for the participant, and recording computer for the administrator. Only the participant and administrator were in the test room. All observers and the data logger worked from a separate room where they could see the participant's screen and face shot, and listen to the audio of the session. To ensure that the environment was comfortable for users, noise levels were kept to a minimum with the ambient temperature within a normal range. All of the safety instruction and evacuation procedures were valid, in place, and visible to the participants.

3.6 TEST ENVIRONMENT

The EMEDICALPRACTICE would be typically be used in a healthcare office or facility. In this instance, the testing was conducted in office location. For testing, the computer used desktop running windows 7.0. The participants used a mouse and keyboard when interacting with the EMEDICALPRACTICE.

The EMEDICALPRACTICE used the monitor screen with resolution of 1366 X 768, with screen display size 21 inches and 32 bit color settings. The application was set up by the test laboratory according to the vendor's documentation describing the system set-up and preparation. The application itself was running on a WINDOWS using a test database on a LAN connection. Technically, the system performance 3-6 seconds 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 control of font size).

3.7 TEST FORMS AND TOOLS

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

1. Informed Consent
2. Moderator's Guide
3. Post-test Questionnaire
4. Incentive Receipt and Acknowledgment Form

The participant's interaction with the EMEDICALPRACTICE was captured and recorded digitally with screen capture software running on the test machine. A web camera recorded each participant's facial expressions synced with the screen capture, and verbal comments were recorded with a microphone. The test session were electronically transmitted to a nearby observation room where the data logger observed the test session

3.8 PARTICIPANT INSTRUCTIONS

The administrator reads the following instructions aloud to the each:

Thank you for participating in this study. Your input is very important. Our session today will last about 60 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 in the system. I will be here in case you need specific help, but I am not able to instruct you or provide help in how to use the application.
Overall, 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. I did not have any involvement in its creation, so please be honest with your opinions. All of the information that you provide will be kept confidential and your name will not be associated with your comments at any time. Should you feel it necessary you are able to withdraw at any time during the testing.

Following the procedural instructions, participants were shown the EHR and as their first task, were given time 60 minutes to explore the system and make comments. Once this task was complete, 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 like to request that you not talk aloud or verbalize while you are doing the tasks.
Participants were then given 9 tasks to complete. Tasks are listed in the moderator's guide in Appendix [B4]. I will ask you your impressions about the task once you are done.

1. Informed Consent
2. Moderator's Guide
3. Post-test Questionnaire
4. Incentive Receipt and Acknowledgment Form

The participant's interaction with the EMEDICALPRACTICE was captured and recorded digitally with screen capture software running on the test machine. A web camera recorded each participant's facial expressions synced with the screen capture, and verbal comments were recorded with a microphone. The test session were electronically transmitted to a nearby observation room where the data logger observed the test session

3.9   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 the test were to assess:
> 1. Effectiveness of eMedicalPractice 2.0 by measuring participant success rates and errors
> 2. Efficiency of eMedicalPractice 2.0 by measuring the average task time and path d eviations
> 3. Satisfaction with eMedicalPractice 2.0 by measuring ease of use ratings

Thank you for participating in this study. Your input is very important. Our session today will last about 60 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 in the system. I will be here in case you need specific help, but I am not able to instruct you or provide help in how to use the application.

4. RESULTS

The following table (Table 2) details how tasks were scored, errors evaluated, and the time data analyzed.

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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. The total number of successes were calculated for each task and then divided by the total number of times that task was attempted. The results are provided as a percentage. Task times were recorded for successes. Observed task times divided by the optimal time for each task is a measure of optimal efficiency. Optimal task performance time, as benchmarked by expert performance under realistic conditions, is recorded when constructing tasks. Target task times used for task times in the Moderator's Guide must be operationally defined by taking multiple measures of optimal performance and multiplying by some factor [e.g., 1.25] that allows some time buffer because the participants are presumably not trained to expert performance. Thus, if expert, optimal performance on a task was [x] seconds then allotted task time performance was [x * 1.25] seconds. This ratio should be aggregated across tasks and reported with mean and variance scores.
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 an "Failures." No task times were taken for errors. The total number of errors was calculated for each task and then divided by the total number of times that task was attempted. Not all deviations would be counted as errors.[11] On a qualitative level, an enumeration of errors and error types should be collected.
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. This path was compared to the optimal path. The number of steps in the observed path is divided by the number of optimal steps to provide a ratio of path deviation. It is strongly recommended that task deviations be reported. Optimal paths (i.e., procedural steps) should be recorded when constructing tasks.
Efficiency: Task Time	Each task was timed from 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. Variance measures (standard deviation and standard error) were also calculated.
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 a 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). These data are averaged across participants. [12] 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 the [EMEDICALPRACTICE] overall, the testing team administered the Likert Scale 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." See full System Usability Score questionnaire in Appendix 5.[13]

Table 2- details how tasks were scored, errors evaluated, and the time data analyzed.

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 data excluded from the analyses.

The usability testing results for the EMEDICALPRACTICE are detailed below (see Table 3). 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.

S.No	Task Name	Task Success		Path Deviation		Task Time						likert scale	
		Mean %	SD%	Observed No. of steps	Optimal No.of steps	Mean (seconds)	SD (seconds)	Optimal (seconds)	Mean Time Deviation (seconds)	Task Errors SD %	Task Errors Mean %	Mean TaskRatings 1=Easy	Task Ratings SD %
1	(a)(5) Demographics	100	0.00	5.1	5	80	13.91	80	70.6	0	0	1.2	33.33
2	(a)(1) Computerized provider order entry – medications	90	0.00	5.1	5	90	21.9	90	83.3		0	1.7	58.82
3	(a)(2) Computerized provider order entry – laboratory	80	0.01	6.1	6	70	21.46	70	62.2	0	0	1.8	64.44
4	(a)(3) Computerized provider order entry – diagnostic imaging	80	0.50	6	6	85	23.72	85	56.2	0	0	1.7	82.94
5	(a)(4) Drug-drug, drug-allergy interaction checks	100	0.00	5	5	75	30.87	75	62.8	0	0	1.5	61.33
6	(a)(6) Problem list	100	0.00	6	6	90	15.69	90	59.1	0	0	1.4	65.00
7	(a)(7) Medication list	90	0.33	5	5	60	18.85	60	49.5	0	0	1.7	61.18
8	(a)(8) Medication allergy list	80	1.00	5	5	60	37.42	60	60.14	0	0	2.7	55.56
9	(a)(9) Clinical decision support	90	0.33	6	6	90	25.14	90	62.8	0	0	1.6	75.00
10	(a)(14) Implantable device list	90	0.33	6	6	90	27.88	90	88.3	3	10	2.2	50.00
11	(b)(2) Clinical information reconciliation and incorporation	100	0.00	5	5	70	15.83	70	53.1	0	0	1.4	85.71
12	(b)(3) Electronic prescribing	100	0.00	6	6	75	19.7	75	55.7	0	0	1.7	52.94

Table- 3

The results from the SUS (System Usability Scale) scored the subjective satisfaction with the system based on performance with these tasks.

4.2 DISCUSSION OF THE FINDINGS

EFFECTIVENESS:
After the completing the tasks, in our conversation this version is more robust and ease of use. System demonstrates great use of navigation with all options/tabs in plain sight. Allows user to switch between tasks and asks to be "SAVED" where needed.

EFFICIENCY:
With few easy click, end user is able to make a note. Allows the user to accomplish tasks with ease. Allows even the most novice of users to use without complications and/or assistance.

SATISFACTION:
With the given statistics by the users, they have expressed more satisfaction. Provides most mandatory fields to be filed for New Patients and Follow-up visits.

MAJOR FINDINGS:
Major finding is more usage of SNOMED codes, system is driven by SNOMED codes. Allow for data to be entered resulting in a more thorough visit/follow-up check-up.

AREAS FOR IMPROVEMENT:
Most of the items user friendly, always there is a room for improvement. Showing the shot cuts for anything that they need when they are doing the patient notes. Lab Result and lab ordering can use more specifics and Social History can include uses of caffeine and other substances that can alter a patient's norm state being.

5. APPENDICES

The following appendices include supplemental data for this usability test report. Following is a list of the appendices provided for all participants:

1: Recruiting screener
2: Participant demographics
3: Non-Disclosure Agreement (NDA) and Informed Consent Form
4: Moderator's Guide
5: System Usability Scale Questionnaire
6: Incentive receipt and acknowledgment form

Part 1: UCD Process Applied

NIST 7741 UCD processes was used during the creation of the software for the applicable criteria.

Name: (NISTIR 7741) NIST Guide to the Processes Approach for Improving the Usability of Electronic Health Records

Description: NIST guide to the processes approach for improving the usability of electronic health records. One of the main purposes of this guide is to provide practical guidance on methods relating to UCD and usability testing. The intended audiences of this document are those with a role in determining the features and functions contained in the EHR and how those are represented in the user interface.

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EHR Usability Test Report of eMedicalPractice 2.0
Report based on ISO/IEC 25062:2006 Common Industry Format for Usability Test Reports
eMedicalPractice 2.0
Certification Criterion**:** §170.315(b)(11) – Electronic Decision Support Interventions (DSI)
Date of Report: [11/28/2025]
Report Prepared By: Norm Software System Labs
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UCD Methodology: NISTIR 7741 / NISTIR 7742 (CIF Template)

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6.0 Executive summary

A usability test of eMedicalPractice 2.0, and ambulatory EHR was conducted on 11/28/25 in Delray Beach, FL by Normsoftware QA team. The purpose of this test was to test and validate the usability of the current user interface, and provide evidence of usability in the EHR under Test eMedicalPractice. During the usability test, 10 healthcare professionals matching the target demographic criteria served as participants and used the EMEDICALPRACTICE in simulated, but representative tasks.

This study collected performance data **new functionality introduced in b11**, not previously part of a9.

o § 170.315(b)(11) Decision support interventions

During the 30 minutes one-on-one usability test, each participant was greeted by the administrator and asked to review and sign an informed consent/release form, they were instructed that they could withdraw at any time. Participants have prior experience with the EHR

Participant screens, head shots and audio were recorded for subsequent analysis. The following types of data were collected for each participant:

• Number of tasks successfully completed within the allotted time without assistance:5

• Time to complete the tasks: 30

• Number and types of errors: 0, None

• Path deviations: None

• Participant's verbalizations: Few suggestions

• Participant's satisfaction ratings of the system: 5

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 $0 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 the EMEDICALPRACTICE. Following is a summary of the performance and rating data collected on the EMEDICALPRACTICE.

7.0 Introduction

The EMEDICALPRACTICE tested for this study was eMedicalPractice 2.0 and Ambulatory. Designed to present medical information to healthcare providers in outpatient clinics, the EMEDICALPRACTICE consists of Ambulatory EHR system. The usability testing attempted to represent realistic exercises and conditions.

The purpose of this study was to test and validate the usability of the current user interface, and provide evidence of usability in the EHR Under Test (EMEDICALPRACTICE). To this end, measures of effectiveness, efficiency and user satisfaction, such as ease of use and time taken, were captured during the usability testing.

8.0 Method

This section outlines all methods.

8.1 PARTICIPANTS

 A total of 10 participants were tested on the EMEDICALPRACTICE. Participants in the test were with medical backgroud. Participants were recruited by NormSoftware LLc and were not compensated for their time. 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 a recruitment screener used to solicit potential participants; an example of a screener is provided in Appendix [10].

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.

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Part ID	Gender	Age	Education	Occupation/Role	Professional Experience (Months)	Computer Experience (Months)	Product Experience (Months)	Assistive Technology Needs
P1	M	20-29	Bachelor's degree	Administrative Staff	5	48	5	N
P2	M	60-69	Associate degree	Administrative Staff	147	147	3	N
P3	M	30-39	Bachelor's degree	Administrative Staff	48	240	48	N
P4	F	30-39	Some college credit, no degree	Clinical Assistant	72	80	72	N
P5	F	20-29	Bachelor's degree	Clinical Assistant	5	60	5	N
P6	F	30-39	Bachelor's degree	RN	10	120	10	N
P7	F	20-29	Associate degree	Clinical Assistant	84	144	84	N
P8	F	30-39	High school graduate, diploma or the equivalent	Clinical Assistant	132	150	132	N
P9	F	50-59	Doctorate degree	MD	300	300	240	N
P10	M	40-49	Doctorate degree	MD	180	180	120	N

10 participants (matching the demographics in the section on Participants) were recruited and 10 participated in the usability test. None of the participants failed to show for the study. Participants were scheduled for 30 minutes sessions with 2:00pm-5:00Pm in between each session for debrief by the administrator(s) and data logger(s), and to reset systems to proper test conditions. A spreadsheet was used to keep track of the participant schedule, and included each participant's demographic characteristics as provided by the recruiting firm. This section outlines all methods.

8.2 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 EHR. 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
• Participant's verbalizations (comments)
• Participant's satisfaction ratings of the system

Additional information about the various measures can be found in Section 8.9 on Usability Metrics.

8.3 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, including:

§ 170.315(b)(11) Decision support interventions
Task1-B11- Locate and View Evidence-Based DSI Source Attributes
Task2-B11- Provide Feedback on Evidence-Based Alert
Task3-B11- Modify Source Attributes for an Evidence-Based DSI
Task4-B11- DSI Selection & Activation Management (Role-Limited)
Task5-B11- Export Decision Support Intervention (DSI) Feedback Data

Tasks were selected based on their frequency of use, criticality of function, and those that may be most troublesome for users.

8.4 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.

To ensure that the test ran smoothly, two staff members participated in this test, the usability administrator and the data logger. The usability testing staff conducting the test was experienced usability practitioners with each participant reviewed and signed an informed consent and release form (See Appendix 10). A representative from the test team witnessed the participant's signature.

• 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.

For each task, the participants were given a written copy of the task. 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. Scoring is discussed below in Section 8.9.

Following the session, the administrator gave the participant the post-test questionnaire (e.g., the System Usability Scale, see Appendix 10), thanked each individual for their participation. Participants' demographic information, task success rate, time on task, errors, deviations, verbal responses, and post-test questionnaire were recorded into a spreadsheet.

Participants were thanked for their time and compensated.

8.5 TEST LOCATION

The test facility included a waiting area and a quiet testing room with a table, computer for the participant, and recording computer for the administrator. Only the participant and administrator were in the test room. All observers and the data logger worked from a separate room where they could see the participant's screen and face shot, and listen to the audio of the session. To ensure that the environment was comfortable for users, noise levels were kept to a minimum with the ambient temperature within a normal range. All of the safety instruction and evacuation procedures were valid, in place, and visible to the participants.

8.6 TEST ENVIRONMENT

The EMEDICALPRACTICE would be typically be used in a healthcare office or facility. In this instance, the testing was conducted in office location. For testing, the computer used desktop running windows 11.0 . The participants used a mouse and keyboard when interacting with the EMEDICALPRACTICE.

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The EMEDICALPRACTICE used the monitor screen with resolution of 1366 X 768, with screen display size 21 inches and 32 bit color settings. The application was set up by the test laboratory according to the vendor's documentation describing the system set-up and preparation. The application itself was running on a WINDOWS using a test database on a LAN connection. Technically, the system performance 3-6 seconds 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 control of font size).

8.7 TEST FORMS AND TOOLS

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

1. Informed Consent
2. Moderator's Guide
3. Post-test Questionnaire
4. Incentive Receipt and Acknowledgment Form

The participant's interaction with the EMEDICALPRACTICE was captured and recorded digitally with screen capture software running on the test machine. A web camera recorded each participant's facial expressions synced with the screen capture, and verbal comments were recorded with a microphone. The test session were electronically transmitted to a nearby observation room where the data logger observed the test session

8.8 PARTICIPANT INSTRUCTIONS

The administrator reads the following instructions aloud to the each:

Thank you for participating in this study. Your input is very important. Our session today will last about 30 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 in the system. I will be here in case you need specific help, but I am not able to instruct you or provide help in how to use the application.
Overall, 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. I did not have any involvement in its creation, so please be honest with your opinions. All of the information that you provide will be kept confidential and your name will not be associated with your comments at any time. Should you feel it necessary you are able to withdraw at any time during the testing.

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Following the procedural instructions, participants were shown the EHR and as their first task, were given time 30 minutes to explore the system and make comments. Once this task was complete, 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 like to request that you not talk aloud or verbalize while you are doing the tasks. Participants were then given 5 tasks to complete. Tasks are listed in the moderator's guide in Appendix [8.3]. I will ask you your impressions about the task once you are done.

1. Informed Consent
2. Moderator's Guide
3. Post-test Questionnaire
4. Incentive Receipt and Acknowledgment Form

The participant's interaction with the EMEDICALPRACTICE was captured and recorded digitally with screen capture software running on the test machine. A web camera recorded each participant's facial expressions synced with the screen capture, and verbal comments were recorded with a microphone. The test session were electronically transmitted to a nearby observation room where the data logger observed the test session

8.9 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 the test were to assess:
1. Effectiveness of eMedicalPractice 2.0 by measuring participant success rates and errors
2. Efficiency of eMedicalPractice 2.0 by measuring the average task time and path d eviations
3. Satisfaction with eMedicalPractice 2.0 by measuring ease of use ratings

9.0 RESULTS

The following table (Table 22) 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. The total number of successes were calculated for each task and then divided by the total number of times that task was attempted. The results are provided as a percentage. Task times were recorded for successes. Observed task times divided by the optimal time for each task is a measure of optimal efficiency. Optimal task performance time, as benchmarked by expert performance under realistic conditions, is recorded when constructing tasks. Target task times used for task times in the Moderator's Guide must be operationally defined by taking multiple measures of optimal performance and multiplying by some factor [e.g., 1.25] that allows some time buffer because the participants are presumably not trained to expert performance. Thus, if expert, optimal performance on a task was [x] seconds then allotted task time performance was [x * 1.25] seconds. This ratio should be aggregated across tasks and reported with mean and variance scores.
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 an "Failures." No task times were taken for errors. The total number of errors was calculated for each task and then divided by the total number of times that task was attempted. Not all deviations would be counted as errors.[11] On a qualitative level, an enumeration of errors and error types should be collected.
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. This path was compared to the optimal path. The number of steps in the observed path is divided by the number of optimal steps to provide a ratio of path deviation.

	It is strongly recommended that task deviations be reported. Optimal paths (i.e., procedural steps) should be recorded when constructing tasks.
Efficiency: Task Time	Each task was timed from 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. Variance measures (standard deviation and standard error) were also calculated.
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 a 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). These data are averaged across participants. [12] 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 the [EMEDICALPRACTICE] overall, the testing team administered the Likert Scale 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." See full System Usability Score questionnaire in Appendix 10.[13]

Table 22- details how tasks were scored, errors evaluated, and the time data analyzed.

9.1 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 data excluded from the analyses.

The usability testing results for the EMEDICALPRACTICE are detailed below (see Table 33). The results should be seen in light of the objectives and goals outlined in Section 8.2 Study Design. The data should yield actionable results that, if corrected, yield material, positive impact on user performance.

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S.No	Task Name	Task Success			Path Deviation		Task Time				Task Errors SD %	Task Errors Mean %	likert scale		
		Mean %	SD	SD%	Observed No. of steps	Optimal No.of steps	Mean (seconds)	SD (seconds)	Optimal (seconds)	Mean Time Deviation (seconds)			Mean TaskRatings 1=Easy	Task Ratings SD	Task Ratings SD %
1	Locate and View Evidence-Based DSI Source Attributes	100	0.00	0.00	5	5	100	58.57	100	90	0	0	1.4	0.66	47.14
2	Provide Feedback on Evidence-Based Alert	100	0.00	0.00	2	2	60	30.14	60	41	0	0	1.2	0.44	36.67
3	Modify Source Attributes for an Evidence-Based DSI	100	0.00	0.00	7	7	90	65.14	90	94	0	0	2.2	0.66	30.00
4	DSI Selection & Activation Management (Role-Limited)	100	0.00	0.00	7	7	100	91.65	100	140	0	0	2	0.63	31.50
5	Export Decision Support Intervention (DSI) Feedback Data	100	0.00	0.00	6	6	100	84.04	100	126	0	0	1.7	0.64	37.65

Table- 33

The results from the SUS (System Usability Scale) scored the subjective satisfaction with the system based on performance with these tasks.

9.2 DISCUSSION OF THE FINDINGS

EFFECTIVENESS:

After the completing the tasks, in our conversation this version is more robust and ease of use. System demonstrates great use of navigation with all options/tabs in plain sight. Allows user to switch between tasks and asks to be "SAVED" where needed.

EFFICIENCY:

With few easy click, end user is able to make a note. Allows the user to accomplish tasks with ease. Allows even the most novice of users to use without complications and/or assistance.

SATISFACTION:

With the given statistics by the users, they have expressed more satisfaction.

MAJOR FINDINGS:

Major finding is missing more visibility and instructions on navigation part.

AREAS FOR IMPROVEMENT:

Most of the items user friendly, always there is a room for improvement.

1. Consider adding tooltips for complex transparency fields.
2. Improve visibility of the "Export DSI Feedback" button.
3. Improve clarity when editing EB DSI attributes.

These refinements are non-critical; overall usability remains strong.

10. APPENDICES

The following appendices include supplemental data for this usability test report. Following is a list of the appendices provided for all participants:
1: Recruiting screener
2: Participant demographics
3: Non-Disclosure Agreement (NDA) and Informed Consent Form
4: Moderator's Guide
5: System Usability Scale Questionnaire
6: Incentive receipt and acknowledgment form

Usability Test Screener

Introduction

Hello, my name is _____ eMedPractice is seeking health care people to take part in a usability test of an Electronic Health Record application.

We would like to ask you a few questions to see if you qualify and if would like to participate. This should only take a few minutes of your time. This is strictly for research purposes. If you are interested and qualify for the study, you will be paid to participate. Can I ask you a few questions?

General Questions

1. [If not obvious] Are you male or female? [Recruit a mix of participants]

A:

2. Have you participated in a focus group or usability test in the past 3 months?

A:

3. Do you, or does anyone in your home, work in marketing research, usability research, web design [...etc.]?

A:

4. Do you, or does anyone in your home, have a commercial or research interest in an electronic health record software or consulting company?

A:

5. Which of the following best describes your age? [23 to 39; 40 to 59; 60 - to 74; 75 and older]

A:

6. Which of the following best describes your race or ethnic group? [e.g., Caucasian, Asian, Black/African-American, Latino/a or Hispanic, etc.]

A:

7. Do you require any assistive technologies to use a computer? [if so, please describe]

A:

Professional Demographics

8. What is your current position and title? (Must be healthcare provider)
   - ☐ RN: Specialty _____
   - ☐ Physician: Specialty _____
   - ☐ Resident: Specialty _____
   - ☐ Administrative Staff
   - ☐ Other [Terminate]

9. How long have you held this position?

A:

10. Describe your work location (or affiliation) and environment? (Recruit according to the intended users of the application) [e.g., private practice, health system, government clinic, etc.]

A:

11. Which of the following describes your highest level of education? [e.g., high school graduate/GED, some college, college graduate (RN, BSN), postgraduate (MD/PhD), other (explain)]

A:

Computer Expertise

12. Besides reading email, what professional activities do you do on the computer? [e.g., access EHR, research; reading news; shopping/banking; digital pictures; programming/word processing, etc.] [If no computer use at all, Terminate]

A:

13. About how many hours per week do you spend on the computer?

A:

14. What computer platform do you usually use? [e.g., Mac, Windows, etc.]

A:

15. What Internet browser(s) do you usually use? [e.g., Chrome, Firefox, IE, AOL, etc.]

A:

16. In the last month, how often have you used an electronic health record?

A:

17. How many years have you used an electronic health record?

A:

18. How many EHRs do you use or are you familiar with?

A:

19. How does your work environment patient records? [Recruit according to the demographics of the intended users]

☐ On paper
☐ Some paper, some electronic
☐ All electronic

Contact Information
May I have your contact information?

- Name of participant:
- Address:
- City, State, Zip:
- Daytime phone number:
- Evening phone number:
- Alternate [cell] phone number:
- Email address:

Before your session starts, we will ask you to sign a release form allowing us to videotape your session. The videotape will only be used internally for further study if needed. Will you consent to be videotaped?

This study will take place in our usability lab at 2150 Lake ida Rd, suite 6, Delray Beach, FL 33445. I will confirm your appointment a couple of days before your session and provide you with directions to our office. What time is the best time to reach you?

Informed Consent

Norm software 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 *60* minutes. At the conclusion of the test, you will be compensated for your time.

Agreement

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

I understand and consent to the use and release of the videotape by *Norm Software, LLc*. I understand that the information and videotape is for research purposes only and that my name and image will not be used for any purpose other than research. I relinquish any rights to the videotape and understand the videotape may be copied and used by *Norm Software, LLc* 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 the data collected from this study may be shared with outside of *Norm Software, LLc* and Normsoftware*'s* client. I understand and agree that data confidentiality is assured, because only de-identified data – i.e., identification numbers not names – will be used in analysis and reporting of the 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:** _____

Orientation (__ minutes)

Thank you for participating in this study. Our session today will last **60 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 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 *stage system, eMedicalPractice 2.0*. Some of the data may not make sense as it is placeholder data.

We are recording the audio and screenshots of our session today. 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?

Preliminary Questions (__ minutes)

What is your job title / appointment?

How long have you been working in this role?

What are some of your main responsibilities?

Tell me about your experience with electronic health records.

Non-Disclosure Agreement

THIS AGREEMENT is entered into as of ___ , ___ , 2017, between
_____ ("the Participant") and the testing organization Norm
Software, LLc located at address 2150 Lake Ida Rd, Suite 6, Delray Beach, FL 33445.

The Participant acknowledges his or her voluntary participation in today's usability study may bring the Participant into possession of Confidential Information. The term "Confidential Information" means all technical and commercial information of a proprietary or confidential nature which is disclosed by Test Company, or otherwise acquired by the Participant, in the course of today's study.

By way of illustration, but not limitation, Confidential Information includes trade secrets, processes, formulae, data, know-how, products, designs, drawings, computer aided design files and other computer files, computer software, ideas, improvements, inventions, training methods and materials, marketing techniques, plans, strategies, budgets, financial information, or forecasts.

Any information the Participant acquires relating to this product during this study is confidential and proprietary to Test Company and is being disclosed solely for the purposes of the Participant's participation in today's usability study. By signing this form the Participant acknowledges that s/he will receive monetary compensation for feedback and will not disclose this confidential information obtained today to anyone else or any other organizations.

Participant's printed name: _____

Signature: _____   Date: _____

Moderator's Guide

Administrator _____

Data Logger _____

Date _____ **Time** _____

Participant # _____

Location _____

Prior to testing

☐ Confirm schedule with Participants
☐ Ensure EHRUT lab environment is running properly
☐ Ensure lab and data recording equipment is running properly

Prior to each participant:
☐ Reset application
☐ Start session recordings with *tool*

Prior to each task:
☐ Reset application to starting point for next task

After each participant:
☐ End session recordings with *tool*

After all testing
☐ Back up all video and data files

Task 1: Locate and View Evidence-Based DSI Source Attributes (___   *Seconds*)

Purpose:
 Evaluate the user's ability to view the alert related DSI source attributes for transparency.

Scenario:
 "As a provider reviewing this patient, you receive an alert for Ampicillin Allergy Alert. By clicking on the view DSI Source info you should be able to review the source data."

Success:
☐   Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed
Comments:

Task Time: _____ Seconds

Patient Chart: 36

Optimal Path: (*Login Screen →   "EMR" Menu on to navigation   →   Search & Select a patient →   "Alerts" on the top bar bobble with number of alerts →   View Evidence based DSI Source Info)*

Customer Path=>

☐   Correct
☐   Minor Deviations / Cycles :: Describe below
☐   Major Deviations :: Describe below

Comments:

Observed Errors and Verbalizations:
Comments:

Rating:
Overall, this task was: _____

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments:

Task 2: Provide Feedback on Evidence-Based Alert (___   *Seconds*)

Purpose:
 Evaluate the user's ability to record feedback (accept/dismiss/override) when an EB DSI fires for a patient.

Scenario:
 "As a provider reviewing this patient, you receive an alert for Ampicillin Allergy Alert. Record your action: Accept, Dismiss, or Override."

Success:
☐   Easily completed
☐   Completed with difficulty or help :: Describe below
☐   Not completed
Comments:

Task Time: _____ Seconds

Patient Chart: 36

Optimal Path: (Next to the alert look for "*Clinical Response For DSI session*" ➔   *Select action taken(accept/dismiss/reject) and optionally comment & save)*

Customer Path=>

☐   Correct
☐   Minor Deviations / Cycles :: Describe below
☐   Major Deviations :: Describe below

Comments:

Observed Errors and Verbalizations:
Comments:

Rating:
Overall, this task was: _____

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments:

Task 3: Modify Source Attributes for an Evidence-Based DSI (___ *Seconds*)

Purpose:
 Evaluate the user's ability to access and modify evidence-based DSI source attributes presented in plain language.

Scenario:
 "You are the clinical administrator. Update the Pneumonia Screening rule with new transparency details, including citation, guideline source, funding source, and demographic use indicators by clicking on add/edit DSI Source info.".

Success:
☐ Easily completed
☐ Completed with difficulty or help:: Describe below
☐ Not completed
Comments:

Task Time: _____ Seconds

Optimal Path: (Login *Screen → Practice Setup → Master Setup → Manage DSI Config → Evidence Based Alerts Tab → Click on "*Add/Edit DSI Source info*" next to the alert name (intervention) → Update citation / funding source / race used)*

Customer Path=>

☐ Correct
☐ Minor Deviations / Cycles: Describe below
☐ Major Deviations: Describe below

Comments:

Observed Errors and Verbalizations:
Comments:

Rating:
Overall, this task was: _____

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments:

Task 4: DSI Selection & Activation Management (Role-Limited) (___ *Seconds*)

Purpose:
 Evaluate the user's ability to configure limited user/roles to manage and activate DSI Setup.

Scenario:
 "A limited set of enabled roles is configured by an admin, defining who may activate DSIs. Only users with these configured roles are allowed to select and activate interventions."

Success:
☐ Easily completed
☐ Completed with difficulty or help: Describe below
☐ Not completed
Comments:

Task Time: _____ Seconds

Optimal Path: (Login *Screen* → *Practice Setup* → *Master Setup* → *Manage Tabs* → *Search "Manage DSI Config"* → Under actions Click on "Manage Roles" → *Search & select roles to manage give access and click on update)*

Customer Path=>

☐ Correct
☐ Minor Deviations / Cycles :: Describe below
☐ Major Deviations :: Describe below

Comments:

Observed Errors and Verbalizations:
Comments:

Rating:
Overall, this task was: _____

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments:

Task 5: Export Decision Support Intervention (DSI) Feedback Data (___ *Seconds*)

Purpose:
 To allow authorized users to download DSI feedback data for analysis, auditing, and ONC certification reporting.

Scenario:
 "Authorized users can export DSI feedback data based on selected filters (date range, provider, patient, DSI type). The system generates a full export file containing all matching feedback records for quality review and ONC compliance reporting."

Success:
☐ Easily completed
☐ Completed with difficulty or help :: Describe below
☐ Not completed
Comments:

Task Time: _____ Seconds

Optimal Path: (*Login Screen* →   Click on "Reports" in the Menu   →   *Select "Clinical Reports"* →   *Click on "DSI feedback"* →   Optionally choose any select fire date as today date "Click on Export" →   View Evidence based DSI Source Info)*

Customer Path=>

☐ Correct
☐ Minor Deviations / Cycles :: Describe below
☐ Major Deviations :: Describe below

Comments:

Observed Errors and Verbalizations:
Comments:

Rating:
Overall, this task was: _____

Show participant written scale: "Very Easy" (1) to "Very Difficult" (5)

Administrator / Note taker Comments:

System Usability Scale

	Strongly disagree				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

INCENTIVE RECEIPT AND ACKNOWLEDGMENT FORM

Acknowledgement of Receipt

I hereby acknowledge receipt of $\$$_____ for my participation in a research study run by *Norm Software, LLc.*

Printed Name: _____

Address: _____

_____

Signature: _____ Date: _____