

# EHR Usability Test Report of Praxis EMR v8.0

Report based on ISO/IEC 25062:2006 - Common Industry Format (CIF) for Usability Test Reports,  
NISTIR 7741 NIST Guide to the Processes Approach for Improving the Usability of Electronic Health Records and NISTIR 7804  
Guide to the Processes Approach for Improving the Usability of Electronic Health Records

Date of Usability Test: 01/13/2020-02/04/2020

Date of Report: 2/5/2020

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## EXECUTIVE SUMMARY

A usability test of Praxis EMR v8 was conducted from 1/13/2020 to 2/4/2020 remotely via internet by our company. The purpose of this examination was to test and validate the usability of the current user interface, and provide evidence of usability in the EHR under Test (EHRUT).

During the usability test, 15 healthcare providers matching the target demographic criteria served as participants and used the EHRUT in simulated, but representative tasks.

This study collected performance data on tasks typically conducted on an EHR:

- Record Medication Order
- Access Medication Order
- Change Medication Order
- Record Laboratory Order
- Access Laboratory Order
- Change Laboratory Order

- Record Radiology/imaging Order
- Access Radiology/imaging Order
- Change Radiology/imaging Order
- Create drug-drug and drug-allergy interventions prior to CPOE completion
- Record Medication List
- Access Medication List
- Change Medication List
- Record Medication Allergy List
- Access Medication Allergy List
- Change Medication Allergy List
- Problem List Interventions
- Medication List Interventions
- Medication Allergy List Interventions
- Demographics Interventions
- Use of Implantable Devices
- Clinical Information reconciliation and incorporation
- Electronic Prescribing
- Clinical Decision Support (Infobutton) functionality

During the one-on-one usability test, each participant was greeted by the administrator and instructed that they could withdraw at any time. Participants had prior experience with the EHR. The administrator introduced the test, showed videos on how to do each task for the specific features, and explained that once each test started no further assistance would be given, and that it was OK not to be able to complete any part of it. It was further explained that this was not testing the client but rather the user friendliness of the application. Participants were then instructed 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 electronically. During each test, the administrator did not give the participant further assistance in how to complete any tasks.

Participant screens 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
- 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 the conclusion of the testing, participants were asked to complete a post-test questionnaire. 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 EHRUT. Following is a summary of the performance and rating data collected on the EHRUT.

The results from the System Usability Scale scored the subjective satisfaction with the system based on performance with these tasks to be: 95.6%

In addition to the performance data, the following qualitative observations were made:

- Major findings

- Overall, the functionalities tested for Praxis v8 were well received by the users that took part in the Usability examination. The one comment that was made throughout was that Praxis has a learning curve and they'd likely need an extensive training session to be able to fully understand the capabilities of the system and the scope of the improvements made. One doctor in particular had not used Praxis in a very long time and found it harder than the rest examined to perform the tasks in the optimal expected time or following the optimal amount of steps.

- Areas for improvement

- Adapt training sessions to have an in-depth showcase of Praxis functionalities to ensure users will understand how far Praxis can go.

## INTRODUCTION

The EHRUT tested for this study was Praxis EMR v8. 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 (EHRUT). To this end, measures of effectiveness, efficiency and user satisfaction were captured during the usability testing.

## METHOD

### PARTICIPANTS

A total of 15 participants were tested on the EHRUT. Each task was tested by 10 participants out of that pool of 15 participants. Participants in the test were not only medical physicians. Participants were not from the testing or supplier organization. Participants were given the opportunity to have the same orientation and level of training as the actual end users would have received.

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 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.

**Table 1**

Participant ID	Gender	Age	Education	Occupation/role	Professional Experience (months)	Computer Experience (moths)	Product Experience (moths)	Assistive Technology Needs
1	Female	50-59	High School	Office Administrator	420	360	95	None
2	Male	70-79	MD	Endocrinologist	539	324	324	None
3	Female	50-59	Associates Degree	Office Administrator	144	240	228	None
4	Male	70-79	MD	Physician	384	420	228	None
5	Male	60-69	MD	Physician	408	120	120	None
6	Male	70-79	MD	MD	539	240	144	None

7	Male	70-79	MD	Physician	479	420	180	None
8	Male	50-59	DPM	Physician	408	240	18	None
9	Male	60-69	MD	Outpatient Family Medicine	228	575	18	None
10	Male	30-39	MD	Physician	120	360	120	None
11	Male	50-59	MD	Physician	336	360	18	None
12	Male	50-59	MD	Physician	312	479	18	None
13	Male	50-59	MD	Physician	120	479	2	None
14	Female	30-39	College	Medical Assistant	95	240	36	None
15	Female	50-59	MD	MD	288	360	71	None

Fifteen participants (matching the demographics in the section on Participants) were recruited and fifteen participated in the usability test. Participants were scheduled for 90-minute sessions. A spreadsheet was used to keep track of the participant schedule, and included each participant's demographic characteristics.

## 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 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 the section on Usability Metrics.

## 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. Record Medication Order
2. Change Medication Order
3. Access Medication Order
4. Record Laboratory Order
5. Change Laboratory Order
6. Access Laboratory Order
7. Record Radiology/imaging Order
8. Change Radiology/imaging Order
9. Create drug-drug and drug-allergy interventions prior to CPOE completion
10. Record Medication List
11. Change Medication List

12. Access Medication List
13. Record Medication Allergy List
14. Change Medication Allergy List
15. Access Medication Allergy List
16. Problem List Interventions
17. Medication List Interventions
18. Medication Allergy List Interventions
19. Demographics Interventions
20. Use of Implantable Devices
21. Clinical Information reconciliation and incorporation
22. Electronic Prescribing
23. Clinical Decision Support (Infobutton) functionality

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

## **PROCEDURES**

The identity of each participant was verified and matched with a name on the participant schedule. Participants were then assigned a participant ID. The administrator provided instructions and tasks, monitored task times, obtained post-task rating data, and took notes on participant comments. The administrator also 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 (see specific instructions below):

- 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.

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.

Following the session, the administrator gave the participant the post-test questionnaire (e.g., the System Usability Scale, see Appendix 2) and 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.

## **TEST LOCATION**

The usability tests conducted as a part of this study were conducted remotely from a lab at Praxis EMR headquarters. The remote tests were conducted using stable and reliable screen share technology and independent and reliable teleconferencing systems.

## **TEST ENVIRONMENT**

To ensure a realistic environment, participants were asked to interact with the system using their own computers and the networks they normally use to access the EHR system. Participants were given access to the remote screen share session and teleconference dial-in information. The administrator was able to view the participants' computer screen and hear the participants' comments via these mechanisms to ensure that data was captured in real time during the course of the test.

The test environment provided by the vendor laboratory, where the participants conducted the tested tasks, was a test database designed to only show patients pertinent to the test, set up on LAN network, running on Windows Server 2008 R2 Enterprise. The display was 1440x900, True Color (32 bits).

## **TEST FORMS AND TOOLS**

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

1. Administrator's guide
2. System Usability Scale (SUS) post-test questionnaire

Examples of these documents can be found in Appendices 1-2 respectively. The administrator's guide was devised so as to be able to capture required data.

The participant's interaction with the EHRUT was captured and recorded digitally with screen capture software running on the administrator's machine and verbal comments were recorded with a microphone.

## **PARTICIPANT INSTRUCTIONS**

The administrator provided the following instructions to each participant (also see the full administrator's guide in Appendix 1):

*Dear Praxis Tester,*

*Thank you for participating in this study. Your input is very important. Our session today will last about 90 minutes. During that time you will use an instance of an electronic medical record. I will show you a quick video on the tasks to complete for each session (there are 8 sessions). You may repeat the video if not clear. Then 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 assist you by reminding you of each specific task that is being requested if needed, but I am not able to instruct you or provide help on how to use the application or perform the task after you've viewed the demos. Upon completion of each task, I will ask you how easy it felt and obtain any other critiques from you. 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. 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. 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.*

*After the test has been completed, we would appreciate you filling out the form below and emailing or faxing this document to us. (FAX 1-818-337-2158)*

*THANK YOU VERY MUCH FOR YOUR ASSISTANCE!*

Participants were then given the tasks to complete. Tasks are listed in the administrator's guide in Appendix 1.

## **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 Praxis EMR v8 by measuring participant success rates and errors
2. Efficiency of Praxis EMR v8 by measuring the average task time and path deviations
3. Satisfaction with Praxis EMR v8 by measuring ease of use ratings

## **DATA SCORING**

The following table (Table 3) details how tasks were scored, errors evaluated, and the time data analyzed.

## **Table 2**

Measures	Rationale and Scoring
<p><b>Effectiveness:</b> Task Success</p>	<p>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.</p> <p>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.</p> <p>Task times were recorded for successes. Observed task times divided by the optimal time for each task is a measure of optimal efficiency.</p> <p>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 administrator's guide were operationally defined by taking multiple measures of optimal performance and multiplying by a factor of 1.25 that allows some time buffer because the participants are 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 was aggregated across tasks and reported with mean and variance scores.</p>
<p><b>Effectiveness:</b> Task Failures</p>	<p>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 taken for errors.</p> <p>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. This should also be expressed as the mean number of failed tasks per participant.</p> <p>On a qualitative level, an enumeration of errors and error types were collected.</p>
<p><b>Efficiency:</b> Task Deviations</p>	<p>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.</p>
<p><b>Efficiency:</b> Task Time</p>	<p>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.</p>

<b>Satisfaction:</b> 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. 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 Praxis EMR v5.27 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.” See full System Usability Score questionnaire in Appendix 3.
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## RESULTS

### 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 EHRUT are detailed below (see Table 4). The results should be seen in light of the objectives and goals outlined in the section on Study Design. The data should yield actionable results that, if corrected, yield material, positive impact on user performance.

Although 15 total participants helped us with the efforts of our Usability testing, each task was tested by only 10 participants. Due to the amount of tasks and time restraints, not all doctors tested all 20 evaluated tasks. Some users only participated in testing the electronic prescribing function, and some doctors tested all functionalities except electronic prescribing.

Measure	N	Task Success	Path Deviation	Steps	Task Time (sec)		Errors	Task Ratings 5=Very easy
Task	#	% Mean/SD	Mean (SD)	Observed / Optimal	Mean (SD)	Deviations: (Observed / Optimal)	Mean (SD)	Mean (SD)
§ 170.315 (a)(5) Demographics	10	90%/31.62	1.1/2.84	17/16	6306.3 (19034.82)	6306.3/309	0.1 (0.31)	4.6(1.05)
§ 170.315 (a)(14) Implantable device list	10	100%/0	0.2/0.42	6/6	61.6 (42.06)	61.6/69	0	5(0)

<b>§ 170.315 (a)(6) Problem list</b>	10	100%/0	0.1/0.31	7/7	124.8 (69.52)	124.8/64	0	4.73(0.59)
<b>§ 170.315 (a)(4) Drug-drug, drug-allergy interaction checks for CPOE</b>	10	100%/0	0.4/0.97	9/9	142.1 (78.25)	142.1/137	0	4.73(0.59)
<b>§ 170.315 (a)(7) Medication list</b>	10	90%/31.62	0.1/0.31	25/25	505.9 (283.2)	505.9/322	0.1(0.31)	4.53(0.91)
<b>§ 170.315 (a)(8) Medication allergy list</b>	10	90%/31.62	0.8/1.47	26/25	505.9 (283.2)	505.9/322	0.1(0.31)	4.53(0.91)
<b>§ 170.315 (a)(2) Computerized provider order entry (CPOE) – laboratory</b>	10	100%/0	0.1/0.31	25/25	505.9 (283.2)	505.9/322	0	4.53(0.91)
<b>§ 170.315 (a)(1) Computerized provider order entry (CPOE) – medications</b>	10	90%/31.62	0.2/0.42	25/25	505.9 (283.2)	505.9/322	0.1(0.31)	4.53(0.91)
<b>§ 170.315 (a)(3) Computerized provider order entry (CPOE) – diagnostic imaging</b>	10	100%/0	0.2/0.63	25/25	505.9 (283.2)	505.9/322	0	4.53(0.91)
<b>§ 170.315 (a)(9) Clinical decision support (CDS)</b>	10	100%/0	0/0	10/10	81.3 (30.56)	81.3/76	0	4.93(0.25)
<b>§ 170.315 (b)(2) Clinical information reconciliation and incorporation</b>	10	100%/0	0.4/0.51	12/12	278.2 (485.67)	278.2/128	0	4.66(0.81)
<b>§ 170.315 (b)(3) Electronic prescribing</b>	10	90%/31.62	6.8/10.3	31/24	778 (706.7)	778/438	1(2.53)	4.66(0.81)

The results from the SUS (System Usability Scale) scored the subjective satisfaction with the system based on performance with these tasks to be: 95.6%. Broadly interpreted, scores under 60 represent systems with poor usability; scores over 80 would be considered above average.

<b>Task</b>	<b>Measure</b>	<b>N</b>	<b>Mean</b>	<b>(SD)</b>	<b>Normalized Average Satisfaction</b>
Clinical Reconciliation - 1. I think that I would like to use this system frequently. (5 totally agree 1 totally disagree)		15	4.86	0.51	97.2
Clinical Reconciliation - 2. I found the system unnecessarily complex. (5 totally agree 1 totally disagree)		15	1.06	0.25	98.6
Clinical Reconciliation - 3. I thought the system was easy to use. (5 totally agree 1 totally disagree)		15	4.73	0.79	94.6
Clinical Reconciliation - 4. I think that I would need the support of a technical person to be able to use this system. (5 totally agree 1 totally disagree)		15	1.20	0.77	96
Clinical Reconciliation - 5. I found the various functions in this system were well integrated. (5 totally agree 1 totally disagree)		15	4.53	0.99	90.6
Clinical Reconciliation - 6. I thought there was too much inconsistency in this system. (5 totally agree 1 totally disagree)		15	1.06	0.25	98.6
Clinical Reconciliation - 7. I would imagine that most people would learn to use this system very quickly. (5 totally agree 1 totally disagree)		15	4.73	0.45	94
Clinical Reconciliation - 8. I found the system very cumbersome to use. (5 totally agree 1 totally disagree)		15	1.06	0.25	98.6
Clinical Reconciliation - 9. I felt very confident using the system. (5 totally agree 1 totally disagree)		15	4.86	0.35	97.2
Clinical Reconciliation - 10. I needed to learn a lot of things before I could get going with this system. (5 totally agree 1 totally disagree)		15	1.46	1.12	90.6
Average normalized satisfaction					95.6%

## **DISCUSSION OF THE FINDINGS**

Generally, our findings from this study were positive. All areas, including high risk areas, scored well in effectiveness, efficiency and satisfaction measures.

### ***EFFECTIVENESS***

The effectiveness of Praxis EMR v8 appears to be high due to the fact that few errors were recorded during the usability test, except mainly when the users hadn't made use of the system in a long time, or when performing a task that they don't normally implement at their practices (such as e-prescribing, for example, in the cases that doctors either use another software in the day-to-day, or don't electronically prescribe at all).

### ***EFFICIENCY***

Overall, most users followed the optimal paths to complete each task. When users deviated from the optimal path, not many steps were added. Sometimes users deviated from the optimal expected by the videos shown as demonstration to the participants without taking any extra steps. This is because Praxis EMR has multiple optimal paths for several tasks, and users have the flexibility to choose work paths based on their own preferences.

### ***SATISFACTION***

The satisfaction of Praxis EMR users appears to be high, considering the satisfaction ratings provided by the System Usability Scale.

### ***MAJOR FINDINGS***

Overall, Praxis EMR scored very highly in effectiveness, efficiency, and satisfaction. There were few errors and complaints made by the participants in the study.

#### ***AREAS FOR IMPROVEMENT***

As previously mentioned, Praxis would benefit greatly by focusing on in-depth training sessions with our users to help them learn how to interpret the systems cues and teach them the scope of Praxis' functionalities. Once participants understood the logic behind each stage, it was much easier to intuitively follow the appropriate steps to achieve each task.

#### **APPENDICES**

**Appendix 1: EHRUT Usability Test: Administrator's Guide**

**Appendix 2: System Usability Scale (SUS) Questionnaire**

## **Appendix 1: EHRUT Usability Test: Administrator's Guide**

Administrator:

Date:

Time:

Participant #:

Location:

### **CHECKLIST**

Prior to testing:

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

Prior to each participant:

- Reset application

Upon receiving participant's consent:

- Start session recordings

After each participant:

- End session recordings

After all testing:

- Back up all video and data files

### **ORIENTATION**

The identity of each participant will be verified and matched with a name on the participant schedule. Participants will then be assigned a participant ID.

The administrator will introduce the test. Sample text to read by participants:

Dear Praxis Tester,

Thank you for participating in this study. Your input is very important. Our session today will last about 90 minutes. During that time you will use an instance of an electronic medical record. I will show you a quick video on the tasks to complete for each session (there are 8 sessions). You may repeat the video if not clear. Then 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 assist you by reminding you of each specific task that is being requested if needed, but I am not able to instruct you or provide help on how to use the application or perform the task after you've viewed the demos.

Upon completion of each task, I will ask you how easy it felt and obtain any other critiques from you.

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. 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. 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.

After the test has been completed, we would appreciate you filling out the form below and emailing or faxing this document to us. (FAX 1-818-337-2158)

THANK YOU VERY MUCH FOR YOUR ASSISTANCE!

Participants will then be given 20 tasks to complete. Task timing will begin once the administrator finishes reading the task prompt. The task time will be stopped once the participant indicated they have successfully completed the task.

During the testing, the administrator will time the test and record user performance data. This should include qualitative observations of user reactions to work flows, navigation, types of errors, screen designs, things that tested well, etc. Participants' screens and audio will be recorded for subsequent analysis.

The following types of data will be collected for each participant:

- Demographic data: Gender, Age, Education, Occupation/role, Professional Experience, Computer Experience, Product Experience, Assistive Technology Needs
- Time to complete the tasks
- Number and types of errors
- Path deviations: going to a wrong screen, clicking on an incorrect menu item, following an incorrect link, or interacting incorrectly with an on-screen control
- Participant's verbalizations
- Participant's satisfaction ratings

## **PARTICIPANT DEMOGRAPHIC DATA**

Gender:

Age:

Education:

Occupation/role:

Professional Experience:

Computer Experience:

Product Experience:

Assistive Technology Needs:

## **EVALUATED TASKS**

### **§170.315(a)(5) Demographics**

***Task 1: Create a new patient, identify demographics and change demographics***

**Starting Point:** Home page

**Instructions:** Create new patient Richard Imaginary, assign date of birth and gender. Assign Race, Ethnicity, Language, Sexual orientation and Gender Identity. Change all assigned values.

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

## § 170.315 (a)(14) Implantable device list

*Task 2: Copy the UID provided for the implantable device and paste in the software to apply the device to the patient*

**Starting Point:** Patient's chart

**Instructions:** Copy the provided unique ID for the implantable device and then apply it to the patient's chart in the EHR to apply to the patient as active/inactive.

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

## § 170.315 (a)(6) Problem list

*Task 3: Change a status of a diagnosis and assign a new one*

**Starting Point:** Patient's chart

**Instructions:** Take the current diagnosis and change it from Chronic to Resolved. Then assign a new diagnosis to the patient's chart, either as active, chronic, resolved or inactive.

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

## § 170.315 (a)(4) Drug-drug, drug-allergy interaction checks for CPOE

### *Task 4: Create drug-drug and drug-allergy interventions prior to CPOE completion*

**Starting Point:** SOAP Generator

**Instructions:** Enter a new office visit, prescribe drug that will trigger an allergy alert due to the current medication. Remove said medication and prescribe a new one that will trigger an allergy due to a patient's existing allergy. Remove said medication.

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

## § 170.315 (a)(1) Computerized provider order entry (CPOE) – medications

### *Task 5: Access and Change Medication Order*

**Starting Point:** SOAP Generator

**Instructions:** Choose a different medication to replace the one you just added.

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

## § 170.315 (a)(2) Computerized provider order entry (CPOE) – laboratory

### *Task 6: Record Laboratory Order*

**Starting Point:** SOAP Generator

**Instructions:** Enter a new lab order for the patient.

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below

- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

## **§ 170.315 (a)(3) Computerized provider order entry (CPOE) – diagnostic imaging**

*Task 7: Record Radiology/imaging Order*

**Starting Point:** SOAP Generator

**Instructions:** Enter a new radiology/imaging order for the patient.

**User Path:**

1. Click the "Radiology and Imaging – Send out" label
2. Select a radiology/imaging order from the list

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

## **§ 170.315 (a)(8) Medication allergy list**

*Task 8: Remove medication allergy and add a new one.*

**Starting Point:** SOAP Generator

**Instructions:** Remove medication allergy and add a new one.

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

## **§ 170.315 (a)(7) Medication list**

### ***Task 9: Access Medication List and Record Medication***

**Starting Point:** SOAP Generator

**Instructions:** Access the patient's medication list, remove the current medication and add a new one. Remove current prescription and add a new one.

**User Path:**

1. Click the "Medications" tab
2. Click "Click here to add new drugs"
3. Select a medication from the list

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

## **§ 170.315 (a)(2) Computerized provider order entry (CPOE) – laboratory**

### ***Task 10: Access and Change Laboratory Order***

**Starting Point:** SOAP Generator

**Instructions:** Choose a different lab order to replace the one you just added.

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

## **§ 170.315 (a)(3) Computerized provider order entry (CPOE) – diagnostic imaging**

**Task 11: Access and Change Radiology/imaging Order**

**Starting Point:** SOAP Generator

**Instructions:** Choose a new radiology/imaging order to replace the one you just added.

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: “Very Difficult” (1) to “Very Easy” (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

## **§ 170.315 (a)(9) Clinical decision support (CDS)**

**Task 12: Test the Clinical decision support button**

**Starting Point:** Home page

**Instructions:** Access a new office visit, assign a diagnosis to the patient and check the clinical decision support button. Make sure there’s an agent being sent to the patient and confirm if you want to send.

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: “Very Difficult” (1) to “Very Easy” (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

## **§ 170.315 (b)(2) Clinical information reconciliation and incorporation**

**Task 13: Check for a received document for clinical information and reconcile/incorporate into the patient’s chart**

**Starting Point:** Home page

**Instructions:** Access patient Mary Imaginary and note there has been a CCDA received into the patient’s chart. Go to a new office visit and reconcile the information to show Allergies, Current medications and the Problem List.

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

### **§ 170.315 (b)(3) Electronic prescribing**

*Task 14: Send new prescription to the pharmacy.*

**Starting Point:** SOAP Generator

**Instructions:** Note the prescribed drug assigned to the patient and make sure the prescription is sent to the Pharmacy.

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

*Task 15: Check for messages from the Pharmacy regarding a change request*

**Starting Point:** Home page

**Instructions:** Check for messages received from the pharmacy and make a change to a previously prescribed drug as requested.

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

***Task 16: Check for messages from the Pharmacy regarding a refill request***

**Starting Point:** Home page

**Instructions:** Check for messages received from the pharmacy and refill a previously prescribed drug as requested.

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

***Task 17: Check fill status***

**Starting Point:** Home page

**Instructions:** Check to see if a previously prescribed drug has been received by the Pharmacy

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

***Task 18: Cancel a prescription***

**Starting Point:** E-RX screen

**Instructions:** Take a previously prescribed drug that has been received by the pharmacy and cancel the prescription.

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

- Correct
  - Minor Deviations / Cycles :: Describe below
  - Major Deviations :: Describe below
- Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

**Task 19: Request RX History**

**Starting Point:** E-RX screen

**Instructions:** Using patient History4 Imaginary, request the RX History from the Pharmacy

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

**Administrator / Notetaker Comments:**

**Task 20: Reconcile the medication's medical history**

**Starting Point:** E-RX screen

**Instructions:** Using patient History5 Imaginary, obtain the current medical history from the Pharmacy via Surescripts and reconcile the medications into the patient's chart.

**Success:**

- Easily completed
- Completed with difficulty or help :: Describe below
- Not completed

Comments:

**Optimal Path:**

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

Comments:

**Observed Errors and Verbalizations:**

Comments:

**Rating:**

Scale: "Very Difficult" (1) to "Very Easy" (5)

Overall, this task was: \_\_\_\_

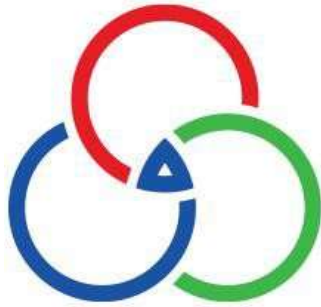
**Administrator / Notetaker Comments:**

After all tasks are completely finished, the administrator will administer the System Usability Scale (SUS) post-test questionnaire.

## **Appendix 2: System Usability Scale (SUS) Questionnaire**

Please place one x in each row.

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



**Praxis**®  
Electronic Medical Records

## **EHR Usability Report for Praxis EMR 9**

45 CFR §170.315 (b)(11)

Date of Usability Test: April 15, 2026 to May 10, 2026  
Date of Report: May 26, 2026  
Report Prepared By: Infor-Med Medical Information Systems, Inc  
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*Report based on ISO/IEC 25062:2006 Common Industry Format for Usability Test Reports*

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## 1. EXECUTIVE SUMMARY

A usability test of PraxisEMR version 9 was conducted from April 15, 2026 to May 10, 2026 by the Infor-Med Medical Information Systems team. The purpose of this test was to evaluate the usability of the new Decision Support Intervention (DSI) functionality required by 45 CFR §170.315 (b)(11) and provide evidence of usability in the EHR Under Test (EHRUT). During the usability test, ten healthcare providers and office administrators matching the target demographic criteria served as participants and used Praxis EMR in simulated, but representative tasks.

The study collected performance data on 8 tasks evaluated to be necessary to assess functionality required by the (b)(11) criteria for which Praxis EMR had never been evaluated and/or certified to:

1. Provide electronic feedback for an evidence-based DSI\*
2. Access feedback and export it in a computable format
3. Select an evidence-based DSI using two new criteria: Unique Device Identifiers for Patient Implantable Device; and, Procedures
4. Access and modify source attributes for an evidence-based DSI
5. Select a predictive DSI
6. Access and modify source attributes for a predictive DSI
7. Identify support of 9 new source attributes for an evidence-based DSI
8. Identify support for 31 source attributes for a predictive DSI

\*Note: the first task was performed by all user-types, while the rest of the tasks were restricted to a limited set of identified users. (For details see Section 3: Methods)

During the 45-minute one-on-one usability test, each participant was greeted by the administrator and asked to review and sign an informed consent/release form (included in Appendix 3); they were instructed that they could withdraw at any time. Participants had prior experience with the EHR. The administrator introduced the test, and instructed participants to complete a series of tasks (given one at a time) using the Praxis EMR. During the testing, the administrator timed the test and, along with the data logger, recorded user performance data electronically. The administrator did not give the participant assistance in how to complete the task. Participant screens, video, 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
- 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 identify of the participant to the data collected. Following the conclusion of the testing, participants were asked to complete a post-test questionnaire. 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 Praxis EMR. Following is a summary of the performance and rating data collected on Praxis EMR.

Measure Task	N	Task Success	Path Deviation	Task Time (Seconds)		Errors	Task Ratings 5 = Easy 1 = Hard
	#	Mean (SD)	Deviations* (Observed / Optimal)	Mean (SD)	Deviations** (Observed / Optimal)	Mean (%)*** (SD)	Mean (SD)
Task 1: Provide electronic feedback for an evidence-based DSI	10	100.00% (0.00%)	100.00% (8 / 8)	29 (12)	90.63% (29 / 32)	0.00 (0.00)	4.90 (0.30)
Task 2: Access feedback and export it in a computable format	10	80.00% (40.00%)	105.26% (20 / 19)	64 (38)	100.00% (64 / 64)	100.00 (110.00)	4.10 (1.00)
Task 3: Select an evidence-based DSI using two new criteria: Unique Device Identifiers for Patient Implantable Device; and, Procedures	10	100.00% (0.00%)	112.50% (9 / 8)	80 (31)	121.54% (79 / 65)	60.00 (70.00)	4.70 (0.50)
Task 4: Access and modify source attributes for an evidence-based DSI	10	100.00% (0.00%)	100.00% (5 / 5)	26 (15)	74.29% (26 / 35)	10.00 (30.00)	5.00 (0.00)
Task 5: Select a predictive DSI	10	90.00% (30.00%)	100.00% (5 / 5)	18 (5)	72.00% (18 / 25)	10.00 (30.00)	4.80 (0.60)
Task 6: Access and modify source attributes for a predictive DSI	10	80.00% (40.00%)	114.29% (8 / 7)	43 (25)	81.13% (43 / 53)	60.00 (90.00)	4.30 (0.90)

Task 7: Identify support of 9 new source attributes for an evidence-based DSI	10	90.00% (30.00%)	100.00% (4 / 4)	24 (5)	109.09% (24 / 22)	0.00 (0.00)	5.00 (0.00)
Task 8: Identify support for 31 source attributes for a predictive DSI	10	100.00% (0.00%)	100.00% (4 / 4)	86 (18)	86.87% (86 / 99)	0.00 (0.00)	4.80 (0.60)

\* Optimal path = 100%, deviations from the optimal path result in a score above 100%

\*\* Expert benchmark = 100%, times slower than the benchmark give a score above 100%  
times faster than the benchmark give a score below 100%

\*\*\* Mean Errors per Task, expressed as a percentage; 100% = an average of 1 error per test

The results from the System Usability Scale scored the subjective satisfaction with the system based on performance with these tasks to be: 81.0/100.0. Broadly interpreted, scores under 60 represent systems with poor usability; scores over 80 would be considered above average perceived usability and user satisfaction with the system. Participants generally reported that the system was easy to use, well integrated, and that they felt confident using it. Most participants also indicated that they would recommend the system to colleagues.

In addition to the performance data, the following qualitative observations were made:

- Major findings
  - Overall system usability was strong, with 6 of 8 tasks achieving success rates of 90.00% or higher and 4 tasks achieving 100.00% success
  - Task 1 achieved 100.00% success with zero errors and a mean task time of 29 seconds
  - Role-based access controls functioned as intended throughout: Basic Users consistently and correctly achieved success identifying their permission level for tasks 2-8 and understood the scope of their access, fulfilling the regulatory requirement that DSI functionality be restricted to a limited set of identified users.
  - Task 2 and 6 achieved success rates of 80.00%, with identified causes documented in the Areas for Improvement section
- Areas for improvement
  - Task 2: failures concentrated around a single UI element (the “Continue” button in the Practice Advisory query workflow), a targeted, fixable issue
  - Task 6: failures related to field discoverability and low familiarity with predictive DSI functionality; qualitative feedback indicated limited perceived clinical utility

of pDSI workflows in their current form, consistent with the fact that Praxis does not currently offer or interface with any pDSIs

- Both Tasks 2, 3, and 6 had the highest path deviation ratios among Medical Officer tasks (105.26%, 112.50% and 114.29% respectively), suggesting that targeted UI improvements to the query entry, and enhanced user orientation and training materials specific to pDSI workflows for those users who request them

## **2. INTRODUCTION**

The EHRUT tested for this study was Praxis EMR version 9. Designed to present medical information to healthcare providers in standard healthcare settings, Praxis EMR is an electronic health record system that generates clinical documentation based on provider input and prior chart data. The system is used for documenting patient encounters, managing problem lists, medications, allergies, and orders, as well as supporting clinical decision-making, quality reporting, and health information exchange. 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 (EHRUT), specifically as it pertains to the functions outlined in 45 CFR §170.315 (b)(11). To this end, measures of effectiveness, efficiency, and user satisfaction, such as time on task, number of errors made, and completion rates were captured during usability testing.

## **3. METHOD**

### **3.1 PARTICIPANTS**

A total of ten participants were tested on Praxis EMR. Ten participants were selected consistent with ONC/NIST guidance recommending 10-15 participants for summative usability testing. Participants in the test were Physicians, Chiropractic Physicians, and Office Administrators/Other. Participants were recruited by Infor-Med Medical Information Systems, Inc. Participants had no direct connection to the development of, or the organization producing Praxis EMR. Participants were not from Infor-Med Medical Information Systems, Inc. Participants are active end-users and have previously received orientation and training on the use of Praxis EMR.

For 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 characteristic, 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.

	<b>Part ID</b>	<b>Gender</b>	<b>Age</b>	<b>Education</b>	<b>Occupation/ Role</b>	<b>Professional Experience (months)</b>	<b>Computer Experience (months)</b>	<b>Product Experience (months)</b>	<b>Assistive Technology Needs</b>
1	1447	Male	60-69	Doctorate degree	Physician	540	252	240	No
2	1785	Male	50-59	Doctorate degree	Physician	240	300	180	No
3	4091	Male	30-39	Doctorate degree	Physician	16	240	24	No
4	4395	Male	50-59	Doctorate degree	Physician	360	300	300	No
5	4500	Female	30-39	Master’s degree	Administrator	12	264	1	No
6	4691	Male	50-59	Doctorate degree	Physician	168	240	120	No
7	5729	Male	50-59	Doctorate degree	Physician	192	240	192	No
8	5785	Female	60-69	Doctorate degree	Administrator	264	300	120	No
9	7668	Male	50-59	Doctorate degree	Physician	240	240	180	No
10	7955	Male	50-59	Doctorate degree	Physician	168	180	180	No

Ten participants (matching the demographics in the section on Participants) were recruited and ten participated in the usability test. No participants failed to show for the study. Participants were scheduled for 45-minute sessions with at least 60 minutes in between sessions to account for debrief by the administrators and data loggers, and to reset systems to proper test conditions. A spreadsheet was used to track the participant schedule and included each participant’s demographic characteristics as provided during recruitment.

## 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 Praxis EMR 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 only interacted with Praxis EMR. Each participant used the system in their own office connecting remotely to the Praxis Test Server while an Administrator and a Data Logger observed the participant's screen using remote desktop software (AnyDesk), as well as the participant's face and voice using video conferencing software (Zoom, Google Meet or similar). Each participant used the same Test Server 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 without assistance within the allotted time
- Time to complete the tasks
- Number and types of errors
- Path deviations
- Participants' 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.

The study design, test methodology and usability report were conducted in alignment with NISTIR 7741 – *NIST Guide to the Process Approach for Improving the Usability of Electronic Health Records* and NISTIR 7742 – *Customized Common Industry Format Template for Electronic Health Record Usability Testing*.

NISTIR 7741 provides guidance on incorporating user-centered design (UCD) principles into health IT development, and introduces an industry standard for user analysis, task analysis, formative testing, and summative usability evaluation. NISTIR 7742 defines the Common Industry Format (CIF) for usability test reporting

and provides a standardized structure for documenting usability evaluation results in a manner that supports transparency and comparability across products.

Citations:

Schumacher, R., Lowry, S. (2010). *NIST Guide to the Processes Approach for Improving the Usability of Electronic Health Records*. NIST Interagency/Internal Report (NISTIR) 7741. National Institute of Standards and Technology, Gaithersburg, MD. [online] <https://doi.org/10.6028/NIST.IR.7741>

Schumacher, R., Lowry, S. (2010). *Customized Common Industry Format Template for Electronic Health Record Usability Testing*. NIST Interagency/Internal Report (NISTIR) 7742. National Institute of Standards and Technology, Gaithersburg, MD. [online] <https://doi.org/10.6028/NIST.IR.7742>

### 3.3 TASKS

A number of tasks were constructed that would be realistic and representative of the activities that are required under 45 CFR §170.315 (b)(11), and to which Praxis EMR had not previously been tested on under 45 CFR §170.315 (a)(9) criteria, including:

1. Provide electronic feedback for an evidence-based DSI
2. Access feedback and export it in a computable format
3. Select an evidence-based DSI using two new criteria: Unique Device Identifiers for Patient Implantable Device; and, Procedures
4. Access and modify source attributes for an evidence-based DSI
5. Select a predictive DSI
6. Access and modify source attributes for a predictive DSI
7. Identify support of 9 new source attributes for an evidence-based DSI
8. Identify support for 31 source attributes for a predictive DSI

Note: (b)(11) stipulates that tasks (2-8) are to be performed restricted to a *limited set of users*. In order to evaluate this criterion, a small subset of participants (2 of 10) were assigned Basic user permissions and the remaining participants (8 of 10) were assigned Medical Officer permissions.

Basic users do not hold sufficient permissions to run feedback reports, select, view, or modify DSIs of any type. The Medical Officer users are the only users in Praxis EMR with permission to run DSI feedback reports, and select, view, and modify

DSIs. Thus, for those tasks where Basic Users were unable to follow the workflow, task success was dependent on the user identifying their level of user permissions and the inaccessibility of these features.

Ten participant IDs were generated randomly, and Basic user permissions were randomly assigned to two of these participant IDs. Participant IDs were randomly assigned to participants at the beginning of each session, and participants were asked to identify their user-type. This distribution ensured that the system's role-based access controls were meaningfully tested and participants performed each applicable task to generate reliable usability metrics.

Tasks were selected based on a technical analysis of the changes from the (a)(9) to the (b)(11) criteria, as well as Praxis EMR's functionalities for which Infor-med Medical Information Systems, Inc. received certification for, and new functionalities for which Praxis EMR had not yet been systematically tested on and certified to. This technical analysis is available for review in Appendix 6.

### 3.4 PROCEDURES

Upon connection to the video conference, participants were greeted; their identify was verified and matched with a name on the participant schedule. Participants were then assigned a participant ID. Each participant reviewed and signed an informed consent and release form (See Appendix 3). The representatives from the test team witnessed the participant's signature.

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 were experienced usability practitioners. The usability administrator holds a doctorate degree in Business Management and has 18 years of experience at Infor-Med Medical Information Systems, Inc. as a Senior Implementation Specialist and certified Praxis trainer, with additional responsibilities as Compliance Manager over the past year. The data logger is a medical graduate (Doctor of Medicine [MD], pending conferral) and holds a Bachelor of Arts degree, and has served as Healthcare Quality & Reporting Analyst at Infor-Med Medical Information Systems, Inc. for 4 years.

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 received a brief, standardized orientation addressing Decision Support Interventions, transparency concepts, and general system navigation. The orientation did not include task-specific procedural instruction or demonstration of the evaluated workflows.

No task-specific guidance was provided by the moderator during task execution. The extent to which participants relied on documentation was recorded for each task and reflected in the reported results.

Participants were instructed to perform the tasks (see specific instructions below):

- 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 participant was 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 (i.e. the System Usability Scale, see Appendix 5), and thanked the individual for their participation. Participant's demographic information, task success rate, time on task, errors, deviations, verbal responses, and post-test questionnaire were recorded into a spreadsheet.

### 3.5 TEST LOCATION

The participants were asked to connect to the virtual test session from their office and were asked to ensure that the space would be quiet and free from distractions during the allotted time for the test. The participants first connected to a virtual conference call (Zoom, Google Meet, or similar) with the Administrator and the Data Logger. The Administrator and Data Logger then connected to the participants desktop via remote desktop software (AnyDesk), and finally the participants

accessed the Praxis Test Server through a secure remote connection. These conditions allowed the Data Logger to see the participant's entire screen and face, as well as listen to the audio of the session.

Participants were reminded prior to the beginning of the test session to ensure that they had a comfortable environment, with noise levels at a minimum, ambient temperature within a normal range, and adequate safety and evacuation protocols in place.

### 3.6 TEST ENVIRONMENT

Praxis EMR would typically be used in a healthcare office or facility. In this instance, testing was conducted virtually with the user present within such a facility. For testing, the users all connected to the same standardized remote Praxis Test Server. The participants used a mouse and keyboard when interacting with Praxis EMR.

The standardized test server displayed the software using a 1920 x 1080 resolution. The application was set up by Infor-Med Medical Information Systems, Inc according to the vendor's documentation describing the system set-up and preparation. The application itself was running on a Microsoft Remote Desktop Services (RDWeb) web client accessed via a standard web browser using a Test Database on a WAN 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 (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

Examples of these documents can be found in Appendices 3-5 respectively. The Moderator's Guide was devised so as to be able to capture required data.

The participants interaction with Praxis EMR was captured and recorded digitally with screen capture software running on the test machine. The video conference

call was recorded, and each camera/voice record was synced with the screen capture. The data logger was connected to the video conference call as well as the test machine in order to observe the test session.

### 3.8 PARTICIPANT INSTRUCTIONS

The administrator reads the following instructions aloud to each participant (see the full moderator's guide in Appendix 4):

*“Thank you for participating in this study. Our session today will last 45 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 help you with anything to do with the system itself. Before beginning the tasks you will be shown a brief orientation video introducing the subject matter of the testing. 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 a final product being tested for certification. Some of the data may not make sense as it is fictitious data for testing purposes only.*

*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. Should you feel it necessary, you are able to withdraw at any time during the testing. Do you have any questions or concerns?”*

Following the procedural instructions, participants were shown the EHR and as their first task, were given as much time as needed 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. I will ask you your impressions about the task once you are done.”*

Participants were given 8 tasks to complete. Tasks are listed in the moderator’s guide in Appendix 4.

### 3.9 USABILITY METRICS

According to the NIST Guide to the Process 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 Praxis EMR by measuring participant success rates and errors
2. Efficiency of Praxis EMR by measuring the average task time and path deviations
3. Satisfaction with Praxis EMR by measuring ease of use ratings

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

<b>Measures</b>	<b>Rationale and Scoring</b>
<p><b>Effectiveness:</b></p> <p>Task Success</p>	<p>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.</p> <p>The total number of success 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.</p> <p>Task times were recorded for successes. Observed task times divided by the optimal time for each task is a measure of optimal efficiency.</p> <p>Optimal task performance time was benchmarked through expert performance by two experienced systems users (the Administrator and the Data Logger) under realistic standardized test conditions using the Praxis EMR test server. Each expert completed each task three times. The mean time across stable trials was calculated and used as</p>

	<p>the baseline optimal time.</p> <p>To account for variability in participant familiarity and natural workflow differences, an adjustment factor was applied to determine the target task times used for task times in the Moderator’s Guide. This multiplier is consistent with common accepted usability benchmarking practices and allows reasonable performance variability without penalizing non-expert users.</p> <p>For tasks with a benchmark duration exceeding 90 seconds, a 1.25 adjustment factor was applied, consistent with NISTIR 7741/7742 guidance. For tasks with a benchmark duration of 90 seconds or under, a 2.0 adjustment factor was applied. This adjustment reflects empirical findings that non-expert older adult users demonstrate completion times approximately 1.5-2x those of expert users on short discrete tasks, and that a proportional short-duration tasks yields and insufficient buffer to distinguish genuine task failure from normal reading and response latency. Thus, if mean expert, optimal performance on a task was [x] seconds then allotted task time performances was [x * 2.0] seconds for tasks under 90 seconds, and [x * 1.25] seconds for tasks exceeding 90 seconds. Benchmarking documentation is retained as part of the usability study record.</p>
<p><b>Effectiveness:</b></p> <p>Task Failures</p>	<p>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 taken for failures.</p> <p>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. This should also be expressed as the mean number of failed tasks per participant.</p> <p>On a qualitative level, an enumeration of errors and error types should be collected.</p>
<p><b>Efficiency:</b></p> <p>Task Deviations</p>	<p>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</p>

	<p>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.</p> <p>It is strongly recommended that task deviations be reported. Optimal paths (i.e., procedural steps) should be recorded when constructing tasks.</p>
<p><b>Efficiency:</b>  Task Time</p>	<p>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. Variance measures (standard deviation and standard error) were also calculated.</p>
<p><b>Satisfaction:</b>  Task Rating</p>	<p>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 5 (Very Easy) to 1 (Very Difficult). These data are averaged across participants.</p> <p>Common convention is that average ratings for systems judged easy to use should be 4.3 or above.</p> <p>To measure participants’ confidence in and likeability of Praxis EMR 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.” See full System Usability Score questionnaire in Appendix 5.</p>

## 4. RESULTS

### 4.1 DATA ANALYSIS AND REPORTING

The results of the usability test were calculated according to the methods specified in the Usability Metrics section above. No participants failed to follow session and task instructions; thus, no data was excluded from the analysis. Calculation of path deviation, task time, and errors was based on data obtained from evaluation of complete and successful workflows, while task success and task rating metrics were calculated based on data from all tasks for all participants. One testing irregularity was noted: the task time for one participant in Task 6 was initially recorded incorrectly and was corrected prior to final analysis. The correction resulted in a successful task completion being properly recorded for the participant, modifying the Task 6 success rate to 80.00%.

The usability testing results for Praxis EMR are detailed in the table 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.

Measure  Task	N	Task Success	Path Deviation	Task Time (Seconds)		Errors	Task Ratings 5 = Easy 1 = Hard
	#	Mean (SD)	Deviations* (Observed / Optimal)	Mean (SD)	Deviations** (Observed / Optimal)	Mean (%)*** (SD)	Mean (SD)
Task 1: Provide electronic feedback for an evidence-based DSI	10	100.00% (0.00%)	100.00% (8 / 8)	29 (12)	90.63% (29 / 32)	0.00 (0.00)	4.90 (0.30)
Task 2: Access feedback and export it in a computable format	10	80.00% (40.00%)	105.26% (20 / 19)	64 (38)	100.00% (64 / 64)	100.00 (110.00)	4.10 (1.00)
Task 3: Select an evidence-based DSI using two new criteria: Unique Device Identifiers for Patient Implantable Device; and, Procedures	10	100.00% (0.00%)	112.50% (9 / 8)	80 (31)	121.54% (79 / 65)	60.00 (70.00)	4.70 (0.50)
Task 4: Access and modify source attributes for an evidence-based DSI	10	100.00% (0.00%)	100.00% (5 / 5)	26 (15)	74.29% (26 / 35)	10.00 (30.00)	5.00 (0.00)

Task 5: Select a predictive DSI	10	90.00% (30.00%)	100.00% (5 / 5)	18 (5)	72.00% (18 / 25)	10.00 (30.00)	4.80 (0.60)
Task 6: Access and modify source attributes for a predictive DSI	10	80.00% (40.00%)	114.29% (8 / 7)	43 (25)	81.13% (43 / 53)	60.00 (90.00)	4.30 (0.90)
Task 7: Identify support of 9 new source attributes for an evidence-based DSI	10	90.00% (30.00%)	100.00% (4 / 4)	24 (5)	109.09% (24 / 22)	0.00 (0.00)	5.00 (0.00)
Task 8: Identify support for 31 source attributes for a predictive DSI	10	100.00% (0.00%)	100.00% (4 / 4)	86 (18)	86.87% (86 / 99)	0.00 (0.00)	4.80 (0.60)

\* Optimal path = 100%, deviations from the optimal path result in a score above 100%

\*\* Expert benchmark = 100%, times slower than the benchmark give a score above 100%  
times faster than the benchmark give a score below 100%

\*\*\* Mean Errors per Task, expressed as a percentage; 100% = an average of 1 error per test

The results from the SUS (System Usability Scale) scored the subjective satisfaction with the system based on performance with these tasks to be: 81.0/100.0. Broadly interpreted, scores under 60 represent systems with poor usability; scores over 80 would be considered above average perceived usability and user satisfaction with the system. Participants generally reported that the system was easy to use, well-integrated, and that they felt confident using it. Most participants also indicated that they would recommend the system to colleagues.

## 4.2 DISCUSSION OF THE FINDINGS

### EFFECTIVENESS

PraxisEMR demonstrated strong effectiveness across the evaluated (b)(11) workflows. Six of eight tasks achieved success rates of 90.00% or higher, with four tasks achieving 100.00% success. Task 1, performed by all user types including Basic Users, achieved a 100.00% success rate with zero errors, demonstrating that the core ebDSI feedback workflow is highly accessible across user roles. Tasks 2 and Task 6 achieved an 80.00% success rate, representing the lowest success rates observed. However, in both cases failures were attributable to specific, identifiable causes rather than systemic usability deficiencies. Notably, Task 6 results are further contextualized by the fact that Praxis does not currently offer or interface with any pDSIs, making participant unfamiliarity with that functionality an expected finding. Role-based access controls were effective throughout testing: Basic Users correctly identified their permission level in every session and successfully

completed their version of each restricted task by acknowledging their lack of access to the relevant functionality, demonstrating that the system appropriately limits DSI functionality to a limited set of identified users as required under (b)(11). Overall, the system demonstrated that its (b)(11) functionality can be used effectively by the intended user population under realistic conditions.

#### EFFICIENCY

PraxisEMR demonstrated adequate efficiency across most evaluated tasks. Task time deviations were within acceptable range for the majority of tasks, with several tasks completed substantially faster than the expert benchmark, including Task 1 (90.63% of benchmark time), Task 4 (74.29% of benchmark time) Task 5 (72.00% of benchmark time), and Task 6 (81.13% of benchmark time). Path deviations were similarly contained, with most tasks completed at or near the optimal number of steps. Task 3 showed slightly elevated path deviation (112.50%), attributable to minor navigational errors that participants self-corrected without administrator intervention. Task 2 showed a path deviation of 105.26% and a task time deviation of 100.00%, consistent with the UI-level difficulty participants encountered at the "Continue" button step, with rapid self-correction in those users who successfully completed the task. Task 6 showed a path deviation of 114.29% and a task time deviation of 81.13%, indicating that participants who completed the task did so efficiently once they correctly identified the relevant fields. These results suggest that the system's workflows are generally efficient, with targeted areas where navigation can be streamlined.

#### SATISFACTION

User satisfaction with PraxisEMR was above average, as reflected in a SUS score of 81.0/100.0. Post-task ratings were consistently high across most tasks, indicating that participants found the workflows easy to complete. Task 4 and 7 each achieved a mean rating of 5.00 (a score of 5 represent "Very Easy" and a score of 1 represents "Very Difficult"), and Tasks 1, 3, 5 and 8 all achieved mean ratings near 5.00. Task 2 received the lowest mean rating of 4.10, consistent with the difficulty participants encountered with the "Continue" button. Qualitative feedback was broadly positive, with participants describing the system as easy to use, straightforward, customizable, and well-suited to clinical workflows. Several participants noted that the system's reporting and Practice Advisory capabilities were particular strengths. Lower engagement and satisfaction ratings observed in pDSI-related tasks were consistent with participants' lack of real-world exposure to that functionality, given that Praxis does not currently interface with any pDSIs. One participant noted

contrast and scaling issues on smaller screens, and another noted that the interface aesthetic felt dated, both of which represent opportunities for UI improvement that fall outside the scope of the (b)(11) evaluation. Several experienced users noted that the system becomes increasingly intuitive with repeated use.

## MAJOR FINDINGS

The usability evaluation of PraxisEMR's (b)(11) functionality yielded predominantly positive results across all three dimensions of usability: effectiveness, efficiency, and satisfaction. The system performed at an above average level as measured by the SUS, and the majority of tasks were completed successfully, efficiently, and with high participant satisfaction. Participants with extensive Praxis EMR experience navigated workflows with minimal deviation, and even less experienced participants were generally able to complete tasks successfully with minor course corrections. The role-based access control structure was validated, with Basic Users appropriately restricted from advanced DSI functionality. Verbal reports from participants reflected confidence in the system and a general willingness to use and recommend it. The Administrator and Data Logger observed that most task failures and deviations were isolated to specific UI chokepoints rather than reflecting broader workflow confusion, and that participants consistently recovered from errors without administrator assistance. Task 6 results are further contextualized by the absence of active pDSI integrations in the current Praxis environment, which accounts for the lower familiarity and perceived utility observed among participants.

## AREAS FOR IMPROVEMENT

Two tasks were identified as areas for improvement. Task 2 (Access and export feedback for ebDSIs) achieved an 80.00% success rate, with failures and deviations concentrated around the "Continue" button in the Practice Advisory query workflow. Multiple participants failed to recognize that this button was required to proceed before entering text in the Free Text field, with one participant verbalizing "I can't type. It doesn't let me type." and another giving up after repeated unsuccessful attempts. This represents a targeted, addressable UI issue. Recommended remediation includes improving the visual prominence of the "Continue" button, adding inline instructional cues at that workflow step, and reviewing the overall discoverability of the query entry workflow. Task 6 also achieved an 80.00% success rate. Failures were attributable to a combination of field discoverability issues and low participant familiarity with predictive DSI functionality. Qualitative feedback consistently indicated that participants found the predictive DSI workflow less

intuitive than the evidence-based DSI workflows, and several participants noted that the volume of source attributes, 31 in total, was excessive, not useful, and difficult to navigate. One participant verbalized that the predictive DSI source attributes have "limited use" in their current form. Recommended remediation includes enhanced user orientation and training materials specific to pDSI workflows, and dedicated training sessions for those users who express interest.

## **5. APPENDICES**

### **5.1 RECRUITING SCREENER**

The following is a list of questions used to screen candidates to participate in testing, along with justification for the question.

1. Are you a male or female?
2. Which of the following describes your age: 23-39, 40-59, 60-74, 75 and older?
3. Which of the following best describes your race or ethnic group: Caucasian, Asian, Black/African-American, Latino/Hispanic, other, prefer not to say.
4. Do you, or does anyone in your home, work in marketing research, usability research, web design, or similar fields?
5. Have you participated in a focus group or usability test in the past 12 months?
6. Do you, or does anyone in your home, have a commercial or research interest in an electronic health record software or consulting company?
7. Do you require any assistive technologies to use a computer? If so, please describe.

#### **Demographics**

8. What is your position and title? RN, Physician, Resident, Administrator, Other. Specialty?
9. How long have you held this position?
10. What is your work location and environment (e.g. private practice, health system, government clinic, etc.)?
11. What is your highest level of education (High School, some college, college graduate [RN for example], postgraduate [MD, PhD for example], other with explanation)?

#### **Computer Expertise**

12. Besides emails, what professional activities do you do on the computer: e.g. access HER, research, read news, shopping/banking, digital pictures, programming, word processing?
13. About how many hours per week would you say you spend on the computer?

14. What computer platform do you usually use? Mac, Windows, Linux, etc.
15. What Internet browsers do you usually use? Firefox, Edge, Opera, Chrome, etc.
16. In the last month, how often have you used an electronic health record?
17. How many years have you used an electronic health records?
18. How many EHRs do you use or are you familiar with?

**Contact Information**

19. Before the test session, 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 recorded?

20. Contact details:

Availability for Test Session

Name

Address, City, State, ZIP

Daytime Phone Number

Evening Phone Number

Email address

## 5.2 PARTICIPANT DEMOGRAPHICS

The following is a breakdown of the key participant demographics of the participants in this study.

### Gender

Men	8
Women	2
Total	10

### Occupation/Role

RN/BSN	0
Physician	7
Admin Staff	3
Total	10

**Years of Experience** 18.3

### Facility Use of EHR

All Paper	0
Some paper, Some EHR	0
All EHR	10
Total	10

The following is a list of deidentified participants with their demographic information

Part ID	Gender	Occupation/Role	Professional Experience (Months)	Facility Use of EHR
1447	Male	Physician	540	All EHR
1785	Male	Physician	240	All EHR
4091	Male	Physician	16	All EHR
4395	Male	Physician	360	All EHR
4500	Female	Administrator	12	All EHR
4691	Male	Physician	168	All EHR
5729	Male	Physician	192	All EHR
5785	Female	Administrator	264	All EHR
7668	Male	Physician	240	All EHR
7955	Male	Physician	168	All EHR

5.3 NON-DISCLOSURE AGREEMENT AND INFORMED CONSENT FORM

**Non-Disclosure Agreement**

This AGREEMENT is entered into as of \_\_\_\_\_, 2026, between \_\_\_\_\_ (“the Participant”) and Infor-Med Medical Information Systems, Inc. located at 5800 S Easter Ave. Suite 500, Commerce, CA 90040.

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 Infor-Med Medical Information Systems, Inc, 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 related to this product during this study is confidential and proprietary to Infor-Med Medical Information Systems, Inc 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 not disclose this confidential information obtained today to anyone else or any other organizations.

Participant’s printed name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## **Informed Consent**

Infor-Med Medical Information Systems, Inc. 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 45 minutes.

### *Agreement*

I understand and agree that as a voluntary participant in the present study conducted by Infor-Med Medical Information Systems, Inc. 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 Infor-Med Medical Information Systems, Inc.

I understand and consent to the use and release of the videotape by Infor-Med Medical Information Systems, Inc. I understand that the information and video recording 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 video recording and understand the video recording may be copied and used by Infor-Med Medical Information Systems, Inc. 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 Infor-Med Medical Information Systems, Inc. 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:** \_\_\_\_\_

5.4 MODERATOR'S GUIDE

**EHR Usability Report for PraxisEMR 9**

**45 CFR §170.315 (b)(11)**

**Moderator's Guide**

**Administrator** \_\_\_\_\_

**Data Logger** \_\_\_\_\_

**Date** \_\_\_\_\_ **Time** \_\_\_\_\_

**Participant #** \_\_\_\_\_

**Assigned User Permissions** Medical Officer / Basic User

**Assigned Source Attributes for Task 7** \_\_\_\_\_

**Assigned Source Attributes for Task 8** \_\_\_\_\_

**Checklist:**

**Prior to Testing**

- Confirm Schedule with Participants
- Ensure Praxis Test Server is running properly
- Ensure recording equipment is running properly

**Prior to each participant**

- Reset application
- Start session recording

**Prior to each task**

- Reset application to starting point for next task

**After each participant**

- End recording Session

**After all testing**

- Back up all video and data files

**Participant Orientation (20 minutes)**

Thank you for participating in this study. Our session today will last 45 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 help you with anything to do with the system itself. Before beginning the tasks you will be shown a brief orientation video introducing the subject matter of the testing. 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 a final product being tested for certification. Some of the data presented may not make sense as it is fictitious data for testing purposes only.

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. Should you feel it necessary, you are able to withdraw at any time during the testing.

Do you have any questions or concerns?

*Show the Orientation Video*

**Preliminary Questions (2 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.

**Preliminary Task: First impression (60 seconds)**

*Show the main window of Praxis EMR to participant*

This is the application you will be working with.

What do you know about it?

Please don't click on anything yet. Do you have any initial comments?

Please take note of your assigned user permissions at this time. You can confirm your level of permission by noting the presence or absence of the Query and Medical Officer Tabs.

*Notes / Comments:*

***General Task 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. I will ask you your impressions about the task once you are done.

**Task 1: Provide electronic feedback for an evidence-based DSI  
(64 seconds)**

**Description of task:**

The Participant will open a new patient note, view a Practice Advisory, click on it to trigger the Practice Advisory, select feedback, and close and save the note.

**Success:**

- Easily Completed
- Complete with difficulty or help – Describe below
- Not completed

*Comments:*

**Task Time:** \_\_\_\_\_ Seconds

**Optimal Path:** Home Screen → Patient Main Screen → New Visit Screen → Select Practice Advisory → Select Feedback → Close Button → OK Button → Finished Record Button

- Correct
- Minor Deviations / Cycles – Describe / enumerate below
- Major Deviations – Describe / enumerate below

*Comments:*

**Observed Errors and Verbalizations:**

*Comments:*

**Rating:**

Overall, this task was: \_\_\_\_\_

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

**Administrator / Notetaker Comments:**

**Task 2: Access feedback and export it in a computable format  
(128 seconds)**

**Description of task:**

Participants assigned Medical Officer user permissions

The participant will navigate to the Query Tab, run the DSI Feedback Query, review the feedback generated, export the data to the desktop as a .txt file, and review the exported data.

Participants assigned Basic user permission

The participant will complete this task by acknowledging that they do not have access to the Query Tab.

**Success:**

- Easily Completed
- Complete with difficulty or help – Describe below
- Not completed

*Comments:*

**Task Time:** \_\_\_\_\_ Seconds

**Optimal Path:** Home Screen → Query Screen → Search DSI → DSI Feedback Report Screen → Input the Name of a DSI Button → Continue Button → Type DSI Name → OK Button → Execute Button → Right-Click Drop-down Menu → Export Data Button → Desktop Button → Save as Type Drop-down Menu → Plain Text (\*.txt) Button → Type File Name → Save Button → OK Button → Minimize Button → Open Text File

- Correct
- Minor Deviations / Cycles – Describe / enumerate below
- Major Deviations – Describe / enumerate below

*Comments:*

**Observed Errors and Verbalizations:**

*Comments:*

**Rating:**

Overall, this task was: \_\_\_\_\_

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

**Administrator / Notetaker Comments:**

**Task 3: Select an evidence-based DSI using two new criteria: Unique Device Identifiers for Patient Implantable Device; and, Procedures (130 seconds)**

**Description of task:**

Participants assigned Medical Officer user permissions

The user will access a new Practice Advisory, read the Practice Advisory Criteria out loud, and activate the Practice Advisory that is based on a Unique Device Identifier for a Patient Implantable.

Participants assigned Basic user permissions

The participant will complete this task by acknowledging that they do not have access to the Medical Officer Tab.

**Success:**

- Easily Completed
- Complete with difficulty or help – Describe below
- Not completed

*Comments:*

**Task Time:** \_\_\_\_\_ Seconds

**Optimal Path:** Home Screen → Medical Officer Screen → Practice Advisory Screen → Right-click drop-down menu → Accept Button → Read out loud the Practice Advisory Criteria → Send Practice Advisory Button → OK Button

- Correct
- Minor Deviations / Cycles – Describe / enumerate below
- Major Deviations – Describe / enumerate below

*Comments:*

**Observed Errors and Verbalizations:**

*Comments:*

**Rating:**

Overall, this task was: \_\_\_\_\_

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

**Administrator / Notetaker Comments:**

**Task 4: Access and modify source attributes for an evidence-based DSI  
(70 seconds)**

**Description of task:**

Participants assigned Medical Officer user permissions

The participant will access a Practice Advisory, review its Source Attributes, modify one of the Source Attributes, and save the Practice Advisory.

Participants assigned Basic user permissions

The participant will complete this task by acknowledging that they do not have access to the Medical Officer Tab.

**Success:**

- Easily Completed
- Complete with difficulty or help – Describe below
- Not completed

*Comments:*

**Task Time:** \_\_\_\_\_ Seconds

**Optimal Path:** Practice Advisory Screen → Right-click drop-down menu → Update Button → Change the Funding Source Field → Send Practice Advisory Button

- Correct
- Minor Deviations / Cycles – Describe / enumerate below
- Major Deviations – Describe / enumerate below

*Comments:*

**Observed Errors and Verbalizations:**

*Comments:*

**Rating:**

Overall, this task was: \_\_\_\_\_

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

**Administrator / Notetaker Comments:**

**Task 5: Select a predictive DSI  
(50 seconds)**

**Description of task:**

Participants assigned Medical Officer user permissions

The user will activate a Predictive DSI.

Participants assigned Basic permissions

The participant will complete the task by acknowledging that they do not have access to the Medical Officer Tab.

**Success:**

- Easily Completed
- Complete with difficulty or help – Describe below
- Not completed

*Comments:*

**Task Time:** \_\_\_\_\_ Seconds

**Optimal Path:** Practice Advisory Screen → Right-click Drop-down Menu → Accept Button → Send Practice Advisory Button → OK Button

- Correct
- Minor Deviations / Cycles – Describe / enumerate below
- Major Deviations – Describe / enumerate below

*Comments:*

**Observed Errors and Verbalizations:**

*Comments:*

**Rating:**

Overall, this task was: \_\_\_\_\_

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

**Administrator / Notetaker Comments:**

**Task 6: Access and modify source attributes for a predictive DSI  
(106 seconds)**

**Description of task:**

Participants assigned Medical Officer user permission

The participant will access a Predictive DSI, review the Source Attributes, modify one of the Source Attributes, and save the Predictive DSI.

Participants assigned Basic user permissions

The participant will complete this task by acknowledging that they do not have access to the Medical Officer Tab.

**Success:**

- Easily Completed
- Complete with difficulty or help – Describe below
- Not completed

*Comments:*

**Task Time:** \_\_\_\_\_ Seconds

**Optimal Path:** Practice Advisory Screen → Right-click Drop-down Menu → Update Button → Double-click on Source Attribute to Modify → Modify Source Attribute text → OK Button → Send Practice Advisory Button

- Correct
- Minor Deviations / Cycles – Describe / enumerate below
- Major Deviations – Describe / enumerate below

*Comments:*

**Observed Errors and Verbalizations:**

*Comments:*

**Rating:**

Overall, this task was: \_\_\_\_\_

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

**Administrator / Notetaker Comments:**

**Task 7: Identify support of 9 new source attributes for an evidence-based DSI (44 seconds)**

**Description of task:**

Participants assigned Medical Officer user permissions

The participant will access an evidence-based DSI, and be asked to identify which one specific source attribute is present from 5 to 13. Each Medical Officer participant is assigned specific source attributes to identify such that, collectively, all required attributes are evaluated at least once during the study.

Participants assigned Basic user permissions

The participant will complete this task by acknowledging that they do not have access to the Medical Officer Tab.

**Success:**

- Easily Completed
- Complete with difficulty or help – Describe below
- Not completed

*Comments:*

**Task Time:** \_\_\_\_\_ Seconds

**Optimal Path:** Practice Advisory Screen → Right-click Drop-down Menu → View Button → Read Assigned Source Attribute field out loud

- Correct
- Minor Deviations / Cycles – Describe / enumerate below
- Major Deviations – Describe / enumerate below

*Comments:*

**Observed Errors and Verbalizations:**

*Comments:*

**Rating:**

Overall, this task was: \_\_\_\_\_

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

**Administrator / Notetaker Comments:**

**Task 8: Identify support for 31 source attributes for a predictive DSI  
(124 seconds)**

**Description of task:**

Participants assigned Medical Officer user permissions

The participant will access a Predictive DSI, and identify the contents of 4 of the 31 source attributes present. Each Medical Officer participant is assigned specific source attributes to identify such that, collectively, all required attributes are evaluated at least once during the study.

Participants assigned Basic user permissions

The participant will complete this task by acknowledging that they do not have access to the Medical Officer Tab.

**Success:**

- Easily Completed
- Complete with difficulty or help – Describe below
- Not completed

*Comments:*

**Task Time:** \_\_\_\_\_ Seconds

**Optimal Path:** Practice Advisory Screen → Right-click Drop-down Menu → View Button → Read Assigned Source Attribute fields out loud

- Correct
- Minor Deviations / Cycles – Describe / enumerate below
- Major Deviations – Describe / enumerate below

*Comments:*

**Observed Errors and Verbalizations:**

*Comments:*

**Rating:**

Overall, this task was: \_\_\_\_\_

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

**Administrator / Notetaker Comments:**

**Final Questions (5 Minutes)**

What was your overall impression of the system?

What aspects of the system did you like most?

What aspects of the system did you like least?

Were there any features that you were surprised to see?

What features did you expect to encounter but did not see? That is, is there anything that is missing in this application?

Compare this system to other systems you have used.

Would you recommend this system to your colleagues?

*Administer the SUS*

## Distribution of Source Attribute Identification Tasks

For Tasks 7 and 8, source attribute assignments were pre-determined using a structured allocation matrix to ensure complete regulatory coverage. Each Medical Officer participant was assigned specific source attributes to identify such that, collectively, all required attributes were evaluated at least once during the study. All participants were assigned an equivalent number of source attributes to promote task consistency.

Assignment tracking is documented in the Source Attribute Coverage Matrix below for use by the Administrator during testing and is maintained as part of the usability study record. This approach ensures that all required attributes under (b)(11)(iv)(A)(5–13) and (b)(11)(iv)(B) are systematically evaluated while preserving realistic task conditions for each participant.

<b>Participant Number</b>	<b>Task 7 Source Attributes</b>	<b>Task 8 Source Attributes</b>
4691	Basic User	Basic User
4091	Basic User	Basic User
7668	5. Race 6. Ethnicity	1. Developer name and Contact info 2. Funding Source 3. Description of Output Values 4. Type of Output
1447	7. Language 8. Sexual orientation	5. Intended Use 6. Intended Patient Populations 7. Intended Users 8. Intended Role in Decision Making
7955	9. Gender Identity 10. Sex	9. Out-of-Scope Tasks, Situations, Populations 10. Known Risks, Inappropriate Uses, Limitations 11. Training Data Inclusion and Exclusion Criteria 12. Sensitive demographic Variables used as Inputs

1785	11. Date of birth 12. Social Determinants of Health	13. Demographic representativeness of Training Data 14. Relevance of Training Data to Intended Deployment Setting 15. Fairness Approach 16. Bias Mitigation Strategies
5785	12. Social Determinants of Health 13. Health Status Assessments Data	17. External Data Sources, Clinical Settings, Environments Assessed through External validation 18. Organization or Party Conducting External Testing 19. Demographic Representativeness of External Validation Data 20. Description of External Validation Process
5729	5. Race 6. Ethnicity	21. Validity of Internal Test Data 22. Fairness on Internal Test Data 23. Validity on External Test Data 24. Fairness on External Test Data
4395	7. Language 8. Sexual Orientation	25. Evidence of Impact on Outcomes 26. Validity Monitoring Process and Frequency 27. Validity in Local Deployment Data 28. Fairness Monitoring Process and Frequency
4500	9. Gender Identity 10. Sex	28. Fairness Monitoring Process and Frequency 29. Fairness in Local Deployment Data 30. Intervention Update Process and Frequency 31. Performance Correction Process and Frequency

Note: Source attributes were pre-assigned prior to testing using a structured allocation model designed to promote task uniformity and comparable visual scanning effort across participants. Attributes were distributed in consecutive groupings to minimize artificial variation in task completion time that could result from dispersed navigation patterns. Limited, intentional redundancy of certain attributes was incorporated to ensure complete regulatory coverage and to support robustness of task evaluation. Collectively, all required source attributes were identified during the study.

## 5.5 SYSTEM USABILITY SCALE QUESTIONNAIRE

*In 1996, Brooke published a “low-cost usability scale that can be used for global assessments of systems usability” known as the System Usability Scale or SUS.*

*Lewis and Sauro (2009) and other have elaborated on the SUS over the year.*

*Computation of the SUS score can be found in Brooke’s paper or in Tullis and Albert (2008)*

	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 technical support 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 the system	1	2	3	4	5
7. I imagine that most people would learn to use this system 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 before I could get going with this system	1	2	3	4	5

5.6 TECHNICAL ANALYSIS SUPPORTING TASK SELECTION

**A. Paragraphs of (b)(11) for which Praxis was previously evaluated on and certified to under (a)(9) and the equivalent paragraph under (a)(9)**

<b>Criteria in (b)(11)</b>	<b>Criteria certified under (a)(9)</b>
(b)(11) (i)	(a)(9) (i)
(b)(11) (ii)A-B	(a)(9) (ii)A-B
(b)(11) (iii)A 1-6	(a)(9) (iii)
(b)(11) (iv)A 1-4	(a)(9) (v)

**B. Paragraphs of (b)(11) for which Praxis was previously not evaluated on and not certified to under (a)(9) and the regulatory text of the new paragraph**

**Criterion  
(b)(11) (ii)C**

**Regulatory text  
(ii) Decision support configuration**

C. Enable a user to provide electronic feedback data for evidence-based decision support interventions selected via the capability provided in paragraph (b)(11)(iii)(A) of this section and make available such feedback data to a limited set of identified users for export, in a computable format, including at a minimum the intervention, action taken, user feedback provided (if applicable), user, date, and location.

**(b)(11) (iii)A 7-8**

**(iii)Decision support intervention selection.**

Enable a limited set of identified users to select (i.e., activate) electronic decision support interventions (in addition to drug-drug and drug-allergy contraindication checking) that are:

**A.** Evidence-based decision support interventions and use any data based on the following data expressed in the standards in § 170.213:

**7.** Unique Device Identifier(s) for a Patient's Implantable Device(s); and

**8.** Procedures.

**(b)(11) (iii)B**

**(iii)Decision support intervention selection.**

Enable a limited set of identified users to select (i.e., activate) electronic decision support interventions (in addition to drug-drug and drug-allergy contraindication checking) that are:

**B.** Predictive Decision Support Interventions and use any data expressed in standards in § 170.213.

**(b)(11) (iv)A 5-13**

**(iv) Source attributes.**

Source attributes listed in paragraphs (b)(11)(iv)(A) and (B) of this section must be supported.

**A.** For evidence-based decision support interventions:

- 5.** Use of race as expressed in the standards in § 170.213;
- 6.** Use of ethnicity as expressed in the standards in § 170.213;
- 7.** Use of language as expressed in the standards in § 170.213;
- 8.** Use of sexual orientation as expressed in the standards in § 170.213;
- 9.** Use of gender identity as expressed in the standards in § 170.213;
- 10.** Use of sex as expressed in the standards in § 170.213;
- 11.** Use of date of birth as expressed in the standards in § 170.213;
- 12.** Use of social determinants of health data as expressed in the standards in § 170.213; and
- 13.** Use of health status assessments data as expressed in the standards in § 170.213.

**(b)(11) (iv)B**

**(iv) Source attributes.**

Source attributes listed in paragraphs (b)(11)(iv)(A) and (B) of this section must be supported.

**B.** For Predictive Decision Support Interventions:

- 1.** Details and output of the intervention, including:
  - i.** Name and contact information for the intervention developer;
  - ii.** Funding source of the technical implementation for the intervention(s) development;
  - iii.** Description of value that the intervention produces as an output; and
  - iv.** Whether the intervention output is a prediction, classification, recommendation, evaluation, analysis, or other type of output.
- 2.** Purpose of the intervention, including:

- i.** Intended use of the intervention;
- ii.** Intended patient population(s) for the intervention's use;
- iii.** Intended user(s); and
- iv.** Intended decision-making role for which the intervention was designed to be used/for (e.g., informs, augments, replaces clinical management).

**3.** Cautioned out-of-scope use of the intervention, including:

- i.** Description of tasks, situations, or populations where a user is cautioned against applying the intervention; and
- ii.** Known risks, inappropriate settings, inappropriate uses, or known limitations.

**4.** Intervention development details and input features, including at a minimum:

- i.** Exclusion and inclusion criteria that influenced the training data set;
- ii.** Use of variables in paragraph (b)(11)(iv)(A)(5)-(13) as input features;
- iii.** Description of demographic representativeness according to variables in paragraph (b)(11)(iv)(A)(5)-(13) including, at a minimum, those used as input features in the intervention;
- iv.** Description of relevance of training data to intended deployed setting; and

**5.** Process used to ensure fairness in development of the intervention, including:

- i.** Description of the approach the intervention developer has taken to ensure that the intervention's output is fair; and
- ii.** Description of approaches to manage, reduce, or eliminate bias.

**6.** External validation process, including:

- i.** Description of the data source, clinical setting, or environment where an intervention's validity and fairness has been assessed, other than the source of training and testing data
- ii.** Party that conducted the external testing;
- iii.** Description of demographic representativeness of external

data according to variables in paragraph (b)(11)(iv)(A)(5)-(13) including, at a minimum, those used as input features in the intervention; and

**iv.** Description of external validation process.

**7.** Quantitative measures of performance, including:

**i.** Validity of intervention in test data derived from the same source as the initial training data;

**ii.** Fairness of intervention in test data derived from the same source as the initial training data;

**iii.** Validity of intervention in data external to or from a different source than the initial training data;

**iv.** Fairness of intervention in data external to or from a different source than the initial training data;

**v.** References to evaluation of use of the intervention on outcomes, including, bibliographic citations or hyperlinks to evaluations of how well the intervention reduced morbidity, mortality, length of stay, or other outcomes;

**8.** Ongoing maintenance of intervention implementation and use, including:

**i.** Description of process and frequency by which the intervention's validity is monitored over time;

**ii.** Validity of intervention in local data;

**iii.** Description of the process and frequency by which the intervention's fairness is monitored over time;

**iv.** Fairness of intervention in local data; and

**9.** Update and continued validation or fairness assessment schedule, including:

**i.** Description of process and frequency by which the intervention is updated; and

**ii.** Description of frequency by which the intervention's performance is corrected when risks related to validity and fairness are identified.

**(b)(11) (v)**

**(v) Source attribute access and modification.**

**A.** Access.

**1.** For evidence-based decision support interventions and Predictive Decision Support Interventions supplied by the health IT developer as part of its Health IT Module, the Health IT Module must enable a limited set of identified users to access complete and up-to-date plain language descriptions of source attribute information specified in paragraphs (b)(11)(iv)(A) and (B) of this section.

**2.** For Predictive Decision Support Interventions supplied by the health IT developer as part of its Health IT Module, the Health IT Module must indicate when information is not available for review for source attributes in paragraphs (b)(11)(iv)(B)(6); (b)(11)(iv)(B)(7)(iii), (iv), and (v); (b)(11)(iv)(B)(8)(ii) and (iv); and (b)(11)(iv)(B)(9) of this section.

**B. Modify.**

**1.** For evidence-based decision support interventions and Predictive Decision Support Interventions, the Health IT Module must enable a limited set of identified users to record, change, and access source attributes in paragraphs (b)(11)(iv)(A) and (B) of this section.

**2.** For Predictive Decision Support Interventions, the Health IT Module must enable a limited set of identified users to record, change, and access additional source attributes not specified in paragraph (b)(11)(iv)(B) of this section.

**(b)(11) (vi)**

**(vi) Intervention risk management.**

Intervention risk management practices must be applied for each Predictive Decision Support Intervention supplied by the health IT developer as part of its Health IT Module.

**A. Risk analysis.** The Predictive Decision Support Intervention(s) must be subject to analysis of potential risks and adverse impacts associated with the following characteristics: validity, reliability, robustness, fairness, intelligibility, safety, security, and privacy.

**B. Risk mitigation.** The Predictive Decision Support Intervention (s) must be subject to practices to mitigate risks, identified in accordance with paragraph (b)(11)(vi)(A) of this section; and

**C. Governance.** The Predictive Decision Support

Intervention(s) must be subject to policies and implemented controls for governance, including how data are acquired, managed, and used.

**C. Paragraphs of (b)(11) for which Praxis does not currently require certification and justification for this decision**

(b)(11)(vi) – “Intervention risk management practices must be applied for each Predictive Decision Support Intervention **supplied by the health IT developer** as part of its Health IT Module.”

Justification: Praxis does not currently supply any Predictive Decision Support Interventions. Accordingly (b)(11)(vi) is not applicable to the current certification scope. While Praxis EMR does not supply Predictive Decision Support Interventions, the Health IT Module includes full system infrastructure to support configuration, display, modification, and governance of predictive DSI source attributes.

**D. Criterion-to-Task Mapping**

The final selection of the eight usability tasks was derived from the preceding regulatory analysis of §170.315(b)(11). The table below maps each applicable regulatory paragraph to the specific task designed to demonstrate fulfillment of that requirement. For each mapping, a brief explanation is provided describing how the task operationalizes and tests compliance with the corresponding criterion.

<b>Criterion</b>	<b>Task</b>	<b>Analysis</b>
<b>(b)(11) (ii)C</b>	1. Provide electronic feedback for an evidence-based DSI	The participant submits structured electronic feedback with an evidence based DSI. Successful completion demonstrates usability of the feedback capture mechanism and confirms the system’s capability to associate feedback with the specific intervention, user, and clinical context.
	2. Access feedback and export it in a computable format	The participant retrieves previously submitted feedback and exports the results in a structured, pipe-delimited flat file. The exported file adheres to

a predefined schema and contains discrete, consistently delimited data elements with consistent field ordering and delimiter usage making it suitable for programmatic ingestion. Successful completion demonstrates both usability of the retrieval/export workflow and the system's capability to produce feedback data in a machine-readable, computable format.

<b>(b)(11) (iii)A 7-8</b>	3. Select an evidence-based DSI using two new criteria: Unique Device identifiers for Patient Implantable Device; and, Procedures	The participant selects and applies an evidence based DSI using the specified new criteria. Successfully demonstrates that the system supports application of evidence based DSIs using the required data element criteria and that such interventions are operational within normal workflow.
<b>(b)(11) (iii)B</b>	5. Select a predictive DSI	The participant selects a predictive DSI. Successful completion demonstrates that the system supports activation of predictive DSIs, even though Praxis EMR does not supply any such predictive DSIs.
<b>(b)(11) (iv)A 5-13</b>	7. Identify support of 9 new source attributes for an evidence-based DSI	The participant accesses the transparency interface and verifies the presence and availability of the nine newly required source attributes associated with an evidence based DSI. Successful completion demonstrates that the system supports display and easy identification of required

evidence based DSI source attributes.

**(b)(11) (iv)B**

8. Identify support for 31 source attributes for a predictive DSI

The participant accesses the predictive DSI transparency interface and verifies support for all 31 required source attributes. While testing includes representative review during usability sessions, system configuration and interface demonstrate full support for all required predictive DSI source attributes, and that participants are easily able to review these attributes, even though Praxis EMR does not supply any pDSIs.

**(b)(11) (v)**

4. Access and modify source attributes for an evidence based DSI

The participant navigates to the evidence based DSI configuration interface and modifies representative source attributes. Successful completion demonstrates usability of source attribute configuration controls and confirms that evidence based DSI source attributes are accessible and configurable within the system.

6. Access and modify source attributes for a predictive DSI

The participant navigates to the predictive DSI configuration interface and modifies representative source attributes. Successful completion demonstrates usability of predictive DSI source attribute configuration controls. While representative attributes are modified during testing, the system supports configuration of all required predictive DSI attributes.

Note: The task numbering in this protocol does not strictly follow the sequential structure of §170.315(b)(11). Tasks are instead ordered to reflect a logical, workflow-based progression consistent with real-world system use during usability testing. This approach minimizes unnecessary navigation between unrelated system functions and allows participants to complete related actions within a coherent workflow. The Criterion-to-Task Mapping table above explicitly cross-references each task to its corresponding regulatory paragraph to ensure complete coverage and traceability.

## 5.7 OPTIMAL PATHS FOR TASK COMPLETION

This appendix provides representative screenshots illustrating the optimal workflow path for completion of each usability testing task. Each step reflects the intended navigation sequence within the system under standard configuration.

These screenshots are provided for documentation and traceability purposes only. They were not shown to participants during usability testing and were not used as instructional material during task execution.

The optimal paths depicted below serve to demonstrate system capability and to clarify the intended interface locations associated with each evaluated function

The following screenshots are drawn from a simulated test environment. Any patient names, demographics, or other clinical information are entirely fictitious and comply with HIPAA privacy requirements.

### **Medical Officer Home Screen and Basic User Home Screen**

Certain tasks require that a limited set of identified users be able to complete them (tasks 2-8). This was achieved by granting the participants specific User Roles within Praxis EMR. All DSI functionality (both evidence-based and predictive) is located in the Medical Officer Tab and the Query Tab. Basic Users do not have access to these tabs. This fulfills (b)(11) requirements that only a limited set of identified users be able to perform these actions. In the screenshots below, note the presence and absence of these tabs in the Home Screens of these two user types.

# Medical Officer User Home Screen

Clayton Reynolds, MD Internal Medicine

Praxis Clayton Reynolds, MD

Home Database Agents Studies e-Rx Query Medical Officer

Pod: Default

Patients Here and Waiting - Provider	Age	Gender	Time	Provider
Whiteagle, Adam Male (162)	45 y.o.	ANY	11:35 AM (11:37 AM)	Reynolds, Clayton, ...
Canton, Lillian Female (216)	65 y.o.	ANY	11:40 AM (11:40 AM)	Reynolds, Clayton, ...
Morris, Felix Male (99)	100 y.o.	ANY	11:35 AM (11:37 AM)	Reynolds, Clayton, ...
Kemper, Sylvia Female (81)	24 y.o.	ANY	10:00 AM (10:04 AM)	Reynolds, Clayton, ...
Roller, Richard Male (171)	16 y.o.	ANY	10:05 AM (10:08 AM)	Reynolds, Clayton, ...
Cornman, Debbie Female (204)	56 y.o.	ANY	07:20 PM (07:20 PM)	Reynolds, Clayton, ...
Chen, David Male (1562)	57 y.o.	ANY	07:10 PM (07:13 PM)	Reynolds, Clayton, ...
Downs, Jimmy Male (26)	26 y.o.	ANY	09:00 AM (09:03 AM)	Reynolds, Clayton, ...
Anderson, Janet Female (157)	39 y.o.	ANY	09:35 AM (09:35 AM)	Reynolds, Clayton, ...

Unread Messages (86) Online users (None) New Labs (4) Electronic Prescription (None)

Order ...	Status	Type
Urgent Messages	1	
Charts Pending	21	
Transcriptions Returned		
Unfinished Records	2	
Prescriptions		
Electronic Prescriptions		
Nursing Tasks To Do		
Nursing Task Agents to do		
Nursing Task Agents Not Done	3	
Returned from Nursing Tasks		
Vaccinations to Administer	13	
Phone Calls		
Patient Agents		
Reschedule Now	131	

Urgent Messages	DATE	SUBJECT	USER
	11/17/2025 05:41 PM	Corrected Entry: Inserted note number 4166 has been changed.	Clayton Reynolds, MD Internal Medicine

# Basic User Home Screen

Kit Owens

Praxis Kit Owens

Home Database Agents Studies

Feb 27, 2026 03:54 PM

Pod: Default

Patients Here and Waiting - Assistant	Age	Gender	Time	Provider
Imaginary, Mary Female (M123)	42 y.o.	ANY	01:00 AM (05:01 AM)	DelGenio, Alex, MD
Whiteagle, Adam Male (162)	45 y.o.	ANY	11:35 AM (11:37 AM)	Reynolds, Clayto...
Canton, Lillian Female (216)	65 y.o.	ANY	11:40 AM (11:40 AM)	Reynolds, Clayto...
Morris, Felix Male (99)	100 y.o.	ANY	11:35 AM (11:37 AM)	Reynolds, Clayto...
Kemper, Sylvia Female (81)	24 y.o.	ANY	10:00 AM (10:04 AM)	Reynolds, Clayto...
Roller, Richard Male (171)	16 y.o.	ANY	10:05 AM (10:08 AM)	Reynolds, Clayto...
Cornman, Debbie Female (204)	56 y.o.	ANY	07:20 PM (07:20 PM)	Reynolds, Clayto...
Chen, David Male (1562)	57 y.o.	ANY	07:10 PM (07:13 PM)	Reynolds, Clayto...
Downs, Jimmy Male (26)	26 y.o.	ANY	09:00 AM (09:03 AM)	Reynolds, Clayto...

Unread Messages (14) Online users (None) New Lab (None)

Order ...	Status	Type
Tasks To Do And Review		
Urgent Messages		
Prescriptions received		
Nursing Tasks To Do		
Nursing Task Agents to do	2	
Nursing Task Agents Not Done		
Nursing Task Agents PostPoned		
Vaccinations to Administer	12	
Phone Calls		
Patient Agents		
Reschedule Now		
Pending for Others		
Pending In Nursing Tasks		
Completed by me		
Nursing Task Agents Done		

Urgent Messages	DATE	SUBJECT	USER
Empty List			

Messages: Regular Messages (14)

- Scheduler
- Fast Rx
- Missing Data
- Clipboard
- Chat
- Print
- Settings

## Task 1: Provide electronic feedback for an evidence-based DSI

### Optimal Path Description

Home Screen → Patient Main Screen → New Visit Screen → Select Practice Advisory → Select Feedback → Close Button → OK Button → Finished Record Button

## Screenshots from Praxis EMR demonstrating Optimal Path

### Home Screen

Whiteagle, Adam Male (162)	45 y.o.	ANY	Reynolds, Clayton, ...	11:35 AM (11:37 AM)
Canton, Lillian Female (216)	65 y.o.	ANY	Reynolds, Clayton, ...	11:40 AM (11:40 AM)
Morris, Felix Male (99)	100 y.o.	ANY	Reynolds, Clayton, ...	11:35 AM (11:37 AM)
Kemper, Sylvia Female (81)	24 y.o.	ANY	Reynolds, Clayton, ...	10:00 AM (10:04 AM)
Roller, Richard Male (171)	16 y.o.	ANY	Reynolds, Clayton, ...	10:05 AM (10:08 AM)
Cornman, Debbie Female (204)	56 y.o.	ANY	Reynolds, Clayton, ...	07:20 PM (07:20 PM)
Chen, David Male (1562)	57 y.o.	ANY	Reynolds, Clayton, ...	07:10 PM (07:13 PM)
Downs, Jimmy Male (26)	26 y.o.	ANY	Reynolds, Clayton, ...	09:00 AM (09:03 AM)
Anderson, Janet Female (157)	39 y.o.	ANY	Reynolds, Clayton, ...	09:35 AM (09:35 AM)

DATE	SUBJECT	USER
11/17/2025 05:41 PM	Corrected Entry: Inserted note number 4166 has been changed.	Clayton Reynolds, MD:Internal Medicine

### Patient Main Screen

Assistant: (None) Insurance: (None) Amount Copy: 1 Eligibility: Room: 0 Days: 0 Waiting Time: 00:00:02 Visit Time: 00:00:14

Diabetes Mellitus Without Mention Of Complication Type II Or Unspecified Type Not Stated As Uncontrolled E11.9

# New Visit Screen

Imaginary, Nora 65 y.o. 7/25/1960 Female (222)

**PraxiS** Clayton Reynolds, MD

Imaginary, Nora 65 y.o. 7/25/1960 Female (222) **Record Audio** **CLOSE**

Assistant: (None) Insurance: (None) Amount Copay: Eligibility: Room: Days: Waiting Time: Visit Time  
Referring Provider: (None) Last Provider was: Clayton Reynolds, MD:Internal Mec Primary Provider: Clayton Reynolds, MD:Internal Mec Started: Past Appointments  
Adverse Drug Reactions: **Penicillin**

**Main** **New Entry** Chart Medications Vaccines Studies Flow Chart Growth Chart Patient Data

**Adverse Drug Reactions** Penicillin [None] [Causing ingredient: ] (ONCOMED-CT: 161591004) (Starting date: 2/27/2026) (Last modified: 9/29/2025)  
**Current Medications** [Brand Name] [Lorazepam oral tablet] [1mg] [Tablet] [Take one by mouth daily] # [Amount] Refill X [Select] 6/29/2025 (NDC: None) (Bottom: None) [Info/Buttons] Me  
**Assistant Note** None  
**Subjective**  
History Of Present Illness  
Past Medical History  
Patient Specific Information  
Questionnaires  
**Objective**  
Vital Signs  
Flow Chart  
Labs  
Clinical Parameters  
**Procedures**  
**Diagnoses** Unknown  
**Assessment**  
**Level of Service**  
**Plan**  
Rx  
Vaccines  
Diagnostics - Send Out  
Diagnostics - In House  
Radiology and Imaging - Send Out

Dictation Multiple Assessments Clear Save knowledge P/A Datum Linked Results Last visit

# Select Practice Advisory

Imaginary, Nora 65 y.o. 7/25/1960 Female (222)

**PraxiS** Clayton Reynolds, MD

Imaginary, Nora 65 y.o. 7/25/1960 Female (222) **Record Audio** **CLOSE**

Assistant: (None) Insurance: (None) Amount Copay: Eligibility: Room: Days: Waiting Time: Visit Time  
Referring Provider: (None) Last Provider was: Clayton Reynolds, MD:Internal Mec Primary Provider: Clayton Reynolds, MD:Internal Mec Started: Past Appointments  
Adverse Drug Reactions: **Penicillin**

**Main** **New Entry** Chart Medications Vaccines Studies Flow Chart Growth Chart Patient Data

Vaccines  
Diagnostics - Send Out  
Diagnostics - In House  
Radiology and Imaging - Send Out  
Radiology and Imaging - In House  
Instructions  
Treatments  
Excuse  
Referral  
Return  
Agent  
Preforms  
Health Maintenance  
**Practice Advisory**  
Biocodempine Prescription Safety (20770000) Information  
SWI 696-A-100-0421-Body Mass Index (BMI) Screening and Follow-up Plan P-0-010 (7/5/2010) Information  
NIG/PQR Initial Adult Screening (1-18 y.o.) (1010500) Information  
**Postmenopausal Screening for Women 65+ (4300011) Information**  
Penicillin Allergy Query (0020000) Information  
PDR 110-0210-Influenza vaccine for patients 50 or older (2/5/2011) Information  
PDR 111-0200-Colonial Vaccination for older adults (4/3/2011) Information  
PDR 112-Screening Mammography (4/5/2011) Information  
PDR 113-Colorectal Cancer Screening (4/2/2011) Information

**Additional Comments**

Dictation Multiple Assessments Clear Save knowledge P/A Datum Linked Results Last visit

## Select Feedback

Imaginary, Nora 65 y.o. 7/25/1960 Female (222)

Number	Feedback Message	Repeat Status
1	Patient has not been screened for osteoporosis in the previous 2 years. DEXA Scan ordered today.	Repeat... +1 Ye...
2	Patient already screened for Osteoporosis screening elsewhere	Repeat... +1 Ye...
3	Patient declines osteoporosis screening. Patient was educated on risks and benefits.	Repeat... +1 Ye...
4	Recent DEXA scan on file. Patient screened negative for osteoporosis.	Repeat... +1 Ye...

Additional Comments

Dictation Multiple Assessments Clear Save Knowledge

Praxis Clayton Reynolds, MD

Days: 0, Waiting Time: 0:00:02, Visit Time: 00:01:21

Growth Chart Patient Data

Close

## Close Button

Imaginary, Nora 65 y.o. 7/25/1960 Female (222)

Praxis Clayton Reynolds, MD

Imaginary, Nora 65 y.o. 7/25/1960 Female (222) Record Audio

Assistant: (None) Insurance: (None) Amount Copay: Eligibility: Room: Referring Provider: (None) Last Provider was: Clayton Reynolds, MD:Internal Mec Primary Provider: Clayton Reynolds, MD:Internal Med: Started: Days: 0, Waiting Time: 0:00:02, Visit Time: 00:02:04

Adverse Drug Reactions: Penicillin Past Appointments

Main New Entry Chart Medications Vaccines Studies Flow Chart Growth Chart Patient Data

Vaccines

Diagnostics - Send Out

Diagnostics - In House

Radiology and Imaging - Send Out

Radiology and Imaging - In House

Instructions

Treatments

Excuse

Referral

Return

Agent

Practices

Health Maintenance

Practice Advisory

Electronic Prescription Safety (20170505) Information

SMO 65+ w/ BMI ≥ 30 - Body Mass Index (BMI) Screening and Follow-up Plan (1-0-2016) (1/10/2016) Information

NOF QDR Initial Adult Screening (1-18-yo) (1/10/2016) Information

Osteoporosis Screening for Women 65+ (8/2/2015) Information

1- Patient has not been screened for osteoporosis in the previous 2 years. DEXA Scan ordered today. Accepted On 2/27/2018

Penicillin Allergy Safety (1/23/2015) Information

PDR 110-2010-Influenza vaccine for patients 50 or older (2/20/11) Information

PDR 111-Preseasonal Vaccination for older adults (4/20/11) Information

PDR 110-Screening Mammography (4/14/11) Information

PDR 110-Colorectal Cancer Screening (4/21/11) Information

Additional Comments

Temporary Exit Dictation Multiple Assessments Clear Save Knowledge

Praxis Clayton Reynolds, MD

Days: 0, Waiting Time: 0:00:02, Visit Time: 00:02:04

Growth Chart Patient Data

Close



## Task 2: Access feedback and export it in a computable format

### Optimal Path Description

Home Screen → Query Screen → Search DSI → DSI Feedback Report Screen → Input the Name of a DSI Button → Continue Button → Type DSI Name → OK Button → Execute Button → Right-Click Drop-down Menu → Export Data Button → Desktop Button → Save as Type Drop-down Menu → Plain Text (\*.txt) Button → Type File Name → Save Button → OK Button → Minimize Button → Open Text File

### Screenshots from Praxis EMR demonstrating Optimal Path

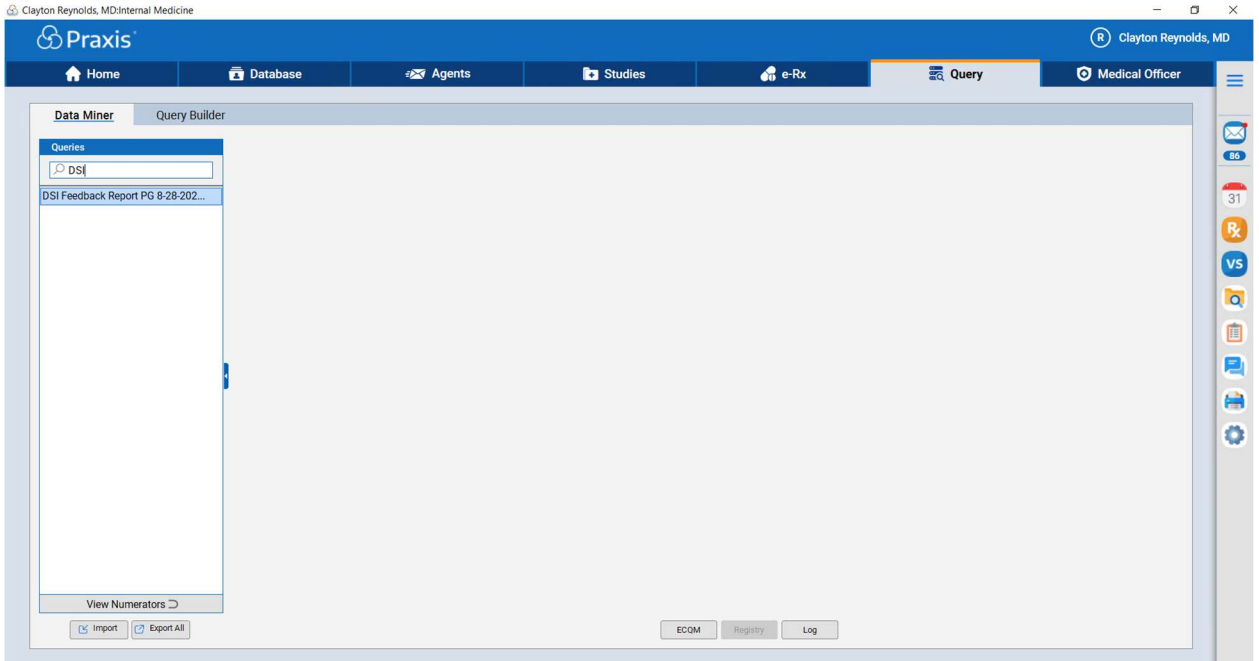
#### Home Screen

The screenshot shows the Praxis EMR Home Screen for Clayton Reynolds, MD. The interface includes a top navigation bar with tabs for Home, Database, Agents, Studies, e-Rx, Query, and Medical Officer. Below the navigation bar is a table titled "Patients Here and Waiting - Provider" with columns for patient name, age, gender, and appointment time. The table lists several patients, including Whiteagle, Adam Male (162), Canton, Lilian Female (216), Morris, Felix Male (99), Kemper, Sylvia Female (81), Roller, Richard Male (171), Cormman, Debbie Female (204), Chen, David Male (1562), Downs, Jimmy Male (26), and Anderson, Janet Female (157). Below the patient list are sections for "Unread Messages (86)", "Online users (None)", "New Labs (4)", and "Electronic Prescription (None)". A sidebar on the left contains a "Tasks To Do And Review" list with categories like Urgent Messages, Charts Pending, and Vaccinations to Administer.

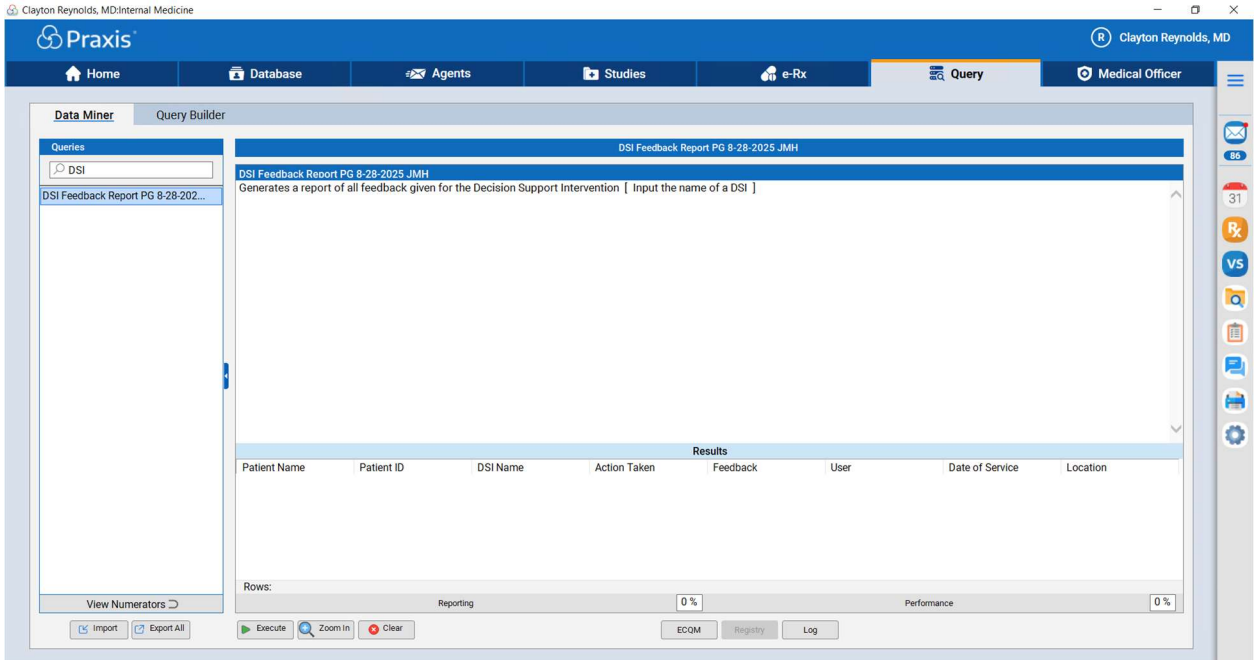
#### Query Screen

The screenshot shows the Praxis EMR Query Screen for Clayton Reynolds, MD. The interface includes a top navigation bar with tabs for Home, Database, Agents, Studies, e-Rx, Query, and Medical Officer. Below the navigation bar is a "Data Miner" section with a "Query Builder" tab. The Query Builder section contains a search bar and a list of queries, including "Active Patients", "Active Patients Mar-31-14", "Addresses - Active Patients", "Addresses for Patients Aged 64 a...", "Agent Outcome Performance Jul...", "All Patients", "Appointments by date Apr-13-18", "Authorized Representatives Oct-2...", "Blood Pressure Measurement ...", "Children 15 months of age (Oct-5...", "Chronic Care Management Times ...", "Clinical Parameter Frequency Sep...", "Clinical Parameter Presentation Fr...", "Clinical Parameters per provider ...", "CMS 122v5 DEN Diabetes: Hemo...", "CMS 123v5 163 DEN Diabetes: Fo...", "CMS 125v6 112 DEN Breast Can...", "CMS 127v6 DEN Pneumococcal V...", and "CMS 165v8.5 DEN Controlling Hig...". Below the list of queries are buttons for "Import" and "Export All". At the bottom of the screen are buttons for "ECOM", "Registry", and "Log".

# Search for DSI



# DSI Feedback Report Screen



## Input the name of a DSI Button

The screenshot shows the Praxis Data Miner interface. The top navigation bar includes Home, Database, Agents, Studies, e-Rx, Query, and Medical Officer. The main window is titled "Data Miner" and "Query Builder". On the left, there is a "Queries" list with "DSI Feedback Report PG 8-28-2025 JMH" selected. The main area displays the query description: "DSI Feedback Report PG 8-28-2025 JMH" and "Generates a report of all feedback given for the Decision Support Intervention". A text input field with the placeholder text "[ Input the name of a DSI ]" is highlighted with a red box. Below the query description is a table with the following columns: Patient Name, Patient ID, DSI Name, Action Taken, Feedback, User, Date of Service, and Location. At the bottom, there are buttons for "Execute", "Zoom In", and "Clear", along with "ECOM", "Registry", and "Log" buttons.

## Continue Button

The screenshot shows the Praxis Data Miner interface with a dialog box open. The dialog box is titled "Last Used Values" and contains a table with the following columns: Value. The dialog box has "Continue", "OK", and "Close" buttons. The "Continue" button is highlighted with a red box. The background interface is the same as the previous screenshot, showing the query builder window with the "DSI Feedback Report PG 8-28-2025 JMH" query and the table with columns: Patient Name, Patient ID, DSI Name, Action Taken, Feedback, User, Date of Service, and Location.

## Type DSI Name

The screenshot shows the Praxis EMR 9.0 interface. The top navigation bar includes Home, Database, Agents, Studies, e-Rx, Query, and Medical Officer. The main window is titled 'Data Miner' and 'Query Builder'. A query titled 'DSI Feedback Report PG 8-28-2025 JMH' is active, with a description: 'Generates a report of all feedback given for the Decision Support Intervention [ Input the name of a DSI ]'. A dialog box titled 'Praxis EMR 9.0' is open, with a 'Free text' field containing 'Osteoporosis'. Below the dialog is a table with columns: Patient Name, Patient ID, DSI Name, Action Taken, Feedback, User, Date of Service, and Location. The table is currently empty. At the bottom, there are buttons for 'Import', 'Export All', 'Execute', 'Zoom In', 'Clear', 'ECOM', 'Registry', and 'Log'.

## OK Button

This screenshot is identical to the one above, but with a red circle highlighting the 'OK' button in the 'Praxis EMR 9.0' dialog box. The 'Free text' field still contains 'Osteoporosis'.

## Execute Button

The screenshot shows the Praxis Data Miner interface. The top navigation bar includes Home, Database, Agents, Studies, e-Rx, Query, and Medical Officer. The main window is titled 'Data Miner' and 'Query Builder'. On the left, there is a 'Queries' list with 'DSI' and 'DSI Feedback Report PG 8-28-202...'. The main area displays the query 'DSI Feedback Report PG 8-28-2025 JMH' with a description: 'Generates a report of all feedback given for the Decision Support Intervention [ Osteoporosis ]'. Below this is a table header for 'Results' with columns: Patient Name, Patient ID, DSI Name, Action Taken, Feedback, User, Date of Service, and Location. At the bottom, there are buttons for 'Import', 'Export All', 'Execute' (highlighted with a red box), 'Zoom In', and 'Clear'. The 'Reporting' and 'Performance' progress bars are both at 0%.

## Right-click Drop-down Menu

The screenshot shows the Praxis Data Miner interface with the results table populated. The table has columns: Patient Name, Patient ID, DSI Name, Action Taken, Feedback, User, Date of Service, and Location. A right-click drop-down menu is open over the table, showing options: 'Group elements', 'Export data', and 'Results to Clipboard'. The 'Reporting' progress bar is at 100% and the 'Performance' progress bar is at 0%.

Patient Name	Patient ID	DSI Name	Action Taken	Feedback	User	Date of Service	Location
Nora Imaginary	222	Osteoporosis Screenin...	Done	Patient has not been s...	Clayton Reynolds, ...	2/27/2026 4:39:23 PM	Office
Lucille Imaginary	98765	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	2/27/2026 3:50:10 PM	Office
Lucille Imaginary	98765	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	2/12/2026 3:54:01 PM	Office
Lucille Harmon	1561	Osteoporosis Screenin...	Done	Patient already sched...	Clayton Reynolds, ...	8/29/2025 3:58:53 AM	Office
Lucille Imaginary	98765	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	8/29/2025 3:16:31 AM	Office
Nora Imaginary	222	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	8/29/2025 2:43:21 AM	Office
Francis Hitchcock	1954	Osteoporosis Screenin...	Done	None	Clayton Reynolds, ...	8/29/2025 12:15:35 AM	Office
Francis Hitchcock	1954	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	8/3/2025 2:30:49 PM	Office
Francis Hitchcock	1954	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	8/3/2025 2:29:09 PM	Office
Francis Hitchcock	1954	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	8/3/2025 2:23:36 PM	Office

## Export Data Button

Clayton Reynolds, MD Internal Medicine

Praxis

Home Database Agents Studies e-Rx Query Medical Officer

Data Miner Query Builder

Queries

DSI Feedback Report PG 8-28-202...

DSI Feedback Report PG 8-28-2025 JMH

Patient Name	Patient ID	DSI Name	Action Taken	Feedback	User	Date of Service	Location
Nora Imaginary	222	Osteoporosis Screenin...	Done	Patient has not been s...	Clayton Reynolds, ...	2/27/2026 4:39:23 PM	Office
Lucille Imaginary	98765	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	2/27/2026 3:50:10 PM	Office
Lucille Imaginary	98765	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	2/12/2026 3:54:01 PM	Office
Lucille Harmon	1561	Osteoporosis Screenin...	Done	Patient already sched...	Clayton Reynolds, ...	8/29/2025 3:58:53 AM	Office
Lucille Imaginary	98765	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	8/29/2025 3:16:31 AM	Office
Nora Imaginary	222	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	8/29/2025 2:43:21 AM	Office
Francis Hitchcock	1954	Osteoporosis Screenin...	Done	Patient already sched...	Clayton Reynolds, ...	8/29/2025 12:15:35 AM	Office
Francis Hitchcock	1954	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	8/3/2025 2:30:49 PM	Office
Francis Hitchcock	1954	Osteopor...	Ignored	None	Clayton Reynolds, ...	8/3/2025 2:29:09 PM	Office
Francis Hitchcock	1954	Osteopor...	None	None	Clayton Reynolds, ...	8/3/2025 2:23:36 PM	Office

Rows: 10

Reporting 100% Performance 0%

Import Export All Execute Zoom Out Clear ECOM Registry Log

Group elements  
Export data  
Results to Clipboard

## Desktop Button

Clayton Reynolds, MD Internal Medicine

Praxis

Home Database Agents Studies e-Rx Query Medical Officer

Select the Filename and Format to Export

PraxisEMR > Server > Queries > Test

Organize New folder

Quick access

- Desktop
- Downloads
- Documents
- Pictures
- This PC
- Network

File name:

Save as type: HTML page (\*.html)

Save Cancel

DSI Feedback Report PG 8-28-2025 JMH

Taken	Feedback	User	Date of Service	Location
	Patient has not been s...	Clayton Reynolds, ...	2/27/2026 4:39:23 PM	Office
	None	Clayton Reynolds, ...	2/27/2026 3:50:10 PM	Office
	None	Clayton Reynolds, ...	2/12/2026 3:54:01 PM	Office
	Patient already sched...	Clayton Reynolds, ...	8/29/2025 3:58:53 AM	Office
	None	Clayton Reynolds, ...	8/29/2025 3:16:31 AM	Office
	None	Clayton Reynolds, ...	8/29/2025 2:43:21 AM	Office
	Patient already sched...	Clayton Reynolds, ...	8/29/2025 12:15:35 AM	Office
	None	Clayton Reynolds, ...	8/3/2025 2:30:49 PM	Office
	None	Clayton Reynolds, ...	8/3/2025 2:29:09 PM	Office
	None	Clayton Reynolds, ...	8/3/2025 2:23:36 PM	Office

Rows: 10

Reporting 100% Performance 0%

Import Export All Execute Zoom Out Clear ECOM Registry Log

## Save as Type Drop-down Menu

The screenshot shows a 'Select the Filename and Format to Export' dialog box overlaid on a medical software interface. The dialog box is set to the Desktop location. The 'Save as type' drop-down menu is open, showing the following options: HTML page (\*.html), Plain Text (\*.txt), Microsoft Excel (\*.xls), and Microsoft Word (\*.doc). The 'HTML page (\*.html)' option is currently selected. The background software interface displays a table of feedback results for a specific report.

Taken	Feedback	User	Date of Service	Location
	Patient has not been s...	Clayton Reynolds, ...	2/27/2026 4:39:23 PM	Office
	None	Clayton Reynolds, ...	2/27/2026 3:50:10 PM	Office
	None	Clayton Reynolds, ...	2/12/2026 3:54:01 PM	Office
	Patient already sched...	Clayton Reynolds, ...	8/29/2025 3:58:53 AM	Office
	None	Clayton Reynolds, ...	8/29/2025 3:16:31 AM	Office
	None	Clayton Reynolds, ...	8/29/2025 2:43:21 AM	Office
	Patient already sched...	Clayton Reynolds, ...	8/29/2025 12:15:35 AM	Office
	None	Clayton Reynolds, ...	8/3/2025 2:30:49 PM	Office
	None	Clayton Reynolds, ...	8/3/2025 2:29:09 PM	Office
	None	Clayton Reynolds, ...	8/3/2025 2:23:36 PM	Office

## Plain text (\*.txt) Button

The screenshot shows the same 'Select the Filename and Format to Export' dialog box as in the previous image. In this instance, the 'Plain Text (\*.txt)' option in the 'Save as type' drop-down menu is selected. The background software interface and the feedback results table are identical to the previous screenshot.

## Type File Name

The screenshot shows a Windows file save dialog box in the foreground. The dialog is titled "Select the Filename and Format to Export" and is set to the "Desktop" location. The "File name" field contains "DSI Report" and the "Save as type" is set to "Plain Text (\*.txt)". The "Save" button is visible at the bottom right of the dialog. In the background, a medical software interface is open, displaying a "SI Feedback Report PG 8-28-2025 JMH". The report table has the following data:

Taken	Feedback	User	Date of Service	Location
	Patient has not been s...	Clayton Reynolds, ...	2/27/2026 4:39:23 PM	Office
	None	Clayton Reynolds, ...	2/27/2026 3:50:10 PM	Office
	None	Clayton Reynolds, ...	2/12/2026 3:54:01 PM	Office
	Patient already sched...	Clayton Reynolds, ...	8/29/2025 3:58:53 AM	Office
	None	Clayton Reynolds, ...	8/29/2025 3:16:31 AM	Office
	None	Clayton Reynolds, ...	8/29/2025 2:43:21 AM	Office
	Patient already sched...	Clayton Reynolds, ...	8/29/2025 12:15:35 AM	Office
	None	Clayton Reynolds, ...	8/3/2025 2:30:49 PM	Office
	None	Clayton Reynolds, ...	8/3/2025 2:29:09 PM	Office
	None	Clayton Reynolds, ...	8/3/2025 2:23:36 PM	Office

## Save Button

This screenshot is identical to the one above, but with a purple rectangular box highlighting the "Save" button in the file save dialog. The background medical software interface remains the same, showing the "SI Feedback Report PG 8-28-2025 JMH" with the same data table.

## OK Button

Clayton Reynolds, MD Internal Medicine

Praxis

Clayton Reynolds, MD

Home Database Agents Studies e-Rx Query Medical Officer

Data Miner Query Builder

Queries

DSI Feedback Report PG 8-28-202...

DSI Feedback Report PG 8-28-2025 JMH

Patient Name	Patient ID	DSI Name	Action Taken	Feedback	User	Date of Service	Location
Nora Imaginary	222	Osteoporosis Screenin...	Done	Patient has not been s...	Clayton Reynolds, ...	2/27/2026 4:39:23 PM	Office
Lucille Imaginary	98765	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	2/27/2026 3:50:10 PM	Office
Lucille Imaginary	98765	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	2/12/2026 3:54:01 PM	Office
Lucille Harmon	1561	Osteoporosis Screenin...	Done	Patient already sched...	Clayton Reynolds, ...	8/29/2025 3:58:53 AM	Office
Lucille Imaginary	98765	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	8/29/2025 3:16:31 AM	Office
Nora Imaginary	222	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	8/29/2025 2:43:21 AM	Office
Francis Hitchcock	1954	Osteoporosis Screenin...	Done	Patient already sched...	Clayton Reynolds, ...	8/29/2025 12:15:35 AM	Office
Francis Hitchcock	1954	Os	Praxis EMR 9.0		Clayton Reynolds, ...	8/3/2025 2:30:49 PM	Office
Francis Hitchcock	1954	Os			Clayton Reynolds, ...	8/3/2025 2:29:09 PM	Office
Francis Hitchcock	1954	Os			Clayton Reynolds, ...	8/3/2025 2:23:36 PM	Office

Results exported to file  
 C:\Users\TEMP\PRAXISEMR.006\Desktop\DSI Report.txt

OK

Rows: 10

Reporting 100% Performance 0%

Import Export All Execute Zoom Out Clear ECOM Registry Log

## Minimize Button

Clayton Reynolds, MD Internal Medicine

Praxis

Clayton Reynolds, MD

Home Database Agents Studies e-Rx Query Medical Officer

Data Miner Query Builder

Queries

DSI Feedback Report PG 8-28-202...

DSI Feedback Report PG 8-28-2025 JMH

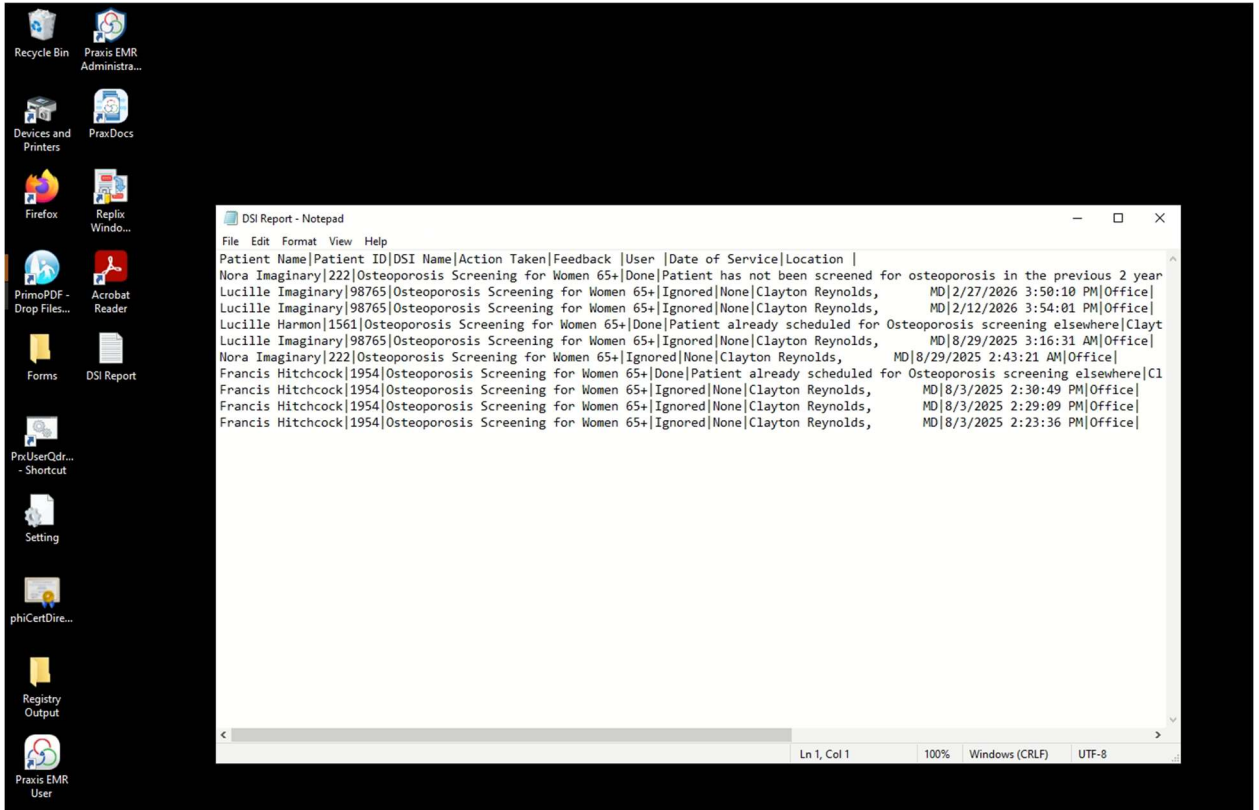
Patient Name	Patient ID	DSI Name	Action Taken	Feedback	User	Date of Service	Location
Nora Imaginary	222	Osteoporosis Screenin...	Done	Patient has not been s...	Clayton Reynolds, ...	2/27/2026 4:39:23 PM	Office
Lucille Imaginary	98765	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	2/27/2026 3:50:10 PM	Office
Lucille Imaginary	98765	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	2/12/2026 3:54:01 PM	Office
Lucille Harmon	1561	Osteoporosis Screenin...	Done	Patient already sched...	Clayton Reynolds, ...	8/29/2025 3:58:53 AM	Office
Lucille Imaginary	98765	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	8/29/2025 3:16:31 AM	Office
Nora Imaginary	222	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	8/29/2025 2:43:21 AM	Office
Francis Hitchcock	1954	Osteoporosis Screenin...	Done	Patient already sched...	Clayton Reynolds, ...	8/29/2025 12:15:35 AM	Office
Francis Hitchcock	1954	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	8/3/2025 2:30:49 PM	Office
Francis Hitchcock	1954	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	8/3/2025 2:29:09 PM	Office
Francis Hitchcock	1954	Osteoporosis Screenin...	Ignored	None	Clayton Reynolds, ...	8/3/2025 2:23:36 PM	Office

Rows: 10

Reporting 100% Performance 0%

Import Export All Execute Zoom Out Clear ECOM Registry Log

## Open Text File



Important Note: The results are exported in a structured, pipe-delimited flat file. The exported file adheres to a predefined schema and contains discrete, consistently delimited data elements with consistent field ordering and delimiter usage making it suitable for programmatic ingestion. This meets requirements that the system produce feedback data in a machine-readable, computable format.

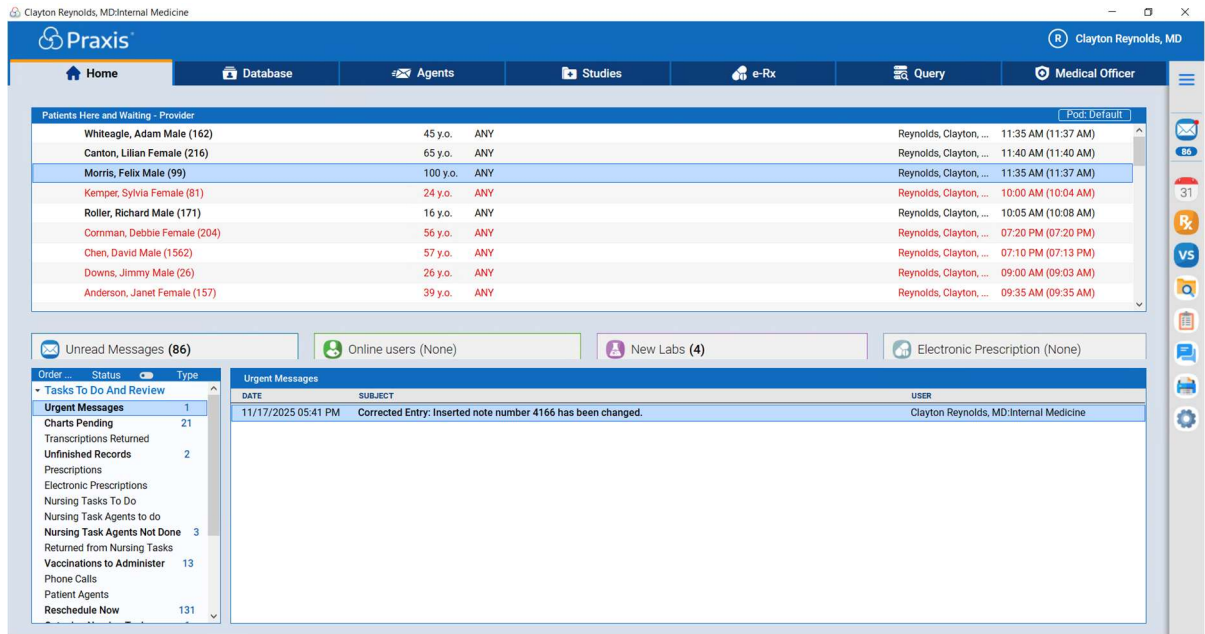
**Task 3:** Select an evidence-based DSI using two new criteria: Unique Device Identifiers for Patient Implantable Device; and, Procedures

**Optimal Path Description**

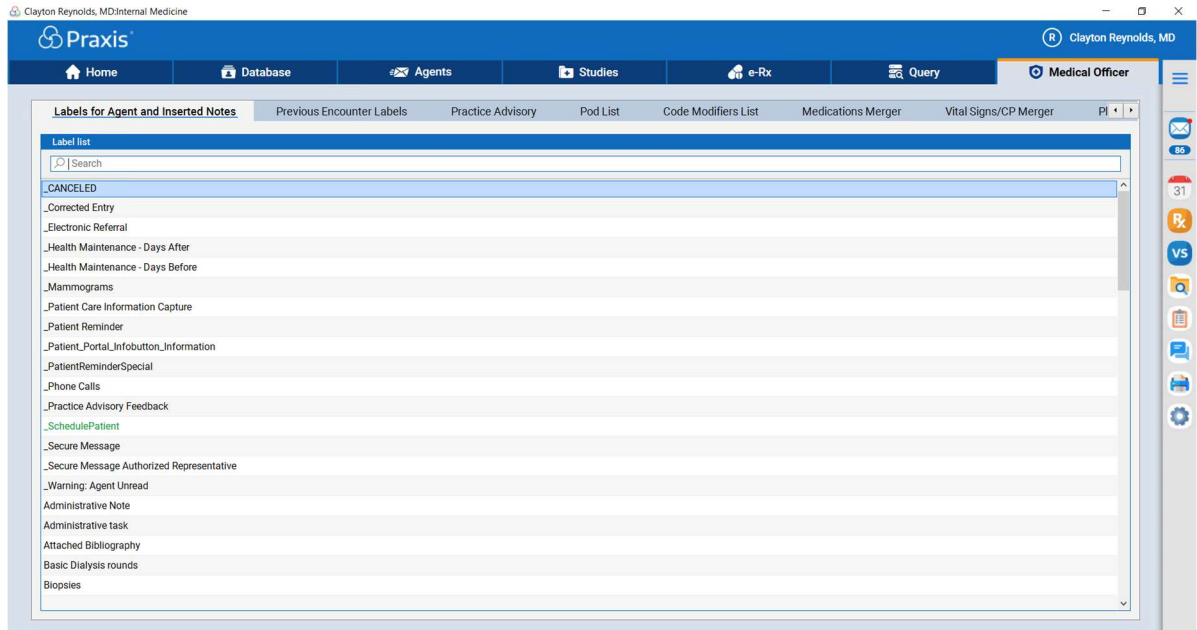
Home Screen → Medical Officer Screen → Practice Advisory Screen → Right-click drop-down menu → Accept Button → Read out loud the Practice Advisory Criteria → Send Practice Advisory Button → OK Button

**Screenshots from Praxis EMR demonstrating Optimal Path**

**Home Screen**



**Medical Officer Screen**



# Practice Advisory Screen

Clayton Reynolds, MD Internal Medicine

Praxis Clayton Reynolds, MD

Home Database Agents Studies e-Rx Query Medical Officer

Labels for Agent and Inserted Notes Previous Encounter Labels Practice Advisory Pod List Code Modifiers List Medications Merger Vital Signs/CP Merger PI

Practice Advisory

Search Import

._Predictive DSI: [New Predictive DSI]	[Enter Details]	2/27/2026
._Predictive DSI: Mickey Mouse Health AI Solution - CardioSpark Predictor	Mickey Mouse Health AI Labs, Inc.	2/10/2026
Annual Eye Exam for Diabetics	Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	RL	4/7/2011
Atrial Fibrillation	rl	4/7/2011
Benzodiazepine Prescription Safety	American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 A NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7-3-2018	Centers for Medicare & Medicaid Services	7/30/2018
Coumadine	RL	6/16/2011
Electronic Copy of Health Information	RL	6/20/2011
INR	rl	5/27/2011
MRI safety with pacemaker/ICD	Praxis EMR Clinical Decision Support Team	2/27/2026
NQF 0024 Patients 11-16 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0024 Patients 2-10 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0038-Vaccinations 2 years	NQF	2/15/2011
NQF 0038-Vaccinations 1 Year	NQF	4/16/2011
NQF 0038-Vaccinations 15 Months	NQF	4/13/2011
NQF 0038-Vaccinations 2 Months	NQF	4/17/2011
NQF 0038-Vaccinations 4 Months	NQF	2/15/2011
NQF 0038-Vaccinations 6 Months	NQF	2/19/2011
NQF 0038-Vaccinations NewBorn	NQF	4/17/2011

Show Inactive Practice Advisory

# Right-click Drop-Down Men

Clayton Reynolds, MD Internal Medicine

Praxis Clayton Reynolds, MD

Home Database Agents Studies e-Rx Query Medical Officer

Labels for Agent and Inserted Notes Previous Encounter Labels Practice Advisory Pod List Code Modifiers List Medications Merger Vital Signs/CP Merger PI

Practice Advisory

Search Import

._Predictive DSI: [New Predictive DSI]	[Enter Details]	2/27/2026
._Predictive DSI: Mickey Mouse Health AI Solution - CardioSpark Predictor	Mickey Mouse Health AI Labs, Inc.	2/10/2026
Annual Eye Exam for Diabetics	Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	RL	4/7/2011
Atrial Fibrillation	rl	4/7/2011
Benzodiazepine Prescription Safety	American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 A NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7-3-2018	Centers for Medicare & Medicaid Services	7/30/2018
Coumadine	RL	6/16/2011
Electronic Copy of Health Information	RL	6/20/2011
INR	rl	5/27/2011
MRI safety with pacemaker/ICD	Praxis EMR Clinical Decision Support Team	2/27/2026
NQF 0024 Patients 11-16 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0024 Patients 2-10 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0038-Vaccinations 2 years	NQF	2/15/2011
NQF 0038-Vaccinations 1 Year	NQF	4/16/2011
NQF 0038-Vaccinations 15 Months	NQF	4/13/2011
NQF 0038-Vaccinations 2 Months	NQF	4/17/2011
NQF 0038-Vaccinations 4 Months	NQF	2/15/2011
NQF 0038-Vaccinations 6 Months	NQF	2/19/2011
NQF 0038-Vaccinations NewBorn	NQF	4/17/2011

Show Inactive Practice Advisory

# Accept Button

Clayton Reynolds, MD Internal Medicine

Praxis Clayton Reynolds, MD

Home Database Agents Studies e-Rx Query Medical Officer

Labels for Agent and Inserted Notes Previous Encounter Labels **Practice Advisory** Pod List Code Modifiers List Medications Merger Vital Signs/CP Merger PI

Practice Advisory

Search Import

._Predictive DSI: [New Predictive DSI]	[Enter Details]	2/27/2026
._Predictive DSI: Mickey Mouse Health AI Solution – CardioSpark Predictor	Mickey Mouse Health AI Labs, Inc.	2/10/2026
Annual Eye Exam for Diabetics	Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	RL	4/7/2011
Atrial Fibrillation	rl	4/7/2011
Benzodiazepine Prescription Safety	American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 A NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7-3-2018	Centers for Medicare & Medicaid Services	7/30/2018
Coumadine	RL	6/16/2011
Electronic Copy of Health Information	RL	6/20/2011
INR	rl	5/27/2011
MRI safety with pacemaker/ICD	Praxis EMR Clinical Decision Support Team	2/27/2026
NQF 0024 Patients 11-17	Assessment and Counseling for Children and Adolescents	6/18/2011
NQF 0024 Patients 2-10	Assessment and Counseling for Children and Adolescents	6/18/2011
NQF 0038-Vaccinations 2 years	NQF	2/15/2011
NQF 0038-Vaccinations 1 Year	NQF	4/16/2011
NQF 0038-Vaccinations 15 Months	NQF	4/13/2011
NQF 0038-Vaccinations 2 Months	NQF	4/17/2011
NQF 0038-Vaccinations 4 Months	NQF	2/15/2011
NQF 0038-Vaccinations 6 Months	NQF	2/19/2011
NQF 0038-Vaccinations NewBorn	NQF	4/17/2011

Show Inactive Practice Advisory

# Read out loud the Practice Advisory Criteria

New Practice Advisory

Send Practice Advisory Save as draft Spell Check Groups Editor

Name: MRI safety with pacemaker/ICD

Author, Funding: Praxis EMR Clinical Decision Support Team

Reference: Nazarian S, Hansford R, Rahsepar AA, et al. Safety of magnetic resonance imaging in patients with cardiac devices. N Engl J Med. 2017;377:2555–2564.

Recipients: Providers

Criteria: Both 0 <= Age < 150. Dynamic Fields: Unique Device Identifier (UDI): 00643169871939 CPT/HCPCS Codes: MAGNETIC RESONANCE (EG, PROTON) IMAGING, ANY JOINT OF LOWER EXTREMITY; WITHOUT CONTRAST MATERIAL.

Nested PA  
Alert Level:  Information  Warning  Critical

Practice Advisory Items

1	Implantable Device detected (Cardiac Pacemaker UDI: 00643169871939) – MRI may be contraindicated without proper safety protocols. Confirm device status before pro...	Repetitive	Now	Exclusive
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Private Text

## Send Practice Advisory Button

New Practice Advisory

Send Practice Advisory Save as draft Spell Check Groups Editor

Name: MRI safety with pacemaker/ICD

Author, Funding: Praxis EMR Clinical Decision Support Team

Reference: Nazarian S, Hansford R, Rahsepar AA, et al. Safety of magnetic resonance imaging in patients with cardiac devices. N Engl J Med. 2017;377:2555-2564.

Recipients Criteria: Providers  
Both 0 <= Age < 150. Dynamic Fields: Unique Device Identifier (UDI): 00643169871939. CPT/HCPCS Codes: MAGNETIC RESONANCE (EG, PROTON) IMAGING, ANY JOINT OF LOWER EXTREMITY; WITHOUT CONTRAST MATERIAL.

Nested PA Alert Level:  Information  Warning  Critical

Practice Advisory Items

1	Implantable Device detected (Cardiac Pacemaker UDI: 00643169871939) – MRI may be contraindicated without proper safety protocols. Confirm device status before pro...	Repetitive	Now	Exclusive

Private Text

## OK Button

New Practice Advisory

Send Practice Advisory Save as draft Spell Check Groups Editor

Name: MRI safety with pacemaker/ICD

Author, Funding: Praxis EMR Clinical Decision Support Team

Reference: Nazarian S, Hansford R, Rahsepar AA, et al. Safety of magnetic resonance imaging in patients with cardiac devices. N Engl J Med. 2017;377:2555-2564.

Recipients Criteria: Providers  
Both 0 <= Age < 150. Dynamic Fields: Unique Device Identifier (

Nested PA Alert Level:  Information  Warning  Critical

DISCLAIMER  
IMPORTANT DISCLAIMER REGARDING THE PRACTICE ADVISORIES:  
We have added Practice Advisories as a simple assistance to you and at no additional cost, but we are NOT responsible for the recommendations issued or not issued and for the proper working conditions of any practice advisory. Please review each Practice Advisory you decide to implement against its official guideline recommendation that comes hyperlinked to it. Use your judgment to modify our advisory as you see fit prior to activating it in your clinic and please report to us anything that may not appear clear or correct. Also, please note that a Practice Advisory may fail to advice and it is no substitute for your clinical judgment. If you note that a Practice Advisory is not triggering as intended, please let us know right away and we will correct it for you and for all our other clients. We recommend that you use as few advisories as possible, and that you focus on high risk advisories. Too many advisories added to your system may create alert-fatigue syndrome, and may also slow down the working of your Praxis. Please keep in mind that conceptual errors may be involved in our understanding of the official recommendations linked to each advisory. So please read the original guideline and review our advisory against it prior to activation. Also please make sure that you are using the latest dates for any given practice advisory as the recommendations are modified over time by the guideline originators and by Praxis. So please make sure you use the very latest practice guideline available. Most importantly, keep in mind that these advisories are an addition to, an...

Practice Advisory Items

1	Implantable Device detected (Cardiac Pacemaker UDI: 00643169871939) –	Repetitive	Now	Exclusive

Private Text

## Task 4: Access and modify source attributes for an evidence-based DSI

### Optimal Path Description

Practice Advisory Screen → Right-click drop-down menu → Update Button →  
Change the Funding Source Field → Send Practice Advisory Button

### Screenshots from Praxis EMR demonstrating Optimal Path

#### Practice Advisory Screen

The screenshot shows the Praxis EMR interface for the Practice Advisory screen. The top navigation bar includes Home, Database, Agents, Studies, e-Rx, Query, and Medical Officer. The main content area displays a table of practice advisories with columns for the advisory name, funding source, and date. The row for 'MRI safety with pacemaker/ICD' is highlighted in blue.

Practice Advisory	Funding Source	Date
._Predictive DSI: [New Predictive DSI]	[Enter Details]	2/27/2026
._Predictive DSI: Mickey Mouse Health AI Solution - CardioSpark Predictor	Mickey Mouse Health AI Labs, Inc.	2/10/2026
Annual Eye Exam for Diabetics	Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	RL	4/7/2011
Atrial Fibrillation	rl	4/7/2011
Benzodiazepine Prescription Safety	American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 A NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7-3-2018	Centers for Medicare & Medicaid Services	7/30/2018
Coumadine	RL	6/16/2011
Electronic Copy of Health Information	RL	6/20/2011
INR	rl	5/27/2011
MRI safety with pacemaker/ICD	Praxis EMR Clinical Decision Support Team	2/27/2026
NQF 0024 Patients 11-16 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0024 Patients 2-10 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0038-Vaccinations 2 years	NQF	2/15/2011
NQF 0038-Vaccinations 1 Year	NQF	4/16/2011
NQF 0038-Vaccinations 15 Months	NQF	4/13/2011
NQF 0038-Vaccinations 2 Months	NQF	4/17/2011
NQF 0038-Vaccinations 4 Months	NQF	2/15/2011
NQF 0038-Vaccinations 6 Months	NQF	2/19/2011
NQF 0038-Vaccinations NewBorn	NQF	4/17/2011

#### Right-click drop-down menu

This screenshot is identical to the previous one, but with a right-click drop-down menu open over the 'MRI safety with pacemaker/ICD' row. The menu options are: View, Update, Clone, Deactivate, and Export.

Practice Advisory	Funding Source	Date
._Predictive DSI: [New Predictive DSI]	[Enter Details]	2/27/2026
._Predictive DSI: Mickey Mouse Health AI Solution - CardioSpark Predictor	Mickey Mouse Health AI Labs, Inc.	2/10/2026
Annual Eye Exam for Diabetics	Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	RL	4/7/2011
Atrial Fibrillation	rl	4/7/2011
Benzodiazepine Prescription Safety	American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 A NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7-3-2018	Centers for Medicare & Medicaid Services	7/30/2018
Coumadine	RL	6/16/2011
Electronic Copy of Health Information	RL	6/20/2011
INR	rl	5/27/2011
MRI safety with pacemaker/ICD	Praxis EMR Clinical Decision Support Team	2/27/2026
NQF 0024 Patients 11-16 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0024 Patients 2-10 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0038-Vaccinations 2 years	NQF	2/15/2011
NQF 0038-Vaccinations 1 Year	NQF	4/16/2011
NQF 0038-Vaccinations 15 Months	NQF	4/13/2011
NQF 0038-Vaccinations 2 Months	NQF	4/17/2011
NQF 0038-Vaccinations 4 Months	NQF	2/15/2011
NQF 0038-Vaccinations 6 Months	NQF	2/19/2011
NQF 0038-Vaccinations NewBorn	NQF	4/17/2011

# Update Button

Clayton Reynolds, MD Internal Medicine

Praxis Clayton Reynolds, MD

Home Database Agents Studies e-Rx Query Medical Officer

Labels for Agent and Inserted Notes Previous Encounter Labels Practice Advisory Pod List Code Modifiers List Medications Merger Vital Signs/CP Merger

Practice Advisory

Search Import

..Predictive DSI: <a href="#">New Predictive DSI</a>	[Enter Details]	2/27/2026
..Predictive DSI: Mickey Mouse Health AI Solution – CardioSpark Predictor	Mickey Mouse Health AI Labs, Inc.	2/10/2026
Annual Eye Exam for Diabetics	Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	RL	4/7/2011
Atrial Fibrillation	rl	4/7/2011
Benzodiazepine Prescription Safety	American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 A NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7-3-2018	Centers for Medicare & Medicaid Services	7/30/2018
Coumadine	RL	6/16/2011
Electronic Copy of Health Information	RL	6/20/2011
INR	rl	5/27/2011
MRI safety with pacemaker/ICD	Praxis EMR Clinical Decision Support Team	2/27/2026
NQF 0024 Patients 11-16 yo Weight Assessment and Counseling for	NQF	6/18/2011
NQF 0024 Patients 2-10 yo Weight Assessment and Counseling for	NQF	6/18/2011
NQF 0038-Vaccinations 2 years	NQF	2/15/2011
NQF 0038-Vaccinations 1 Year	NQF	4/16/2011
NQF 0038-Vaccinations 15 Months	NQF	4/13/2011
NQF 0038-Vaccinations 2 Months	NQF	4/17/2011
NQF 0038-Vaccinations 4 Months	NQF	2/15/2011
NQF 0038-Vaccinations 6 Months	NQF	2/19/2011
NQF 0038-Vaccinations NewBorn	NQF	4/17/2011

Show Inactive Practice Advisory

# Change the Funding Source Field

Update Practice Advisory

Send Practice Advisor Spell Check Groups Editor

Name: MRI safety with pacemaker/ICD

Author, Funding: Praxis EMR Clinical Team, **UPDATED 2026 Funding**

Reference: Nazarian S, Hansford R, Rahsepar AA, et al. Safety of magnetic resonance imaging in patients with cardiac devices. N Engl J Med. 2017;377:2555-2564.

Recipients: Providers

Criteria: Both 0 <- Age < 150. Dynamic Fields: Unique Device Identifier (UDI): 00643169871939. CPT/HCPCS Codes: MAGNETIC RESONANCE (EG, PROTON) IMAGING, ANY JOINT OF LOWER EXTREMITY; WITHOUT CONTRAST MATERIAL.

Nested PA:

Alert Level:  Information  Warning  Critical

Practice Advisory Items

1	Implantable Device detected (Cardiac Pacemaker UDI: 00643169871939) – MRI may be contraindicated without proper safety protocols. Confirm device status before pro...	Repetitive	Now	Exclusive
---	---	------------	-----	-----------

Private Text

## Send Practice Advisory Button

**Update Practice Advisory**

Send Practice Advisory | Spell Check | Groups Editor

Name: MRI safety with pacemaker/ICD

Author, Funding: Praxis EMR Clinical Team, UPDATED 2026 Funding

Reference: Nazarian S, Hansford R, Rahsepar AA, et al. Safety of magnetic resonance imaging in patients with cardiac devices. N Engl J Med. 2017;377:2555-2564.

Recipients: Providers

Criteria: Both 0 <= Age < 150. Dynamic Fields: Unique Device Identifier (UDI): 00643169871939, CPT/HCPCS Codes: MAGNETIC RESONANCE (EG, PROTON) IMAGING, ANY JOINT OF LOWER EXTREMITY; WITHOUT CONTRAST MATERIAL.

Nested PA:  Alert Level:  Information  Warning  Critical

Practice Advisory Items				
1	Implantable Device detected (Cardiac Pacemaker UDI: 00643169871939) - MRI may be contraindicated without proper safety protocols. Confirm device status before pro...	Repetitive	Now	Exclusive

Private Text

## Task 5: Select a predictive DSI

### Optimal Path Description

Practice Advisory Screen → Right-click Drop-down Menu → Accept Button → Send Practice Advisory Button → OK Button

## Screenshots from Praxis EMR demonstrating Optimal Path

### Practice Advisory Screen

Clayton Reynolds, MD | Internal Medicine

Praxis | Clayton Reynolds, MD

Home | Database | Agents | Studies | e-Rx | Query | Medical Officer

Labels for Agent and Inserted Notes | Previous Encounter Labels | **Practice Advisory** | Pod List | Code Modifiers List | Medications Merger | Vital Signs/CP Merger | PI

Practice Advisory	Provider	Date
Search		Import
...Predictive DSI: [New Predictive DSI]	[Enter Details]	2/27/2026
...Predictive DSI: Mickey Mouse Health AI Solution - CardioSpark Predictor	Mickey Mouse Health AI Labs, Inc.	2/10/2026
Annual Eye Exam for Diabetics	Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	RL	4/7/2011
Atrial Fibrillation	rl	4/7/2011
Benzodiazepine Prescription Safety	American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 A NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7-3-2018	Centers for Medicare & Medicaid Services	7/30/2018
Coumadine	RL	6/16/2011
Electronic Copy of Health Information	RL	6/20/2011
INR	rl	5/27/2011
<b>MRI safety with pacemaker/ICD</b>	<b>Praxis EMR Clinical Decision Support Team</b>	<b>2/27/2026</b>
NQF 0024 Patients 11-16 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0024 Patients 2-10 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0038-Vaccinations 2 years	NQF	2/15/2011
NQF 0038-Vaccinations 1 Year	NQF	4/16/2011
NQF 0038-Vaccinations 15 Months	NQF	4/13/2011
NQF 0038-Vaccinations 2 Months	NQF	4/17/2011
NQF 0038-Vaccinations 4 Months	NQF	2/15/2011
NQF 0038-Vaccinations 6 Months	NQF	2/19/2011
NQF 0038-Vaccinations NewBorn	NQF	4/17/2011

Show Inactive Practice Advisory

## Right-click Drop-down Menu

Clayton Reynolds, MD Internal Medicine

Praxis Clayton Reynolds, MD

Home Database Agents Studies e-Rx Query Medical Officer

Labels for Agent and Inserted Notes Previous Encounter Labels Practice Advisory Pod List Code Modifiers List Medications Merger Vital Signs/CP Merger PI

Practice Advisory

Search Import

..Predictive DSI: [New Predictive DSI]	[Enter Details]	2/27/2026
..Predictive DSI: Mickey Mouse Health AI Solution - CardioSpark Predictor	Mickey Mouse Health AI Labs, Inc.	2/10/2026
Annual Eye Exam for Diabetics	Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	RL	4/7/2011
Atrial Fibrillation	rl	4/7/2011
Benzodiazepine Prescription Safety	American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 A NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7-3-2018	Centers for Medicare & Medicaid Services	7/30/2018
Coumadine	RL	6/16/2011
Electronic Copy of Health Information	RL	6/20/2011
INR	rl	5/27/2011
MRI safety with pacemaker/ICD	Praxis EMR Clinical Decision Support Team	2/27/2026
NQF 0024 Patients 11-16 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0024 Patients 2-10 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0038-Vaccinations 2 years	NQF	2/15/2011
NQF 0038-Vaccinations 1 Year	NQF	4/16/2011
NQF 0038-Vaccinations 15 Months	NQF	4/13/2011
NQF 0038-Vaccinations 2 Months	NQF	4/17/2011
NQF 0038-Vaccinations 4 Months	NQF	2/15/2011
NQF 0038-Vaccinations 6 Months	NQF	2/19/2011
NQF 0038-Vaccinations NewBorn	NQF	4/17/2011

Show Inactive Practice Advisory

## Accept Button

Clayton Reynolds, MD Internal Medicine

Praxis Clayton Reynolds, MD

Home Database Agents Studies e-Rx Query Medical Officer

Labels for Agent and Inserted Notes Previous Encounter Labels Practice Advisory Pod List Code Modifiers List Medications Merger Vital Signs/CP Merger PI

Practice Advisory

Search Import

..Predictive DSI: [New Predictive DSI]	[Enter Details]	2/27/2026
..Predictive DSI: Mickey Mouse Health AI Solution - CardioSpark Predictor	Mickey Mouse Health AI Labs, Inc.	2/10/2026
Annual Eye Exam for Diabetics	Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	RL	4/7/2011
Atrial Fibrillation	rl	4/7/2011
Benzodiazepine Prescription Safety	American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 A NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7-3-2018	Centers for Medicare & Medicaid Services	7/30/2018
Coumadine	RL	6/16/2011
Electronic Copy of Health Information	RL	6/20/2011
INR	rl	5/27/2011
MRI safety with pacemaker/ICD	Praxis EMR Clinical Decision Support Team	2/27/2026
NQF 0024 Patients 11-16 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0024 Patients 2-10 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0038-Vaccinations 2 years	NQF	2/15/2011
NQF 0038-Vaccinations 1 Year	NQF	4/16/2011
NQF 0038-Vaccinations 15 Months	NQF	4/13/2011
NQF 0038-Vaccinations 2 Months	NQF	4/17/2011
NQF 0038-Vaccinations 4 Months	NQF	2/15/2011
NQF 0038-Vaccinations 6 Months	NQF	2/19/2011
NQF 0038-Vaccinations NewBorn	NQF	4/17/2011

Show Inactive Practice Advisory

## Send Practice Advisory Button

New Practice Advisory

Send Practice Advisory Save as draft Spell Check Groups Editor

Name: [\_Predictive DSt: [New Predictive DSt]]

Author, Funding: [Enter Details]

Reference: [Enter Details]

Recipients: Providers

Criteria: Both 0 <= Age < 0.

Nested PA Alert Level:  Information  Warning  Critical

Practice Advisory Items				
1	A. Intervention Overview & Outputs	Repetitive	Now	Regular
2	- 1. Developer Name and Contact Information: [Enter Details]	Repetitive	Now	Regular
3	- 2. Funding Source: [Enter Details]	Repetitive	Now	Regular
4	- 3. Description of Output Values: [Enter Details]	Repetitive	Now	Regular
5	- 4. Type of Output: [Enter Details]	Repetitive	Now	Regular
6	B. Intended Purpose & Use	Repetitive	Now	Regular
7	- 5. Intended Use: [Enter Details]	Repetitive	Now	Regular
8	- 6. Intended Patient Population(s): [Enter Details]	Repetitive	Now	Regular
9	- 7. Intended User(s): [Enter Details]	Repetitive	Now	Regular
10	- 8. Intended Role in Decision-Making: [Enter Details]	Repetitive	Now	Regular
11	C. Out-of-Scope and Cautionary Use	Repetitive	Now	Regular
12	- 9. Out-of-Scope Tasks, Situations, and/or Populations: [Enter Details]	Repetitive	Now	Regular

Private Text

## OK Button

New Practice Advisory

Send Practice Advisory Save as draft Spell Check Groups Editor

Name: [\_Predictive DSt: [New Predictive DSt]]

Author, Funding: [Enter Details]

Reference: [Enter Details]

Recipients: Providers

Criteria: Both 0 <= Age < 0.

Nested PA Alert Level:  Information  Warning  Critical

**DISCLAIMER**

**IMPORTANT DISCLAIMER REGARDING THE PRACTICE ADVISORIES:**

We have added Practice Advisories as a simple assistance to you and at no additional cost, but we are NOT responsible for the recommendations issued or not issued and for the proper working conditions of any practice advisory.

Please review each Practice Advisory you decide to implement against its official guideline recommendation that comes hyperlinked to it. Use your judgment to modify our advisory as you see fit prior to activating it in your clinic and please report to us anything that may not appear clear or correct. Also, please note that a Practice Advisory may fail to advice and it is no substitute for your clinical judgment. If you note that a Practice Advisory is not triggering as intended, please let us know right away and we will correct it for you and for all our other clients.

We recommend that you use as few advisories as possible, and that you focus on high risk advisories. Too many advisories added to your system may create alert-fatigue syndrome, and may also slow down the working of your Praxis. Please keep in mind that conceptual errors may be involved in our understanding of the official recommendations linked to each advisory. So please read the original guideline and review our advisory against it prior to activation.

Also please make sure that you are using the latest dates for any given practice advisory as the recommendations are modified over time by the guideline originators and by Praxis. So please make sure you use the very latest practice guideline available. Most importantly, keep in mind that these advisories are an addition to, an...

OK Cancel

Practice Advisory Items				
1	A. Intervention Overview & Outputs	Repetitive	Now	Regular
2	- 1. Developer Name and Contact Information: [Enter Details]	Repetitive	Now	Regular
3	- 2. Funding Source: [Enter Details]	Repetitive	Now	Regular
4	- 3. Description of Output Values: [Enter Details]	Repetitive	Now	Regular
5	- 4. Type of Output: [Enter Details]	Repetitive	Now	Regular
6	B. Intended Purpose & Use	Repetitive	Now	Regular
7	- 5. Intended Use: [Enter Details]	Repetitive	Now	Regular
8	- 6. Intended Patient Population(s): [Enter Details]	Repetitive	Now	Regular
9	- 7. Intended User(s): [Enter Details]	Repetitive	Now	Regular
10	- 8. Intended Role in Decision-Making: [Enter Details]	Repetitive	Now	Regular
11	C. Out-of-Scope and Cautionary Use	Repetitive	Now	Regular
12	- 9. Out-of-Scope Tasks, Situations, and/or Populations: [Enter Details]	Repetitive	Now	Regular

Private Text

## Task 6: Access and modify source attributes for a predictive DSI

### Optimal Path Description

Practice Advisory Screen → Right-click Drop-down Menu → Update Button → Double-click on Source Attribute to Modify → Modify Source Attribute text → OK Button → Send Practice Advisory Button

## Screenshots from Praxis EMR demonstrating Optimal Path

### Practice Advisory Screen

The screenshot shows the Praxis EMR interface for a Medical Officer. The 'Practice Advisory' tab is active, displaying a table of practice advisories. The table has columns for the advisory name, source, and date. The first row is highlighted in blue.

Practice Advisory	Source	Date
._Predictive DSI: [New Predictive DSI]	[Enter Details]	2/27/2026
._Predictive DSI: Mickey Mouse Health AI Solution – CardioSpark Predictor	Mickey Mouse Health AI Labs, Inc.	2/10/2026
Annual Eye Exam for Diabetics	Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	RL	4/7/2011
Atrial Fibrillation	rl	4/7/2011
Benzodiazepine Prescription Safety	American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 A NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7-3-2018	Centers for Medicare & Medicaid Services	7/30/2018
Coumadine	RL	6/16/2011
Electronic Copy of Health Information	RL	6/20/2011
INR	rl	5/27/2011
MRI safety with pacemaker/ICD	Praxis EMR Clinical Decision Support Team	2/27/2026
NQF 0024 Patients 11-16 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0024 Patients 2-10 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0038-Vaccinations 2 years	NQF	2/15/2011
NQF 0038-Vaccinations 1 Year	NQF	4/16/2011
NQF 0038-Vaccinations 15 Months	NQF	4/13/2011
NQF 0038-Vaccinations 2 Months	NQF	4/17/2011
NQF 0038-Vaccinations 4 Months	NQF	2/15/2011
NQF 0038-Vaccinations 6 Months	NQF	2/19/2011
NQF 0038-Vaccinations NewBorn	NQF	4/17/2011

### Right-click Drop-down Menu

The screenshot shows the same Praxis EMR interface as the previous screenshot, but with a right-click context menu open over the first row of the practice advisory table. The menu options are: View, Update, Clone, Deactivate, and Export.

Practice Advisory	Source	Date
._Predictive DSI: [New Predictive DSI]	[Enter Details]	2/27/2026
._Predictive DSI: Mickey Mouse Health AI Solution – CardioSpark Predictor	Mickey Mouse Health AI Labs, Inc.	2/10/2026
Annual Eye Exam for Diabetics	Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	RL	4/7/2011
Atrial Fibrillation	rl	4/7/2011
Benzodiazepine Prescription Safety	American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 A NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7-3-2018	Centers for Medicare & Medicaid Services	7/30/2018
Coumadine	RL	6/16/2011
Electronic Copy of Health Information	RL	6/20/2011
INR	rl	5/27/2011
MRI safety with pacemaker/ICD	Praxis EMR Clinical Decision Support Team	2/27/2026
NQF 0024 Patients 11-16 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0024 Patients 2-10 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0038-Vaccinations 2 years	NQF	2/15/2011
NQF 0038-Vaccinations 1 Year	NQF	4/16/2011
NQF 0038-Vaccinations 15 Months	NQF	4/13/2011
NQF 0038-Vaccinations 2 Months	NQF	4/17/2011
NQF 0038-Vaccinations 4 Months	NQF	2/15/2011
NQF 0038-Vaccinations 6 Months	NQF	2/19/2011
NQF 0038-Vaccinations NewBorn	NQF	4/17/2011

# Update Button

Clayton Reynolds, MD Internal Medicine

Praxis Clayton Reynolds, MD

Home Database Agents Studies e-Rx Query Medical Officer

Labels for Agent and Inserted Notes Previous Encounter Labels Practice Advisory Pod List Code Modifiers List Medications Merger Vital Signs/CP Merger PI

Practice Advisory

Search [Input]

Practice Advisory	View	CardioSpark Predictor	Mickey Mouse Health AI Labs, Inc.	2/27/2026
Annual Eye Exam for Diabetic	Update		Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	Clone		RL	4/7/2011
Atrial Fibrillation	Deactivate		rl	4/7/2011
Benzodiazepine Prescription Safety	Export		American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 A NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7-3-2018			Centers for Medicare & Medicaid Services	7/30/2018
Coumadine			RL	6/16/2011
Electronic Copy of Health Information			RL	6/20/2011
INR			rl	5/27/2011
MRI safety with pacemaker/ICD			Praxis EMR Clinical Decision Support Team	2/27/2026
NQF 0024 Patients 11-16 yo Weight Assessment and Counseling for Children and Adolescents			NQF	6/18/2011
NQF 0024 Patients 2-10 yo Weight Assessment and Counseling for Children and Adolescents			NQF	6/18/2011
NQF 0038-Vaccinations 2 years			NQF	2/15/2011
NQF 0038-Vaccinations 1 Year			NQF	4/16/2011
NQF 0038-Vaccinations 15 Months			NQF	4/13/2011
NQF 0038-Vaccinations 2 Months			NQF	4/17/2011
NQF 0038-Vaccinations 4 Months			NQF	2/15/2011
NQF 0038-Vaccinations 6 Months			NQF	2/19/2011
NQF 0038-Vaccinations NewBorn			NQF	4/17/2011

Show Inactive Practice Advisory

# Double-click on Source Attribute to Modify

Update Practice Advisory

Send Practice Advisory Spell Check Groups Editor

Name: \_Predictive DSI: Mickey Mouse Health AI Solution - CardioSpark Predictor

Author, Funding: Mickey Mouse Health AI Labs, Inc.

Reference: http://www.MickeyMouseHealth-Fake

Recipients: Providers

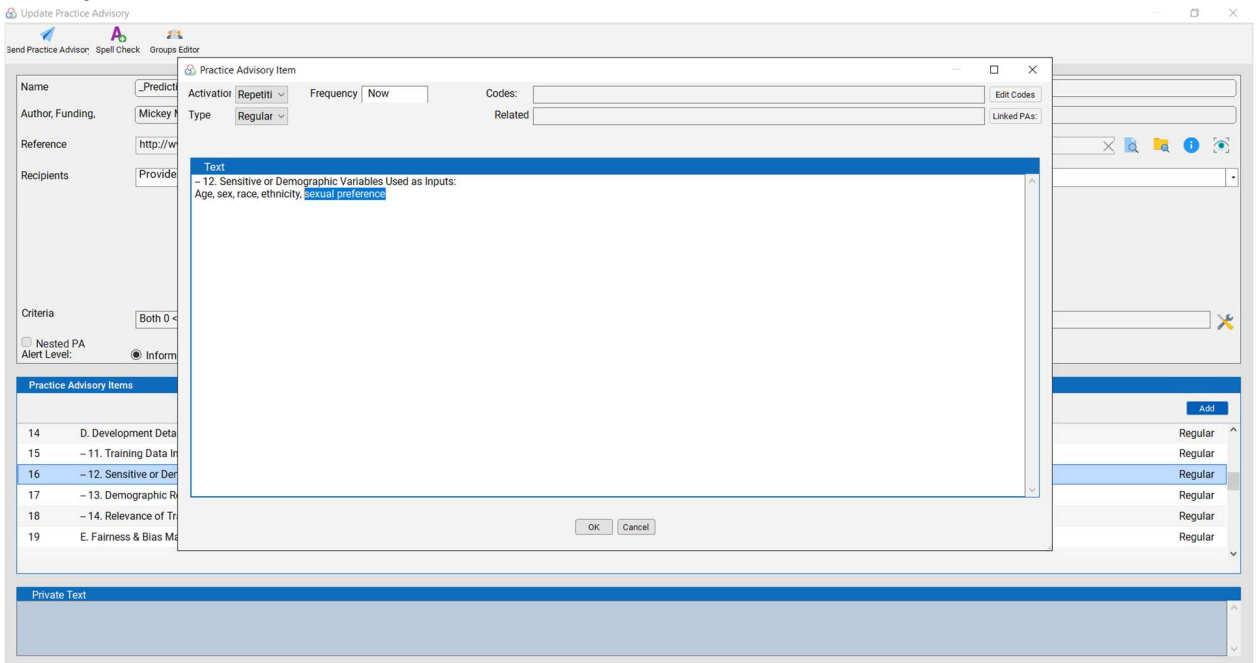
Criteria: Both 0 <= Age < 0.

Nested PA Alert Level:  Information  Warning  Critical

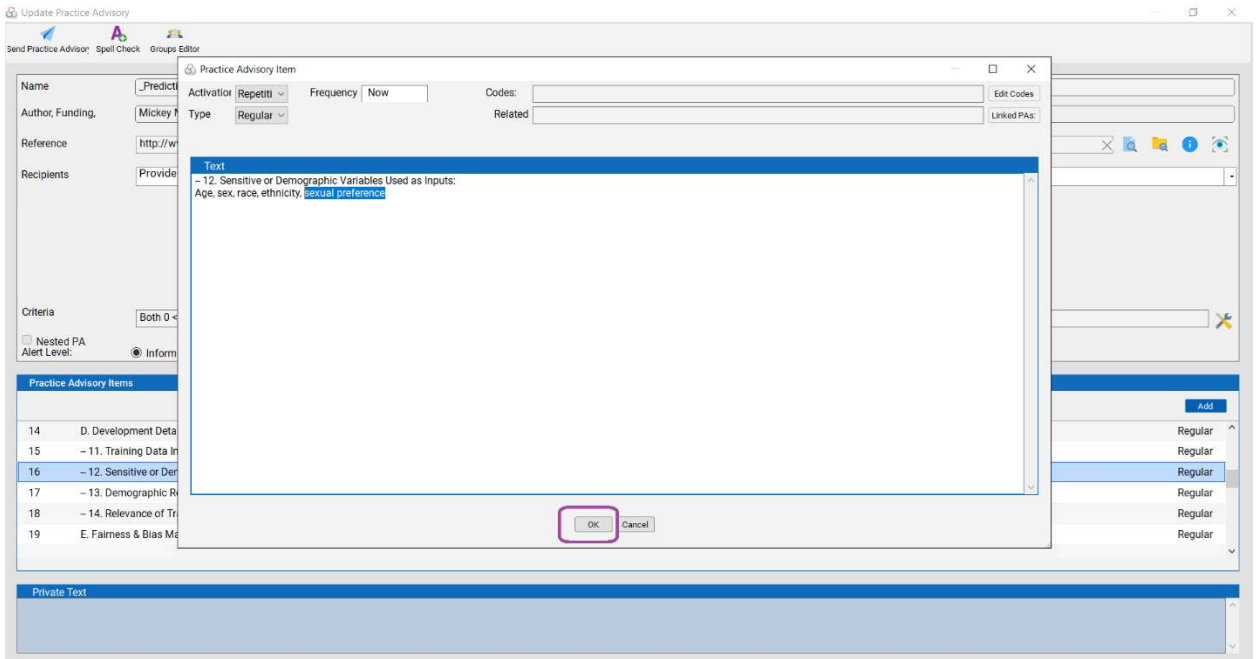
Practice Advisory Items				
14	D. Development Details & Input Data	Repetitive	Now	Regular
15	- 11. Training Data Inclusion and Exclusion Criteria: Included patients aged 40-85 with at least 12 months of longitudinal clinical data and documented cardiovascular ri...	Repetitive	Now	Regular
16	- 12. Sensitive or Demographic Variables Used as Inputs: Age, sex, race, ethnicity	Repetitive	Now	Regular
17	- 13. Demographic Representativeness of Training Data: Training data included representation across age, sex, race, and ethnicity categories consistent with the source h...	Repetitive	Now	Regular
18	- 14. Relevance of Training Data to Intended Deployment Setting: Training data were derived from U.S.-based inpatient and outpatient clinical settings similar to intended ...	Repetitive	Now	Regular
19	E. Fairness & Bias Management	Repetitive	Now	Regular

Private Text

# Modify Source Attribute text



# OK Button



## Send Practice Advisory Button

Update Practice Advisory

Send Practice Advisory | Spell Check | Groups Editor

Name:

Author, Funding:

Reference:

Recipients:

Criteria:

Nested PA  
Alert Level:  Information  Warning  Critical

Practice Advisory Items				
14	D. Development Details & Input Data	Repetitive	Now	Regular
15	-11. Training Data Inclusion and Exclusion Criteria: Included patients aged 40-85 with at least 12 months of longitudinal clinical data and documented cardiovascular ri...	Repetitive	Now	Regular
16	-12. Sensitive or Demographic Variables Used as Inputs: Age, sex, race, ethnicity, sexual preference	Repetitive	Now	Regular
17	-13. Demographic Representativeness of Training Data: Training data included representation across age, sex, race, and ethnicity categories consistent with the source h...	Repetitive	Now	Regular
18	-14. Relevance of Training Data to Intended Deployment Setting: Training data were derived from U.S.-based inpatient and outpatient clinical settings similar to intended ...	Repetitive	Now	Regular
19	E. Fairness & Bias Management	Repetitive	Now	Regular

Private Text

**Task 7:** Identify support of 9 new source attributes for an evidence-based DSI

### Optimal Path Description

Practice Advisory Screen → Right-click Drop-down Menu → View Button → Read Assigned Source Attribute field out loud

## Screenshots from Praxis EMR demonstrating Optimal Path

### Practice Advisory Screen

Clayton Reynolds, MD | Internal Medicine

Praxis | Clayton Reynolds, MD

Home | Database | Agents | Studies | e-Rx | Query | Medical Officer

Labels for Agent and Inserted Notes | Previous Encounter Labels | **Practice Advisory** | Pod List | Code Modifiers List | Medications Merger | Vital Signs/CP Merger | PI

Practice Advisory	Source	Effective Date
Search		
..Mickey Mouse Practice Advisory 2026	Disney Labs, Disney Corp	1/1/0001
..Predictive DSI: [New Predictive DSI]	[Enter Details]	2/27/2026
..Predictive DSI: Mickey Mouse Health AI Solution - CardioSpark Predictor	Mickey Mouse Health AI Labs, Inc.	2/10/2026
Annual Eye Exam for Diabetics	Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	RL	4/7/2011
Atrial Fibrillation	rl	4/7/2011
Benzodiazepine Prescription Safety	American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7.3-2018	Centers for Medicare & Medicaid Services	7/30/2018
Coumadine	RL	6/16/2011
Electronic Copy of Health Information	RL	6/20/2011
INR	rl	5/27/2011
MRI safety with pacemaker/ICD	Praxis EMR Clinical Decision Support Team	2/27/2026
NQF 0024 Patients 11-16 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0024 Patients 2-10 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0038-Vaccinations 2 years	NQF	2/15/2011
NQF 0038-Vaccinations 1 Year	NQF	4/16/2011
NQF 0038-Vaccinations 15 Months	NQF	4/13/2011
NQF 0038-Vaccinations 2 Months	NQF	4/17/2011
NQF 0038-Vaccinations 4 Months	NQF	2/15/2011
NQF 0038-Vaccinations 6 Months	NQF	2/19/2011

Show Inactive Practice Advisory

## Right-click Drop-down Menu

Clayton Reynolds, MD Internal Medicine

Praxis Clayton Reynolds, MD

Home Database Agents Studies e-Rx Query Medical Officer

Labels for Agent and Inserted Notes Previous Encounter Labels Practice Advisory Pod List Code Modifiers List Medications Merger Vital Signs/CP Merger PI

Practice Advisory

Search Import

..Mickey Mouse Practice Advisory	View	Disney Labs, Disney Corp	1/11/0001
..Predictive DSI: Mickey Mouse Health AI Solution - CardioSpark Predictor	Update	[Enter Details]	2/27/2026
..Predictive DSI: Mickey Mouse Health AI Solution - CardioSpark Predictor	Clone	Mickey Mouse Health AI Labs, Inc.	2/10/2026
Annual Eye Exam for Diabetics	Deactivate	Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	Export	RL	4/7/2011
Atrial Fibrillation		rl	4/7/2011
Benzodiazepine Prescription Safety		American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 A NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7-3-2018		Centers for Medicare & Medicaid Services	7/30/2018
Coumadine		RL	6/16/2011
Electronic Copy of Health Information		RL	6/20/2011
INR		rl	5/27/2011
MRI safety with pacemaker/ICD		Praxis EMR Clinical Decision Support Team	2/27/2026
NQF 0024 Patients 11-16 yo Weight Assessment and Counseling for Children and Adolescents		NQF	6/18/2011
NQF 0024 Patients 2-10 yo Weight Assessment and Counseling for Children and Adolescents		NQF	6/18/2011
NQF 0038-Vaccinations 2 years		NQF	2/15/2011
NQF 0038-Vaccinations 1 Year		NQF	4/16/2011
NQF 0038-Vaccinations 15 Months		NQF	4/13/2011
NQF 0038-Vaccinations 2 Months		NQF	4/17/2011
NQF 0038-Vaccinations 4 Months		NQF	2/15/2011
NQF 0038-Vaccinations 6 Months		NQF	2/19/2011

Show Inactive Practice Advisory

## View Button

Clayton Reynolds, MD Internal Medicine

Praxis Clayton Reynolds, MD

Home Database Agents Studies e-Rx Query Medical Officer

Labels for Agent and Inserted Notes Previous Encounter Labels Practice Advisory Pod List Code Modifiers List Medications Merger Vital Signs/CP Merger PI

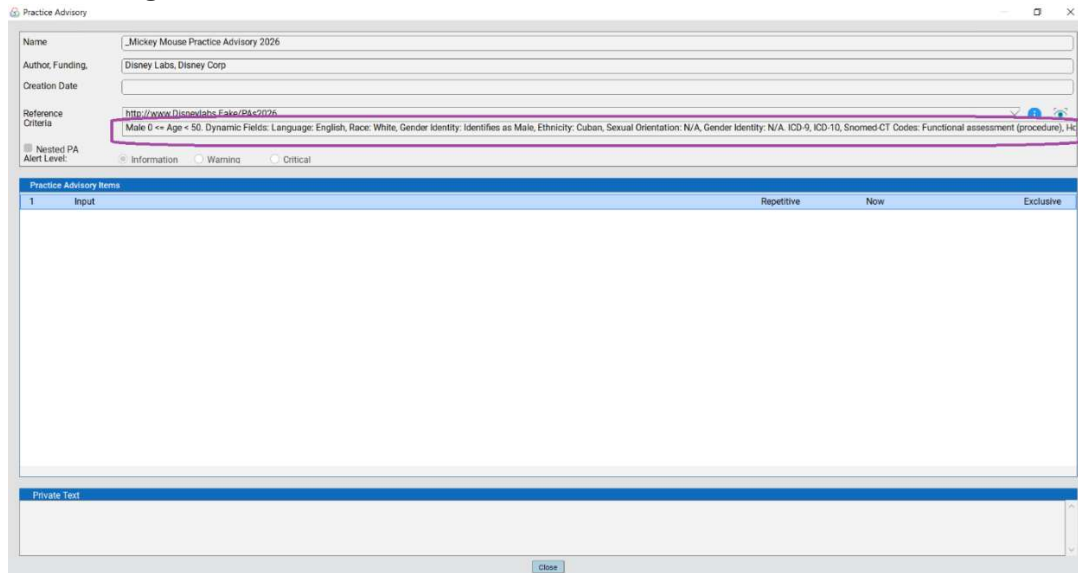
Practice Advisory

Search Import

..Mickey Mouse Practice Advisory	View	Disney Labs, Disney Corp	1/11/0001
..Predictive DSI: Mickey Mouse Health AI Solution - CardioSpark Predictor	Update	[Enter Details]	2/27/2026
..Predictive DSI: Mickey Mouse Health AI Solution - CardioSpark Predictor	Clone	Mickey Mouse Health AI Labs, Inc.	2/10/2026
Annual Eye Exam for Diabetics	Deactivate	Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	Export	RL	4/7/2011
Atrial Fibrillation		rl	4/7/2011
Benzodiazepine Prescription Safety		American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 A NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7-3-2018		Centers for Medicare & Medicaid Services	7/30/2018
Coumadine		RL	6/16/2011
Electronic Copy of Health Information		RL	6/20/2011
INR		rl	5/27/2011
MRI safety with pacemaker/ICD		Praxis EMR Clinical Decision Support Team	2/27/2026
NQF 0024 Patients 11-16 yo Weight Assessment and Counseling for Children and Adolescents		NQF	6/18/2011
NQF 0024 Patients 2-10 yo Weight Assessment and Counseling for Children and Adolescents		NQF	6/18/2011
NQF 0038-Vaccinations 2 years		NQF	2/15/2011
NQF 0038-Vaccinations 1 Year		NQF	4/16/2011
NQF 0038-Vaccinations 15 Months		NQF	4/13/2011
NQF 0038-Vaccinations 2 Months		NQF	4/17/2011
NQF 0038-Vaccinations 4 Months		NQF	2/15/2011
NQF 0038-Vaccinations 6 Months		NQF	2/19/2011

Show Inactive Practice Advisory

## Read Assigned Source Attribute field out loud



Note: The evidence-based DSI displayed in this window is not a functional DSI and does not represent a real-world use case. The purpose of this task is not to evaluate the real-world usefulness of any specific DSI, but rather to demonstrate fulfillment of basic DSI maintenance capability and transparency requirements.

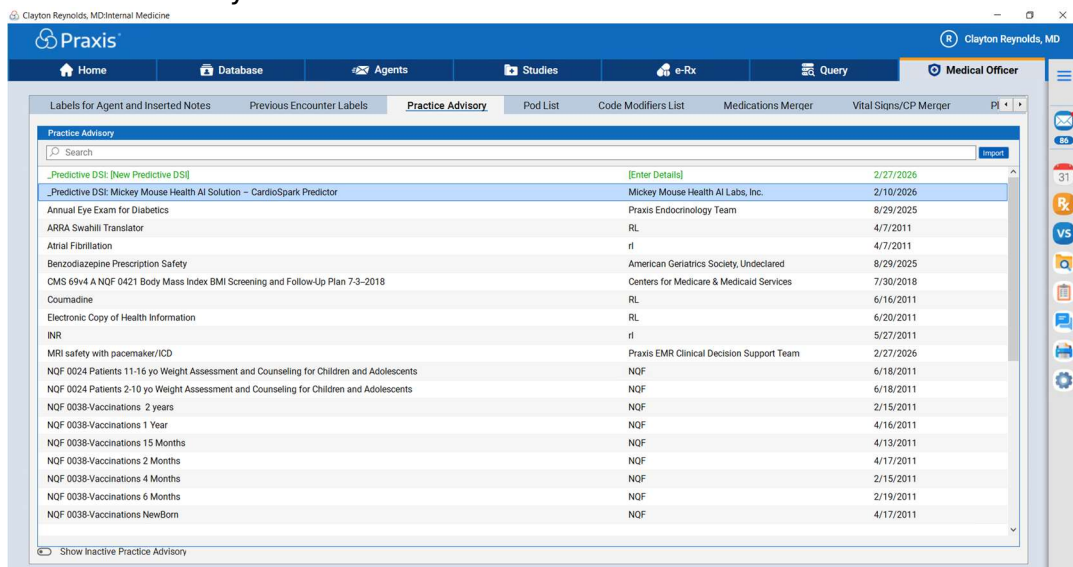
**Task 8:** Identify support for 31 source attributes for a predictive DSI

### Optimal Path Description

Practice Advisory Screen → Right-click Drop-down Menu → View Button → Read Assigned Source Attribute fields out loud

## Screenshots from Praxis EMR demonstrating Optimal Path

### Practice Advisory Screen



## Right-click Drop-down Menu

Clayton Reynolds, MD Internal Medicine

Praxis Clayton Reynolds, MD

Home Database Agents Studies e-Rx Query Medical Officer

Labels for Agent and Inserted Notes Previous Encounter Labels Practice Advisory Pod List Code Modifiers List Medications Merger Vital Signs/CP Merger PI

Practice Advisory

Search Import

..Mickey Mouse Practice Advisory 2026	Disney Labs, Disney Corp	1/11/0001
..Predictive DSI: <a href="#">New Predictive DSI</a>	<a href="#">[Enter Details]</a>	2/27/2026
..Predictive DSI: Mickey Mouse Health AI Solution - CardioSpark Predictor	Mickey Mouse Health AI Labs, Inc.	2/10/2026
Annual Eye Exam for Diabetics	Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	RL	4/7/2011
Atrial Fibrillation	rl	4/7/2011
Benzodiazepine Prescription Safety	American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 A NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7-3-2018	Centers for Medicare & Medicaid Services	7/30/2018
Coumadine	RL	6/16/2011
Electronic Copy of Health Information	RL	6/20/2011
INR	rl	5/27/2011
MRI safety with pacemaker/ICD	Praxis EMR Clinical Decision Support Team	2/27/2026
NQF 0024 Patients 11-16 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0024 Patients 2-10 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0038-Vaccinations 2 years	NQF	2/15/2011
NQF 0038-Vaccinations 1 Year	NQF	4/16/2011
NQF 0038-Vaccinations 15 Months	NQF	4/13/2011
NQF 0038-Vaccinations 2 Months	NQF	4/17/2011
NQF 0038-Vaccinations 4 Months	NQF	2/15/2011
NQF 0038-Vaccinations 6 Months	NQF	2/19/2011

Show Inactive Practice Advisory

## View Button

Clayton Reynolds, MD Internal Medicine

Praxis Clayton Reynolds, MD

Home Database Agents Studies e-Rx Query Medical Officer

Labels for Agent and Inserted Notes Previous Encounter Labels Practice Advisory Pod List Code Modifiers List Medications Merger Vital Signs/CP Merger PI

Practice Advisory

Search Import

..Predictive DSI: <a href="#">New Predictive DSI</a>	<a href="#">[Enter Details]</a>	2/27/2026
..Predictive DSI: Mickey Mouse Health AI Solution - Card	Mickey Mouse Health AI Labs, Inc.	2/10/2026
Annual Eye Exam for Diabetics	Praxis Endocrinology Team	8/29/2025
ARRA Swahili Translator	RL	4/7/2011
Atrial Fibrillation	rl	4/7/2011
Benzodiazepine Prescription Safety	American Geriatrics Society, Undeclared	8/29/2025
CMS 69v4 A NQF 0421 Body Mass Index BMI Screening and Follow-Up Plan 7-3-2018	Centers for Medicare & Medicaid Services	7/30/2018
Coumadine	RL	6/16/2011
Electronic Copy of Health Information	RL	6/20/2011
INR	rl	5/27/2011
MRI safety with pacemaker/ICD	Praxis EMR Clinical Decision Support Team	2/27/2026
NQF 0024 Patients 11-16 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0024 Patients 2-10 yo Weight Assessment and Counseling for Children and Adolescents	NQF	6/18/2011
NQF 0038-Vaccinations 2 years	NQF	2/15/2011
NQF 0038-Vaccinations 1 Year	NQF	4/16/2011
NQF 0038-Vaccinations 15 Months	NQF	4/13/2011
NQF 0038-Vaccinations 2 Months	NQF	4/17/2011
NQF 0038-Vaccinations 4 Months	NQF	2/15/2011
NQF 0038-Vaccinations 6 Months	NQF	2/19/2011
NQF 0038-Vaccinations NewBorn	NQF	4/17/2011

Show Inactive Practice Advisory

# Read Assigned Source Attribute field out loud (Participant may scroll for more fields)

Practice Advisory

Name: \_Predictive DSI: Mickey Mouse Health AI Solution – CardioSpark Predictor

Author, Funding: Mickey Mouse Health AI Labs, Inc.

Creation Date: 2/10/2026 6:45:06 PM

Reference Criteria: http://www.MickeyMouseHealth.Fake  
Both 0 <= Age < 0.

Nested PA Alert Level:  Information  Warning  Critical

Practice Advisory Items					
1	A. Intervention Overview & Outputs		Repetitive	Now	Regular
2	- 1. Developer Name and Contact Information: Mickey Mouse Health AI Labs, Inc. (Fictitious Product) 123 Toon Town Avenue, Toon Town, CA, USA Email: regulatory@mi...		Repetitive	Now	Regular
3	- 2. Funding Source: Internal research and development funding provided by Mickey Mouse Health AI Labs, Inc.		Repetitive	Now	Regular
4	- 3. Description of Output Values: The intervention generates a numerical risk score estimating the likelihood of cardiovascular decompensation within 30 days to support...		Repetitive	Now	Regular
5	- 4. Type of Output: Prediction		Repetitive	Now	Regular
6	B. Intended Purpose & Use		Repetitive	Now	Regular
7	- 5. Intended Use: To assist clinicians in identifying adult patients at elevated short-term cardiovascular risk using routinely collected clinical data.		Repetitive	Now	Regular
8	- 6. Intended Patient Population(s): Adults aged 40–85 with documented cardiovascular disease or cardiovascular risk factors receiving outpatient or inpatient care.		Repetitive	Now	Regular
9	- 7. Intended User(s): Physicians, nurse practitioners, physician assistants, and care coordination teams.		Repetitive	Now	Regular
10	- 8. Intended Role in Decision-Making: Augments clinical decision-making. Not intended to replace clinician judgment.		Repetitive	Now	Regular
11	C. Out-of-Scope and Cautionary Use		Repetitive	Now	Regular
12	- 9. Out-of-Scope Tasks, Situations, and/or Populations: Pediatric patients. Pregnant patients. Use in emergency or real-time critical care decision-making. Use as the sole ...		Repetitive	Now	Regular
13	- 10. Known Risks, Inappropriate uses, and/or Limitations: Reduced performance in populations underrepresented in the training data. Does not incorporate unstructured c...		Repetitive	Now	Regular
14	D. Development Details & Input Data		Repetitive	Now	Regular
15	- 11. Training Data Inclusion and Exclusion Criteria: Included patients aged 40–85 with at least 12 months of longitudinal clinical data and documented cardiovascular ri...		Repetitive	Now	Regular

Private Text

Close

Practice Advisory

Name: \_Predictive DSI: Mickey Mouse Health AI Solution – CardioSpark Predictor

Author, Funding: Mickey Mouse Health AI Labs, Inc.

Creation Date: 2/10/2026 6:45:06 PM

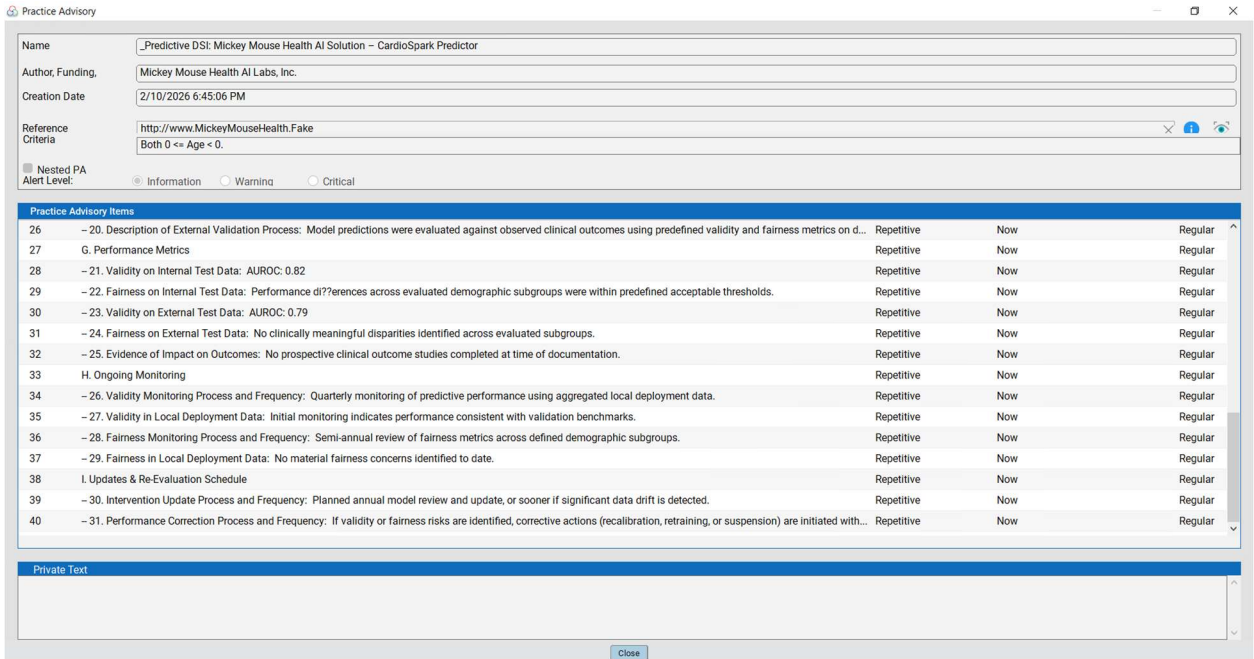
Reference Criteria: http://www.MickeyMouseHealth.Fake  
Both 0 <= Age < 0.

Nested PA Alert Level:  Information  Warning  Critical

Practice Advisory Items					
14	D. Development Details & Input Data		Repetitive	Now	Regular
15	- 11. Training Data Inclusion and Exclusion Criteria: Included patients aged 40–85 with at least 12 months of longitudinal clinical data and documented cardiovascular ri...		Repetitive	Now	Regular
16	- 12. Sensitive or Demographic Variables Used as Inputs: Age, sex, race, ethnicity		Repetitive	Now	Regular
17	- 13. Demographic Representativeness of Training Data: Training data included representation across age, sex, race, and ethnicity categories consistent with the source h...		Repetitive	Now	Regular
18	- 14. Relevance of Training Data to Intended Deployment Setting: Training data were derived from U.S.-based inpatient and outpatient clinical settings similar to intended ...		Repetitive	Now	Regular
19	E. Fairness & Bias Management		Repetitive	Now	Regular
20	- 15. Fairness Approach: Fairness was assessed by evaluating predictive performance across demographic subgroups defined by age, sex, race, and ethnicity.		Repetitive	Now	Regular
21	- 16. Bias Mitigation Strategies: Subgroup performance monitoring. Model recalibration to reduce observed disparities. Periodic fairness reviews during post-deployment ...		Repetitive	Now	Regular
22	F. External Validation		Repetitive	Now	Regular
23	- 17. External Data Sources, Clinical Settings, and/or Environments assessed through External Validation: Retrospective dataset from an independent multi-site health sys...		Repetitive	Now	Regular
24	- 18. Organization or Party Conducting External Testing: Toon Town Analytics Validation Group (fictional third party)		Repetitive	Now	Regular
25	- 19. Demographic Representativeness of External Validation Data: External validation data included demographic distributions comparable to those used during training...		Repetitive	Now	Regular
26	- 20. Description of External Validation Process: Model predictions were evaluated against observed clinical outcomes using predefined validity and fairness metrics on d...		Repetitive	Now	Regular
27	G. Performance Metrics		Repetitive	Now	Regular
28	- 21. Validity on Internal Test Data: AUROC: 0.82		Repetitive	Now	Regular

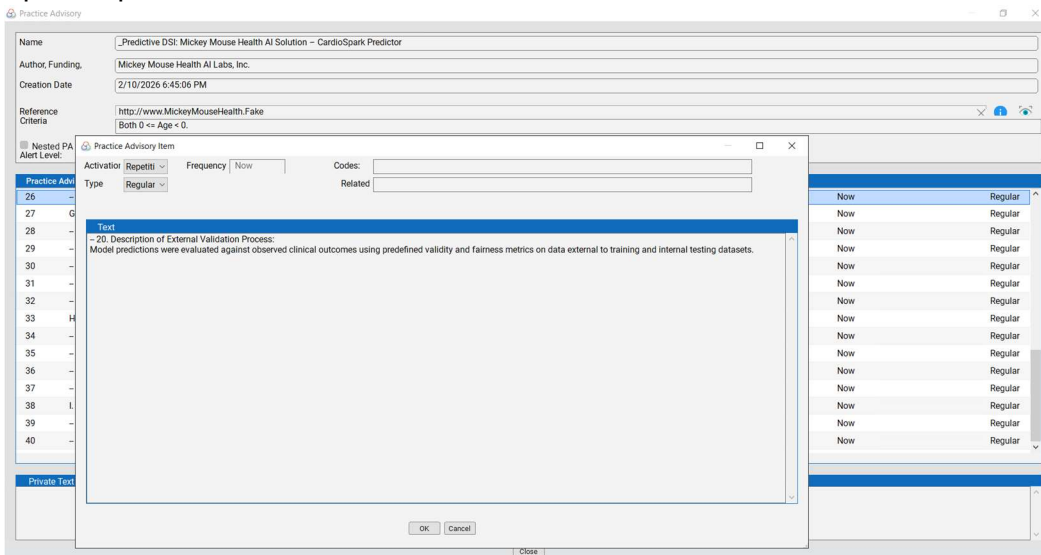
Private Text

Close



**Note 1:**

If the participant double-clicked on the respective source attribute in order to view the full text of the source attribute, we did not consider it a deviation from the optimal path.



Note 2: It bears repeating: Praxis EMR does *not* supply any predictive DSIs. As such information displayed is completely fictitious, and is intended solely to demonstrate full support for functionality and transparency of Source Attributes. The predictive DSI used in testing is a structured placeholder designed solely to validate transparency workflows, role-based access controls, and source attribute management functionality. No claims regarding predictive validity, performance, or clinical impact are made or evaluated in this study.