ONC HIT Certification Program
Test Results Summary for 2014 Edition EHR Certification

Part 1: Product and Developer Information

1.1 Certified Product Information

Product Name:	MedWorxs Evolution
Product Version:	6.1
Domain:	Ambulatory
Test Type:	Complete EHR

1.2 Developer/Vendor Information

Developer/Vendor Name:	MedWorxs LLC
Address:	PO Box 568 Evergreen CO 80437
Website:	www.medworxs.com
Email:	info@medworxs.com
Phone:	720-961-4050
Developer/Vendor Contact:	Greg Noble

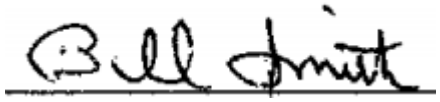
Part 2: ONC-Authorized Certification Body Information

2.1 ONC-Authorized Certification Body Information

ONC-ACB Name:	Drummond Group
Address:	13359 North Hwy 183, Ste B-406-238, Austin, TX 78750
Website:	www.drummondgroup.com
Email:	ehr@drummondgroup.com
Phone:	817-294-7339
ONC-ACB Contact:	Bill Smith

This test results summary is approved for public release by the following ONC-Authorized Certification Body Representative:

Bill Smith
ONC-ACB Authorized Representative


5/30/14
Signature and Date

Certification Committee Chair
Function/Title

2.2 Gap Certification

The following identifies criterion or criteria certified via gap certification

§170.314			
[x] (a)(1)	[ ] (a)(17)	[x] (d)(5)	[ ] (d)(9)
[x] (a)(6)	[ ] (b)(5)*	[x] (d)(6)	[x] (f)(1)
[x] (a)(7)	[x] (d)(1)	[x] (d)(8)	

*Gap certification allowed for Inpatient setting only

[ ] No gap certification

2.3 Inherited Certification

The following identifies criterion or criteria certified via inherited certification

§170.314			
☐ (a)(1)	☐ (a)(14)	☐ (c)(3)	☐ (f)(1)
☐ (a)(2)	☐ (a)(15)	☐ (d)(1)	☐ (f)(2)
☐ (a)(3)	☐ (a)(16) *Inpt. only*	☐ (d)(2)	☐ (f)(3)
☐ (a)(4)	☐ (a)(17) *Inpt. only*	☐ (d)(3)	☐ (f)(4) *Inpt. only*
☐ (a)(5)	☐ (b)(1)	☐ (d)(4)	☐ (f)(5) *Optional & Amb. only*
☐ (a)(6)	☐ (b)(2)	☐ (d)(5)	
☐ (a)(7)	☐ (b)(3)	☐ (d)(6)	☐ (f)(6) *Optional & Amb. only*
☐ (a)(8)	☐ (b)(4)	☐ (d)(7)	
☐ (a)(9)	☐ (b)(5)	☐ (d)(8)	☐ (g)(1)
☐ (a)(10)	☐ (b)(6) *Inpt. only*	☐ (d)(9) *Optional*	☐ (g)(2)
☐ (a)(11)	☐ (b)(7)	☐ (e)(1)	☐ (g)(3)
☐ (a)(12)	☐ (c)(1)	☐ (e)(2) *Amb. only*	☐ (g)(4)
☐ (a)(13)	☐ (c)(2)	☐ (e)(3) *Amb. only*	

☒ No inherited certification

Part 3: NVLAP-Accredited Testing Laboratory Information

Report Number: KAM-052914-2420

Test Date(s): 01/21/14, 03/31/14, 05/22/14, 05/29/14

3.1 NVLAP-Accredited Testing Laboratory Information

ATL Name:	Drummond Group EHR Test Lab
Accreditation Number:	NVLAP Lab Code 200979-0
Address:	13359 North Hwy 183, Ste B-406-238, Austin, TX 78750
Website:	www.drummondgroup.com
Email:	ehr@drummondgroup.com
Phone:	512-335-5606
ATL Contact:	Beth Morrow

For more information on scope of accreditation, please reference NVLAP Lab Code 200979-0.

Part 3 of this test results summary is approved for public release by the following Accredited Testing Laboratory Representative:

Kyle Meadors	Test Proctor
ATL Authorized Representative	**Function/Title**
Kyle Meadors 5/30/14	Nashville, TN
Signature and Date	**Location Where Test Conducted**

3.2 Test Information

3.2.1 Additional Software Relied Upon for Certification

Additional Software	Applicable Criteria	Functionality provided by Additional Software
Truven Health Analytics	a.8, a.15	education and CDS
Ingage Patient	b.1, b.2, b.4, e.1, e.3	portal and Direct HISP

Additional Software	Applicable Criteria	Functionality provided by Additional Software

☐ No additional software required

3.2.2 Test Tools

Test Tool	Version
☒ Cypress	2.4.1
☒ ePrescribing Validation Tool	1.0.3
☐ HL7 CDA Cancer Registry Reporting Validation Tool	1.0.3
☐ HL7 v2 Electronic Laboratory Reporting (ELR) Validation Tool	1.7
☒ HL7 v2 Immunization Information System (IIS) Reporting Validation Tool	1.7.1
☒ HL7 v2 Laboratory Results Interface (LRI) Validation Tool	1.7
☒ HL7 v2 Syndromic Surveillance Reporting Validation Tool	1.7
☒ Transport Testing Tool	178
☒ Direct Certificate Discovery Tool	2.1

☐ No test tools required

3.2.3 Test Data

☐ Alteration (customization) to the test data was necessary and is described in Appendix [*insert appendix letter*]

☒ No alteration (customization) to the test data was necessary

3.2.4 Standards

3.2.4.1 Multiple Standards Permitted

The following identifies the standard(s) that has been successfully tested where more than one standard is permitted

Criterion #	Standard Successfully Tested	
(a)(8)(ii)(A)(2)	☐ §170.204(b)(1) HL7 Version 3 Implementation Guide: URL-Based Implementations of the Context-Aware Information Retrieval (Infobutton) Domain	☒ §170.204(b)(2) HL7 Version 3 Implementation Guide: Context-Aware Knowledge Retrieval (Infobutton) Service-Oriented Architecture Implementation Guide

Criterion #	Standard Successfully Tested	
(a)(13)	[x] §170.207(a)(3) IHTSDO SNOMED CT® International Release July 2012 and US Extension to SNOMED CT® March 2012 Release	[ ] §170.207(j) HL7 Version 3 Standard: Clinical Genomics; Pedigree
(a)(15)(i)	[ ] §170.204(b)(1) HL7 Version 3 Implementation Guide: URL-Based Implementations of the Context-Aware Information Retrieval (Infobutton) Domain	[x] §170.204(b)(2) HL7 Version 3 Implementation Guide: Context-Aware Knowledge Retrieval (Infobutton) Service-Oriented Architecture Implementation Guide
(a)(16)(ii)	[ ] §170.210(g) Network Time Protocol Version 3 (RFC 1305)	[ ] §170. 210(g) Network Time Protocol Version 4 (RFC 5905)
(b)(2)(i)(A)	[ ] §170.207(i) The code set specified at 45 CFR 162.1002(c)(2) (ICD-10-CM) for the indicated conditions	[x] §170.207(a)(3) IHTSDO SNOMED CT® International Release July 2012 and US Extension to SNOMED CT® March 2012 Release
(b)(7)(i)	[ ] §170.207(i) The code set specified at 45 CFR 162.1002(c)(2) (ICD-10-CM) for the indicated conditions	[x] §170.207(a)(3) IHTSDO SNOMED CT® International Release July 2012 and US Extension to SNOMED CT® March 2012 Release
(e)(1)(i)	Annex A of the FIPS Publication 140-2 [*list encryption and hashing algorithms*] AES SHA-1	
(e)(1)(ii)(A)(2)	[ ] §170.210(g) Network Time Protocol Version 3 (RFC 1305)	[x] §170. 210(g) Network Time Protocol Version 4 (RFC 5905)
(e)(3)(ii)	Annex A of the FIPS Publication 140-2 [*list encryption and hashing algorithms*] AES SHA-1	
Common MU Data Set (15)	[x] §170.207(a)(3) IHTSDO SNOMED CT® International Release July 2012 and US Extension to SNOMED CT® March 2012 Release	[ ] §170.207(b)(2) The code set specified at 45 CFR 162.1002(a)(5) (HCPCS and CPT-4)

Criterion #	Standard Successfully Tested

☐ None of the criteria and corresponding standards listed above are applicable

3.2.4.2 Newer Versions of Standards

The following identifies the newer version of a minimum standard(s) that has been successfully tested

Newer Version	Applicable Criteria

☒ No newer version of a minimum standard was tested

3.2.5 Optional Functionality

Criterion #	Optional Functionality Successfully Tested
☒ (a)(4)(iii)	Plot and display growth charts
☐ (b)(1)(i)(B)	Receive summary care record using the standards specified at §170.202(a) and (b) (Direct and XDM Validation)
☐ (b)(1)(i)(C)	Receive summary care record using the standards specified at §170.202(b) and (c) (SOAP Protocols)
☐ (b)(2)(ii)(B)	Transmit health information to a Third Party using the standards specified at §170.202(a) and (b) (Direct and XDM Validation)
☐ (b)(2)(ii)(C)	Transmit health information to a Third Party using the standards specified at §170.202(b) and (c) (SOAP Protocols)
☐ (f)(3)	Ambulatory setting only – Create syndrome-based public health surveillance information for transmission using the standard specified at §170.205(d)(3) (urgent care visit scenario)
☐ Common MU Data Set (15)	Express Procedures according to the standard specified at §170.207(b)(3) (45 CFR162.1002(a)(4): Code on Dental Procedures and Nomenclature)
☐ Common MU Data Set (15)	Express Procedures according to the standard specified at §170.207(b)(4) (45 CFR162.1002(c)(3): ICD-10-PCS)

☐ No optional functionality tested

3.2.6 2014 Edition Certification Criteria* Successfully Tested

Criteria #	Version		Criteria #	Version	
	TP**	TD***		TP	TD
☐ (a)(1)	1.2	1.5	☒ (c)(3)	1.6	1.6
☒ (a)(2)	1.2		☐ (d)(1)	1.2	
☒ (a)(3)	1.2	1.4	☒ (d)(2)	1.4	
☒ (a)(4)	1.4	1.3	☒ (d)(3)	1.3	
☒ (a)(5)	1.4	1.3	☒ (d)(4)	1.2	
☐ (a)(6)	1.3	1.4	☐ (d)(5)	1.2	
☐ (a)(7)	1.3	1.3	☐ (d)(6)	1.2	
☒ (a)(8)	1.2		☒ (d)(7)	1.2	
☒ (a)(9)	1.3	1.3	☐ (d)(8)	1.2	
☒ (a)(10)	1.2	1.4	☐ (d)(9) *Optional*	1.2	
☒ (a)(11)	1.3		☒ (e)(1)	1.7	1.4
☒ (a)(12)	1.3		☒ (e)(2) *Amb. only*	1.2	1.5
☒ (a)(13)	1.2		☒ (e)(3) *Amb. only*	1.3	
☒ (a)(14)	1.2		☐ (f)(1)	1.2	1.2
☒ (a)(15)	1.5		☒ (f)(2)	1.3	1.7.1
☐ (a)(16) *Inpt. only*	1.3	1.2	☒ (f)(3)	1.3	1.7
☐ (a)(17) *Inpt. only*	1.2		☐ (f)(4) *Inpt. only*	1.3	1.7
☒ (b)(1)	1.6	1.3	☐ (f)(5) *Optional & Amb. only*	1.2	1.2
☒ (b)(2)	1.4	1.5			
☒ (b)(3)	1.4	1.2	☐ (f)(6) *Optional & Amb. only*	1.3	1.0.3
☒ (b)(4)	1.3	1.4			
☒ (b)(5)	1.4	1.7	☐ (g)(1)	1.6	1.8
☐ (b)(6) *Inpt. only*	1.3	1.7	☒ (g)(2)	1.6	1.8
☒ (b)(7)	1.4	1.5	☒ (g)(3)	1.3	
☒ (c)(1)	1.6	1.6	☒ (g)(4)	1.2	
☒ (c)(2)	1.6	1.6			

☐ No criteria tested

*For a list of the 2014 Edition Certification Criteria, please reference http://www.healthit.gov/certification (navigation: 2014 Edition Test Method)

**Indicates the version number for the Test Procedure (TP)

***Indicates the version number for the Test Data (TD)

3.2.7 2014 Clinical Quality Measures*

Type of Clinical Quality Measures Successfully Tested:

- [x] Ambulatory
- [ ] Inpatient
- [ ] No CQMs tested

*For a list of the 2014 Clinical Quality Measures, please reference http://www.cms.gov (navigation: 2014 Clinical Quality Measures)

Ambulatory CQMs							
CMS ID	Version	CMS ID	Version	CMS ID	Version	CMS ID	Version
[x] 2	v3	[ ] 90		[ ] 136		[ ] 155	
[ ] 22		[ ] 117		[ ] 137		[x] 156	v2
[x] 50	v2	[ ] 122		[x] 138	v2	[x] 157	v2
[ ] 52		[ ] 123		[ ] 139		[ ] 158	
[ ] 56		[ ] 124		[ ] 140		[ ] 159	
[ ] 61		[ ] 125		[ ] 141		[ ] 160	
[ ] 62		[ ] 126		[ ] 142		[ ] 161	
[ ] 64		[ ] 127		[ ] 143		[ ] 163	
[ ] 65		[ ] 128		[ ] 144		[ ] 164	
[ ] 66		[ ] 129		[ ] 145		[x] 165	v2
[x] 68	v3	[ ] 130		[ ] 146		[x] 166	v3
[x] 69	v2	[ ] 131		[ ] 147		[ ] 167	
[ ] 74		[ ] 132		[ ] 148		[ ] 169	
[ ] 75		[ ] 133		[ ] 149		[ ] 177	
[ ] 77		[ ] 134		[ ] 153		[ ] 179	
[ ] 82		[ ] 135		[ ] 154		[ ] 182	

Inpatient CQMs							
CMS ID	Version	CMS ID	Version	CMS ID	Version	CMS ID	Version
[ ] 9		[ ] 71		[ ] 107		[ ] 172	
[ ] 26		[ ] 72		[ ] 108		[ ] 178	
[ ] 30		[ ] 73		[ ] 109		[ ] 185	
[ ] 31		[ ] 91		[ ] 110		[ ] 188	
[ ] 32		[ ] 100		[ ] 111		[ ] 190	
[ ] 53		[ ] 102		[ ] 113			
[ ] 55		[ ] 104		[ ] 114			
[ ] 60		[ ] 105		[ ] 171			

3.2.8 Automated Numerator Recording and Measure Calculation

3.2.8.1 Automated Numerator Recording

Automated Numerator Recording Successfully Tested			
☐ (a)(1)	☐ (a)(9)	☐ (a)(16)	☐ (b)(6)
☐ (a)(3)	☐ (a)(11)	☐ (a)(17)	☐ (e)(1)
☐ (a)(4)	☐ (a)(12)	☐ (b)(2)	☐ (e)(2)
☐ (a)(5)	☐ (a)(13)	☐ (b)(3)	☐ (e)(3)
☐ (a)(6)	☐ (a)(14)	☐ (b)(4)	
☐ (a)(7)	☐ (a)(15)	☐ (b)(5)	

☒ Automated Numerator Recording was not tested

3.2.8.2 Automated Measure Calculation

Automated Measure Calculation Successfully Tested			
☒ (a)(1)	☒ (a)(9)	☐ (a)(16)	☐ (b)(6)
☒ (a)(3)	☒ (a)(11)	☐ (a)(17)	☒ (e)(1)
☒ (a)(4)	☒ (a)(12)	☒ (b)(2)	☒ (e)(2)
☒ (a)(5)	☒ (a)(13)	☒ (b)(3)	☒ (e)(3)
☒ (a)(6)	☒ (a)(14)	☒ (b)(4)	
☒ (a)(7)	☒ (a)(15)	☒ (b)(5)	

☐ Automated Measure Calculation was not tested

3.2.9 Attestation

Attestation Forms (as applicable)	Appendix
☒ Safety-Enhanced Design*	A
☒ Quality Management System**	B
☒ Privacy and Security	C

*Required if any of the following were tested: (a)(1), (a)(2), (a)(6), (a)(7), (a)(8), (a)(16), (b)(3), (b)(4)

**Required for every EHR product

3.3 Appendices

Attached below.

Test Results Summary Document History

Version	Description of Change	Date
17-Feb-2014	Edited: section header page 3; contact info page 4	17-Feb-2014
10-Feb-2014	Modified layout	10-Feb-2014
20-Nov-2013	Updated test tool sections	20-Nov-2013
25-Oct-2013	Corrected numbering of 3.2.8 section	25-Oct-2013
15-Oct-2013	Modified layout slightly	15-Oct-2013
01-Oct-2013	Initial Version	01-Oct-2013

2014 Edition Test Report Summary

2014

EHR Usability Test Report
MedWorxs Evolution 6.1

DATE OF USABILITY TEST: MAY 1ST AND 2ND 2014
DATE OF REPORT: MAY 9TH 2014
USER CENTERED DESIGN PROCESS: MODIFIED NISTIR 7741
REPORT PREPARED BY: GREG NOBLE
PHONE NUMBER: 720-961-4050
EMAIL ADDRESS: GREG.NOBLE@MEDWORXS.COM
MAILING ADDRESS: PO BOX 568 EVERGREEN CO 80437

Table of Contents

Executive Summary

A usability test of the MedWorxs Evolution 6.1 system was conducted from May 1st through May 2nd 2014 at the home office of MedWorxs. The purpose of this process was to test and validate the usability of the current user interface, new features, and provide information of usability in the EHR usability Test (EHRUT). During the usability test 3 healthcare professionals matching the target demographic criteria played the role of participants and used the MedWorxs Evolution 6.1 software in a simulated environment representing 'real-life' scenarios.

The following areas were tested:

- Adding Medications
- Adding Drug Allergies
- Clinical Information Reconciliation
- Clinical Decision Support
- CPOE Lab Orders
- CPOE Radiology Orders
- CPOE Medications – E-Prescribing
- Drug-Drug Interactions
- Drug-Allergy Interactions

A one-on-one usability test lasting 90 minutes was conducted, during which each participant was met by an administrator and asked to review and sign an informed consent/release form. They were instructed they could withdraw from the test at any time. Participants did have prior experience with other various electronic health record systems as well as the health record system being tested.

The test administrator introduced the testing process and instructed participants to complete a series of tasks using the EHRUT. Each task was given and performed one at a time. A data logger observed, timed and recorded user performance on paper and electronically. The data collected for each participant – Time to complete the assigned task, number/types of errors, participant's verbal communication, and participant's satisfaction rating.

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 post-test questionnaire. Various recommended metrics, in accordance with the examples set forth in the NIST Guide to the Process Approach for Improving the Usability of Electronic Health Records (NISTIR 7741) were used to evaluate the usability of the EHRUT. A summary of the performance and rating data collected on the EHRUT is found in Section 4 0 Data Analysis and Reporting.

Major Findings

Participants had very positive responses with the system experience and in general were pleased with the 'ease' of use and the flow of the system. Many comments were made about how simple the system made complex tasks.

Comments were made about the cryptic nature of some icons and that they did not accurately represent the task or function clicking on the icon would perform.

Of the 7 tasks tested requiring the participant to enter, change or retrieve data, 6 of the tasks rated an 'Easy' for all participants. Participants rated CPOE Medications a 3 on a scale from 1 being Easy to 5 being difficult due to the amount of required data to produce a complete entry and the system not allowing you to leave the screen until all information was input.

Areas of Improvement

Participants shared opinions on areas of improvement – suggestions were made to increase the font size on entry screens, create more 'auto-complete' possibilities based on user preferences.

Introduction

The Complete EHR tested in this study was MedWorxs Evolution 6.1 designed specifically to be compliant with Stage 2 Meaningful Use criteria. Previously certified as Stage 1 compliant, complete EHR, by Drummond Group based on the 2011/2012 criteria. The application serves the ambulatory setting with an intended user population of Medical Doctors, Nurses, Physician Assistants, Medical Assistants, and General administrative staff such as Practice Managers, Scheduling and Billing personnel. The users for the Usability testing were selected based on their position duties and relevance to the tasks needed for testing. Their demographics, education, and years of experience in their position as well as EHRUT use were considered.

The Evolution software system is presented to nation-wide users in an ASP (Application Service Provider) model hosted at MedWorxs facilities. The facility is secured and HIPAA compliant.

Usability tested attempted to the best of the testing facilities ability to represent realistic, real-world, exercises and conditions.

The purpose of the study was to test and validate the usability of the current user interface. Additionally to provide evidence of the usability in the EHR Usability Test. Measures of effectiveness, efficiency and user satisfaction, such as time to complete a task and data capture errors were recorded during said test.

Method

Participants

There were a total of 5 participants invited to the test of which 3 actually participated. Intended users of the EHR are ambulatory providers, registered nurses, certified nurse assistants, nurse practitioners, and business office staff with varying responsibilities. Participants in the test were recruited by MedWorxs and compensated for their time. Participants had no direct connection to the development of or organization producing the EHRUT. Participants were not from the testing organization or any of its partners or suppliers.

The following table describes the participant's origins:

Participant	Position	Specialty
User 1	Medical Doctor	Allergy and Asthma
User 2	Practice Manager	Podiatry
User 3	Practice Manager	Neurology

Participants backgrounds were a mixed both in experience and demographic characteristics. The table below better describes these aspects. A more detailed summary of participant's characteristics, with demographics, professional experience, computer and technical experience as well as user needs for assistive technology is contained in appendix 5.2. Names and demographics were replaced with participant IDs so that an individual/s data could not be tied back to identities.

Sessions were scheduled for 90 minutes over a 2 day period.

Participant	Gender	Age	Education	Professional Experience	Computer Experience	Product Experience	Assistive Tech Needs
User 1	Male	60-74	MD	20+	Medium	1 Yr	Medium
User 2	Female	40-59	College	10+	Medium	5+ Yrs	Low
User 3	Female	23-39	Highschool+	3+	High	2+ Yrs	Low

Study Design

The objective of this test was to uncover areas where the application performed well, meaning effectively, efficiently and with user satisfaction. As well as areas the application failed or fell short to meet the needs of the participants. The data from this test will serve as a baseline for future such test on enhanced versions of the EHRUT. This test will serve as both a means to record/benchmark current usability as well as identify areas for improvement.

Participants interacted with the EHRUT during the test. Each used the system in their own environment, separate from the others. The EHRUT was reset to baseline between test to ensure an even field and replicable baselines.

The following was studied:

- Numbers of tasks successfully completed in allotted time without assistance
- Time to complete tasks
- Number and basis of errors
- Participants audible comments
- Users satisfaction rating of the system

Tasks

Tasks were built to be compliant with Meaningful Use Stage 2 requirements for user centered testing. Tasks were conducting in a common workflow scenario.

The following tasks were completed in order listed based on a priority in accordance with risk associated with user error.

1. CPOE Medications
2. CPOE Labs
3. CPOE Radiology
4. Add Drug Allergy
5. Medications
6. E-scripts
7. Drug-Drug Interaction Check
8. Drug-Allergy Interaction Check
9. Clinical Information Reconciliation
10. Clinical Decision Support

A number of tasks and scenarios were constructed that would be realistic and Representative of the kinds of activities a user might do with the EHRUT.

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

        - Access Laboratory Order
        - Record Radiology/imaging Order
        - Change Radiology/imaging Order
        - Access Radiology/imaging Order
- Medication Allergy List
    - Access Medication Allergy Module
    - Record New Medication Allergy
    - Change Medication Allergy
- Medication List
    - Access Current Medication List
    - Prescribe New Medication
- e-Prescribing Module
    - Create Prescriptions
    - Submit Electronically to pharmacy
- Drug to drug and drug to allergy interaction check
    - Create intervention prior to CPOE completion
    - Adjustment of severity level of drug-drug interventions
- Clinical Information Reconciliation
    - Reconcile patient's active medication list with another source
    - Reconcile patient's active problem list with another source
    - Reconcile patient's active medication allergy list with another source
- Clinical Decision Support Intervention
    - Problem List Interventions
    - Medication List Interventions
    - Medication Allergy List Interventions
    - Demographics Interventions
    - Lab Tests and Results Interventions
    - Vital Signs Interventions
    - Identify User Diagnostic and Therapeutic Reference Information
    - Configuration of CDS interventions by user (may be an admin type function)

Procedures

On arrival participants were greeted, their identity was verified and matched with the schedule. They were then assigned an ID. Each participant was on a system which could be monitored in real time by the test team. Each participant reviewed and signed an informed consent and release form prior to the test.

For verification and to ensure all went smooth two test team members supervised each test, a MedWorxs system trainer and a MedWorxs customer service representative both with extensive MedWorxs Evolution 6.1 knowledge.

The system trainer served as the administrator moderating the session including instructions and tasks. The system trainer also obtained post task rating data, and took notes on participant audible comments. The service representative served as the data logger and monitored task times, took notes on task success/failure, number and type of errors as well as general comments.

Participants were instructed to do the following:

- Complete each task as quickly as possible making few errors and deviations outside task focus as possible
- The test team was allowed to give immaterial guidance and clarification on tasks including verbal instructions if warranted.

For each task the participants were given a written copy of the task. Task timing began once the administrator finished reading the task instructions. The task time was stopped once the participant verbally said “Done” indicating they felt they had completed the task.

Participants were compensated and thanked for their participation. A receipt was signed by each acknowledging they were to receive a $100 Visa gift card for their compensation.

Test Location and Testing Environment

Each participant took the test at their place of business or home. They logged into the web hosted MedWorxs Evolution system just like every other live office does. Their computers were verified to comply with our minimal requirements and connectivity was verified as functional prior to the test beginning. The participant was the only person in the room during testing with the test team monitoring all action remotely. Verbal communication was via phone or VoIP.

Test Forms and Tools

During the usability test various documents and tools were used including the following list:

- Participant Recruiting Screener (Appendix 1)
- Non-Disclosure agreement (Appendix 2)
- Informed Consent (Appendix 4)
- Post Test Questionnaire (Appendix 5)
- Incentive Receipt and acknowledgment form (Appendix 6)
- Screens interaction was monitored with gotomeeting.com ™
- Verbal communication either through gotomeeting.com ™ VoIP or phone conference bridge

Participant Instructions

The testing administrator read the following instructions aloud to each participant

We appreciate your participating in our test. Your input is very important. The session today will last approximately 90 minutes, during that time you will use an instance of an electronic health record. I will ask you complete 7 task in the specified order using the system then will be asked questions about your experience. 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 written instructions carefully. We are not testing your abilities directly, we are testing the system, if you have problems completing a task it is not a reflection on

your expertise but possible means the system needs improvement. I will be here if you need specific help but I am restricted in instructing you or provide help in how to use the application.

The purpose and our interest is how easy/difficult the system is to use, what is most useful to you and how can it be improved. Your honesty is much appreciated. All information and feedback is confidential and your name will not be associated with your individual results or comments. You are able to withdraw your participation at any time for any reason.

The process will be task related. I will read aloud the description of a task and you will follow the steps per task. Once you have completed the task please verbally indicate it's complete by saying "Done".

Usability Metrics

The NIST Guide to the Processes Approach for Improving the Usability of Electronic Health Records says an EHR 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. The metrics below is a summary for these factors which were captured during the usability test.

Test Goals:

A. By measuring test participant success rates and errors report the effectiveness of MedWorxs Evolution 6.1
B. Measuring the average time tom complete tasks report the efficiency of MedWorxs Evolution 6.1
C. Collect and Measure the ease of use ratings to report user satisfaction with MedWorxs Evolution 6.1

Task	Task Success	Task Time (Average)		Errors	Ratings 1-Easy/5-Difficult
	Mean (SD)	Mean (SD) In Minutes	Deviations	Mean (SD)	Mean (SD)
CPOE Lab	100%	1.5	None	None	1
CPOE Radiology	100%	1.5	None	None	1
Add Medication	100%	3.0	None	None	3
CPOE Med-E-script	100%	2.25	None	None	1
Add Drug Allergy	100%	1.0	None	None	1
Drug-Drug Interaction	100%	1.50	None	None	1
Drug-Allergy Interaction	100%	1.50	None	None	1
Clinical Information Recon	100%	3.1	None	None	1
Clinical Decision Support	100%	1.5	None	None	1

Data Scoring

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

Measure	Scoring/Rationale
Effectiveness: Task Success	A task was counted successful if the participant was able to achieve the correct outcome, without assistance, within the allotted time per task. The time allotted was 90 minutes. Tasks were scaled on a 1 Easy to 5 Very Difficult scale.
Effectiveness: Task Failure/Difficulties	If the participant quit the task, abandoned the step or reach in an incomplete or incorrect answer by the end of the allotted time the task was counted as a difficult or a 4-5 scaled task
Efficient: Task Time	Tasks were timed from when the instructions were given from the administrator to the time (stopped) after all 7 objectives were completed.
Satisfaction: Task Experience	A post task questionnaire and a post session questionnaire were used to gather the participant's subjective assessment regarding use of the EHRUT. Rating scale used was 1 Easy to 5 Very Difficult.

Results

Data Analysis and Reporting

Testing was done via remote connection with real time viewing and verbal connections allowing a healthy and accurate testing environment. Participants had some experience with the majority of the tasks and due to the design of the system some tasks such as CPOE Labs and CPOE radiology used the same entry screen allowing iterative learning from previous success.

All feedback was carefully documented and communicated to the MedWorxs development team for future enhancements or kudos on a job well done.

Discussion of the Findings

The majority of the tasks – 6 out of 7 were marked very high with a 1 indicating "Easy". Medication entry was a 3 due to the amount of restrictive data the system required for a complete medication request. Participants attempted to end the entry prematurely and the system would indicate an error communicating which data point was missing. Some of this data is required by outside sources such as SureScripts and beyond the control of MedWorxs. The data is all required and enhancements will be discussed on how to ease entry with more defaulted options if possible.

Effectiveness

Test Participants indicated the system was very effective in completed the required task. There were general comments about why certain data was required questioning its usefulness. There seemed to be a consensus among the testers that some required data provided no value in their daily routines therefore questioning the effectiveness.

Efficiency

Overall the system was deemed as very effective with relatively quick entry times. All 3 participants completed all 7 tasks well under the 90 minute allotted time. Feedback indicated moving from one task to another was 'simple' and overall layout, font size etc. lent to an efficient system.

Satisfaction

Each participant was asked to rate individual tasks on a scale of 1 – Easy to 5 – Very difficult. The majority of tasks – 6 out of 7 rated a 1 as being Easy only 1 – Medications rated higher.

The general impression was a system easy to navigate, screens simple to read with only relevant data displaying resulting in an overall high satisfaction rating.

Major Findings

Participants were generally pleased with the system indicating its abilities to show multiple screens at the same time but still focus on the task at hand was valuable in assisting task completion. The simple layout with minimal color and graphics help them concentrate and focus on the important information limiting distractions.

Although participants praised the single-colored icons they also commented on the cryptic nature and needing to hover over the icon to determine its function.

System setup became an area of focus as the data contained within the test environment did not reflect specialty specific information participants were familiar with.

Areas of Improvement

In general the test showed a successful use of the system with only the task instructions as a guide. Users did have previous experience with the system so any "first time used" improvements may not have been mentioned.

Users did share greater use of pre-built or pre-populated options allowing more drop and click type functions were highly suggested. An Increase in font size was recommended by one user who had a very large screen with a large resolution setting thus showing more screen but smaller fonts. Potentially a different handling of large screens could be implemented.

Appendices

Appendix 1 – Participant Recruiting Screener

The following is the standard recruiting form used to validate invited participants – taken from NISTIR7742 recommended form.

Hello, my name is _____, calling from MedWorxs. We are recruiting individuals to participate in a usability study for our electronic health record. We would like to ask you a few questions to see if you qualify and if would like to participate. This should only take a few minutes of your time. This is strictly for research purposes. If you are interested and qualify for the study, you will be paid to participate.

Can I ask you a few questions?

Customize this by dropping or adding questions so that it reflects your EHR's primary audience

1. Have you participated in a focus group or usability test in the past *xx* months?
   { } Yes { } No [If yes, Terminate]
2. Do you, or does anyone in your home, work in marketing research, usability research, web design?
   { } Yes { } No [If yes, Terminate]
3. Do you, or does anyone in your home, have a commercial or research interest in an electronic health record software or consulting company?
   { } Yes { } No [If yes, Terminate]
4. Which of the following best describes your age? { } 23 to 39 { } 40 to 59 { } 60 - to 74 { } 75 and older]
5. Do you require any assistive technologies to use a computer? [if so, please describe]

_____
_____

Professional Demographics

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

9. How long have you held this position?_____
10. Describe your work location (or affiliation) and environment?
    { } Practice { } Government { } Other Explain:_____
11. Which of the following describes your highest level of education? [e.g., high school
    { } Post Graduate – MD { } College Graduate { } High School Graduate

Computer Expertise

12. Besides reading email, what professional activities do you do on the computer?
    { } Electronic Health Records
    { } Online Shopping
    { } Programming
    { } Never use the Computer - Terminate
13. About how many hours per week do you spend on the computer?
    { } 0 to 10
    { } 11 to 25
    { } 26+ hours per week
14. What computer platform do you usually use? { } Mac { } Windows { } Other
16. In the last month, how often have you used an electronic health record?
    { } Often
    { } Occasionally

{ } Not at all

17. How many years have you used an electronic health record? { } None { } 1 { } 2+ { } 5+ { } 10+
18. How many EHRs do you use or are you familiar with? { } None { } 1 { } More than 1
19. How does your work environment patient records
    { } On paper
    { } Some paper, some electronic
    { } All electronic

Contact Information *If you get this far, ask*

Those are all the questions I have for you. Your background matches the people we're looking for. You will receive a $100 Visa gift card for your participation,

May I get your contact information?

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

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

Appendix 2 – Non Disclosure

The following is the Non-Disclosure Agreement used for usability testing.

NONDISCLOSURE AGREEMENT

THIS NONDISCLOSURE AGREEMENT (the "Agreement") is made and entered into as of this 1st day of May 2014 (the "Effective Date"), by and between the individual or business ("agreeing party") listed below:

USER NAME AND ADDRESS

and MedWorxs LLC. ("MedWorxs"), with offices located at PO Box, Evergreen, CO 80439. For purposes of this agreement the agreeing party and MedWorxs are sometimes collectively referred to as the "Parties" and individually referred to as a "Party". As used herein, "Receiving Party" shall mean the party which has been given "Confidential Information" (as hereinafter defined) or "Trade Secrets" (as hereinafter defined) by and of the other Party.

A. The Parties are discussing and from time to time, following the Effective Date hereof, will have discussions in connection with potential arrangements for the provisioning of consultation and other related services, including, without limitation, the disclosure of certain Confidential Information and/or Trade Secrets (each such discussion is hereinafter referred to individually as a "Discussion").

B. In order to protect the Parties' substantial investment in their Confidential Information and Trade Secrets and to protect the goodwill associated with their customer, client and contractor relationships, the Parties have agreed to abide by the terms and conditions of this Agreement.

For and in consideration of the above premises and other good and valuable consideration, the receipt, adequacy and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:

1. **Definitions**. The following terms shall have the following meanings when used in this Agreement:

(a) **"Confidential Information"** shall mean the proprietary and confidential data or information of a Party, other than "Trade Secrets" (as defined below), which is of tangible or intangible value to that Party and is not public information or is not generally known or available to that Party's competitors but is known only to that Party and those of its employees, independent contractors, consultants or agents to whom it must be confided in order to apply it to the uses intended, including, without limitation, information regarding that Party's customers or prospective customers, marketing methods, business plans and/or rates gained by the other Party as a result of the other Party's participation in a Discussion. In addition, the definition of "Confidential Information" shall include those items specifically identified as "Trade Secrets" in Section 1(c), if it is judicially determined that any such items are not trade secrets, as defined by applicable law, and such items otherwise meet the definition of "Confidential Information" as contained in this Section 1(a). Confidential Information shall not include information which: (i) at the time of disclosure to Receiving Party is in the public domain through no act or omission of Receiving Party; (ii) as shown by written records, is already known by Receiving Party; or (iii) is revealed to Receiving Party by a third party who does not thereby breach any obligation of confidentiality and who discloses such information in good faith.

(b) **"Entity"** shall mean any person, partnership, joint venture, agency, governmental subdivision, association, firm, corporation or entity.

(c) **"Trade Secrets"** shall mean that portion of Confidential Information which constitutes trade secrets, as defined by applicable law and including, without limitation, confidential computer programs, software, designs, processes, procedures, equipment, data, reports, product specifications, formulas, improvements, on-line terminal designs, software applications and knowledge of the existence of any existing or proposed contracts with third parties, whether copyrightable or not.

2. **Consideration**. The consideration for the covenants and agreements of each Party contained in this Agreement shall be that Party's right to participate in a Discussion, which the Parties acknowledge and agree, shall constitute sufficient and adequate consideration.

3. **Nondisclosure; Ownership of Proprietary Property**.

(a) Each Party hereby acknowledges that it is in the best business interests of the other Party to insist on the strict confidentiality of any of its Trade Secrets and Confidential Information that may be disclosed as a result of a Discussion.

(b) In recognition of the Parties' need to protect their legitimate business interests, each Party hereby covenants and agrees that it shall regard and treat each item of information or data constituting a Trade Secret or Confidential Information of the other Party as strictly confidential and wholly owned by the other Party and that it will not, for any reason or in any manner, either directly or indirectly, use, sell, lend, lease, distribute, license, give, transfer, assign, show, disclose, disseminate, reproduce, copy, appropriate or otherwise communicate any such item of information or data to any person or Entity for any purpose other than strictly in accordance with the express terms of this Agreement or any other written agreement between the Parties. With regard to each item of information or data constituting a Trade Secret, the covenant in the immediately preceding sentence shall apply at all times during a Discussion and for as long after the cessation of a Discussion as such item continues to constitute a trade secret under applicable law; and with regard to any Confidential Information, the covenant in the immediately preceding sentence shall apply at all times during a Discussion and for three (3) years after the termination of a Discussion.

(c) Each Party shall exercise reasonable efforts to ensure the continued confidentiality of all Trade Secrets and Confidential Information known by, disclosed or made available to that party or that Party's employees or personnel during a Discussion. Each Party shall immediately notify the other Party of any intended or unintended, unauthorized disclosure or use of any Trade Secrets or Confidential Information by that Party or any other person of which that party becomes aware. Each Party shall assist the other Party, to the extent necessary, in the procurement or any protection of the other Party's rights to or in any of the Trade Secrets or Confidential Information.

(d) Upon termination of a Discussion, or anytime at the specific request of the other Party, or upon the execution of any agreement resulting from a Discussion containing provisions that expressly supersede the provisions of this Agreement, each Party shall return to the other Party all written or descriptive materials of any kind that contain or discuss any Confidential Information or Trade Secrets, and the confidentiality obligations of this Agreement shall continue until their expiration under the terms of this Agreement.

4. **Remedies: Damages, Injunctions and Specific Performance**. The Parties expressly understand and agree that the covenants and agreements to be rendered and performed by the Parties pursuant to Section 3 are special, unique, and of an extraordinary character, and in the event of any default, breach by either Party of Section 3, the other Party shall be entitled to such relief as may be available to it pursuant hereto, at law or in equity, including, without limiting the generality of the foregoing, any proceedings to: (i) obtain direct damages for any breach of this Agreement; (ii) order the specific performance thereof; or (iii) enjoin the breach of such provisions. This Agreement shall be governed by the laws of the State of Colorado without regard to its choice of law principles.

5. **Liability**. IN NO EVENT SHALL EITHER PARTY BE LIABLE TO THE OTHER FOR ANY INDIRECT, CONSEQUENTIAL, EXEMPLARY, SPECIAL, INCIDENTAL OR PUNITIVE DAMAGES, OR FOR ANY LOST PROFITS OF ANY KIND OR NATURE WHATSOEVER, EVEN IF FORESEEABLE, ARISING OUT OF OR RESULTING FROM ANY PROHIBITED USE OR DISCLOSURE OF CONFIDENTIAL INFORMATION OR OTHER BREACH HEREUNDER, EVEN IF THE PARTY HAS BEEN ADVISED, KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY OF SUCH DAMAGES.

6. **Binding Effect and Assignability**. The rights and obligations of each Party under this Agreement shall inure to the benefit of and shall be binding upon any subsidiary, affiliate, and successor or permitted assign of or to the business of such Party, to the extent provided below. Neither this Agreement nor any rights or obligations of either Party under this Agreement shall be transferable or assignable by that Party without the prior written consent of the other Party, and any attempted transfer or assignment of this Agreement by either Party not in accordance herewith shall be null and void. Notwithstanding the foregoing, MedWorxs may assign this Agreement immediately, without the prior written consent of the other Party (a) to any entity that controls, is controlled by, or is in common control with MedWorxs or (b) to any successor in interest to MedWorxs or (c) if necessary to satisfy the rules, regulations and/or orders of any federal, state or local governmental agency or body.

7. **Severability**. All sections and subsections of this Agreement are severable, and the unenforceability or invalidity of any of the sections or subsections of this Agreement shall not affect the validity or enforceability of the remaining sections or subsections of this Agreement, but such remaining sections or subsections shall be interpreted and construed in such a manner as to carry out fully the intention of the parties.

8. **Waiver**. The waiver by either Party of a default or breach of any provision of this Agreement shall not operate or be construed as a waiver of any subsequent default or breach of the same or of a different provision by that Party. No waiver or modification of this Agreement or of any covenant, condition, or limitation contained in this Agreement shall be valid unless in writing and duly executed by the Party or Parties to be charged therewith.

9. **Miscellaneous**. This Agreement contains the complete agreement concerning the arrangement between the agreeing party and MedWorxs regarding its subject matter, as of the date hereof, and supersedes all other similar agreements or understandings between the parties, whether oral or written, consistent or inconsistent, with this Agreement. This Agreement may not be amended by the Parties except by a writing executed by both Parties. Any Exhibit to this Agreement is to be deemed a part of this Agreement and the contents of any such Exhibit are hereby incorporated by this reference into this Agreement.

IN WITNESS WHEREOF, the Parties have duly executed and delivered this Agreement, as of the Effective Date.

MedWorxs LLC

By:_____

Print Name:

Title:_____

Date:_____

By:

Print Name: Gregory L. Noble

Title: Chief Executive Officer

Appendix 3 – Participant Demographics

Persona	Practicing Physician
Alias	User 1
Age	62
Gender	Male
Education	Medical Doctor
Goals	Physician is responsible for the safety and care of patients during their Allergy and Asthma treatment
Task	He is responsible for diagnosing and treating Allergy related ailments
Experience	He has been a practicing physician for over 20 years. He is new to technology but interested in embracing it
Personal Characteristics	Patient focused and team oriented. He communicates well with patients and follow providers.
Skills	Highly skilled medical doctor who had to go through extensive training and additional residency post medical school graduation
Tools and Technology	Comfortable with a computer for email but fairly new to Electronic Health Records
Work Environment	Traditional Ambulatory private practice

Persona	Practice Manager
Alias	User 2
Age	57
Gender	Female
Education	Bachelor of Arts - Business
Goals	Responsible the successful operation of Podiatry practice
Task	Maintain and promote business with patients and vendors
Experience	She has worked in her current role for over 5 years, previously worked for a different practice with various responsibilities
Personal Characteristics	Patient advocate, highly detailed
Skills	States she is efficient, detail oriented, organized and always on time
Tools and Technology	Medium computer experience, used it for forms creation , email and in recent years become well versed on EHR
Work Environment	Typical professional medical office Monday-Friday 8-5

Persona	Practice Manager
Alias	User 3
Age	38
Gender	Female
Education	High school Graduate/ Some College level classes
Goals	She ensures the schedules are published and all staff informed, organizing and managing all aspects of the busy office, reporting and management.
Task	Daily management functions as dictated by the physicians
Experience	Relatively new to being an office manager, she is comfortable with technology.
Personal Characteristics	Good at communications and conflict resolution, enjoys working with patients and able to manage a variety of personality type.
Skills	Well organized, thoughtful and detail oriented
Tools and Technology	She feels comfortable with computers and medical technology in general
Work Environment	Private office in professional practice setting

Appendix 4 – Informed Consent

The following informed consent was signed by each participant – basis taken from NISTIR 7742 example.

Informed Consent

MedWorxs LLC 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 90 minutes. At the conclusion of the test, you will be compensated for your time.

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

I understand and consent to the use and release of the videotape/recordings by MedWorxs LLC. I understand that the information and videotape/recordings are for research purposes only and that my name and image will not be used for any purpose other than research. I relinquish any rights to the videotape/recordings and understand the videotape/recordings may be copied and used by MedWorxs LLC without further permission.

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

I understand and agree that the data collected from this study may be shared with outside of MedWorxs LLC. 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:**_____

Appendix 5 – Post Test Questionnaire

The below questionnaire was provider to participants for the usability scale.

MedWorxs Evolution

System Usability Questionnaire

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

Appendix 6 – Incentive Receipt

Acknowledgement of Receipt

I hereby acknowledge receipt of a $100 Visa gift card for my participation in a research study run by MedWorxs LLC.

Printed Name: _____

Address: _____

_____

Signature: _____ Date: _____

Usability Tester: _____

Signature of Usability Tester: _____

Date: _____

January 1, 2014

MedWorxs LLC attests that following is true in regards to our quality management system.

MedWorxs LLC uses a modified Quality Management System which has been tailored for our specific needs. The system has several stages to assure the highest quality product possible. Each stage has documentation requirements within our proprietary quality management software system. Prior to each major system release we archive previous changes and keep them in perpetuity. All changes completed on the Evolution software system have been archived and stored.

The stages are as follows:

- Gather requirements and set scope of work.
- Set priority of project
- New feature or issue resolution development
- Quality assurance testing
- End user beta testing
- Final deployment to all users

Overview of development procedures

Gather requirements and set scope of work – Our initial product development team will review reported problems and enhancement requests reported either from our internal team or through technical support interactions. The system change will be documented with specific screen shots and/or written details to easily explain the end goal.

Set priority of project – Once the scope of work has been completed a priority will be given based on many factors. Highest priority will be given to defects of the system with Patient safety having the highest priority, workflow following, then claims restrictions and other issues. Enhancements will be set based on utility and time to complete. Enhancements always take a lower priority then defects.

New feature or issue resolution development – The product team will communicate projects to the development team who will then facilitate creation of the project within the Evolution software system. The development team uses a modified SCRUM project approach to assure full cycle compliance with stated goals. Once the project is completed it will be sent back to product management for sign off on completion and adherence to project scope and expected result.

Quality assurance testing – The product management team will send the alpha approved project to quality assurance for testing. They will verify it has met quality standards and in no way impacts patient safety, impede workflow or otherwise cause detrimental harm to the overall system.

P O Box 568 Evergreen Colorado 80437 Phone: (720) 961-4050 Fax: (720) 259-7696

End user Beta testing – After the project has completed quality assurance testing it is released to a select few beta clients who can assess the project for completeness and expected results. This also gives a 'real-life' run through of the project. The entire team works closely with beta test sites and are available to very quickly asses, fix and release defects to the software. Any defects discovered will go back through all stages of our quality management process.

Final Deployment – Once beta testing is complete the release will be scheduled for final deployment to all users. MedWorxs deploys verified and tested changes weekly, every Wednesday evening at 10pm. If there is a critical problem then a deployment will happen the evening it is fixed if not sooner. Most defects which are serious to the end user are fixed in the same day discovered and released overnight.

Processes outside the approved standard must be approved by management prior to the deviation.

Signed

Gregory L Noble
Chief Executive Officer
MedWorxs LLC

P O Box 568 Evergreen Colorado 80437 Phone: (720) 961-4050 Fax: (720) 259-7696

January 1, 2014

MedWorxs LLC attests that following is true in regards to the auditable events/disabling of audit logs set forth in the requirements for 170.314(d)(2) of the meaningful Use Stage 2 criteria.

Audit logs, their entry and viewing are part of the base level code and as such are not able to be changed or modified by any end users. Audit logs are enabled by default.

All data exists on MedWorxs LLC secure servers in our own locked down data center using industry standard security measures and are protected by both physical and software systems with multiple password in non-human readable formats. All data is backed up nightly with a copy saved offsite in a separate secure environment.

End users do not have the ability to access either through the software or physically the log data and as such cannot edit, remove, modify or otherwise alter records. Only certain MedWorxs employees using specific applications are allowed to make changes to any data records and any changes made to the database and/or file system are logged in SQL Server Change Tracking. All events are captured whether internal, external, human or computer.

Signed

Gregory L Noble
Chief Executive Officer
MedWorxs LLC

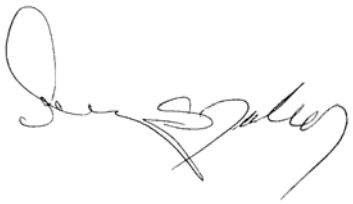
P O Box 568 Evergreen Colorado 80437 Phone: (720) 961-4050 Fax: (720) 259-7696

January 1, 2014

MedWorxs LLC attests that following is true in regards to the encryption of data at rest for the Evolution product.

MedWorxs Evolution software system is a cloud/ASP based service, we do not store any information locally on client devices. All data either covered by Private Health Information rules or not exists only on our protected servers. Interaction and display of data is protected using industry standard protocols. All information moving between our servers and the end users device is fully encrypted. No information is stored even on a temporary basis on the end user's device and is only available through the application itself. Once a user ceases to view the information through the application and/or logs out the information is no longer available.

Signed



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