

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: Royal Solutions
Product Version: 3.0
Domain: Ambulatory
Test Type: Modular EHR

1.2 Developer/Vendor Information

Developer/Vendor Name: Royal Solutions Group, LLC
Address: 343 E. 74th Street, New York, NY 10021-3752
Website: www.royalsolutionsgroup.com
Email: sales@royalsecure.com
Phone: 646-405-4878
Developer/Vendor Contact: Steve Nassif

Part 2: ONC-Authorized Certification Body Information

2.1 ONC-Authorized Certification Body Information

ONC-ACB Name: ICSA Labs, an independent division of Verizon
Address: 1000 Bent Creek Boulevard, Suite 200
Mechanicsburg, PA 17050
Website: <https://www.icsalabs.com/technology-program/onc-ehr>
Email: EHR@icsalabs.com
Phone: 717.790.8100
ONC-ACB Contact: Amit Trivedi

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

Amit Trivedi

ONC-ACB Authorized Representative

Amit V. Trivedi 4/17/2014

Signature and Date

Program Manager – Healthcare

Function/Title

2.2 Gap Certification

The following identifies criterion or criteria certified via gap certification

§170.314			
<input type="checkbox"/> (a)(1)	<input type="checkbox"/> (a)(17)	<input checked="" type="checkbox"/> (d)(5)	<input type="checkbox"/> (d)(9)
<input type="checkbox"/> (a)(6)	<input type="checkbox"/> (b)(5)*	<input checked="" type="checkbox"/> (d)(6)	<input type="checkbox"/> (f)(1)
<input type="checkbox"/> (a)(7)	<input checked="" type="checkbox"/> (d)(1)	<input checked="" type="checkbox"/> (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			
<input type="checkbox"/> (a)(1)	<input type="checkbox"/> (a)(14)	<input type="checkbox"/> (c)(3)	<input type="checkbox"/> (f)(1)
<input type="checkbox"/> (a)(2)	<input type="checkbox"/> (a)(15)	<input type="checkbox"/> (d)(1)	<input type="checkbox"/> (f)(2)
<input type="checkbox"/> (a)(3)	<input type="checkbox"/> (a)(16) <i>Inpt. only</i>	<input type="checkbox"/> (d)(2)	<input type="checkbox"/> (f)(3)
<input type="checkbox"/> (a)(4)	<input type="checkbox"/> (a)(17) <i>Inpt. only</i>	<input type="checkbox"/> (d)(3)	<input type="checkbox"/> (f)(4) <i>Inpt. only</i>
<input type="checkbox"/> (a)(5)	<input type="checkbox"/> (b)(1)	<input type="checkbox"/> (d)(4)	<input type="checkbox"/> (f)(5) <i>Optional & Amb. only</i>
<input type="checkbox"/> (a)(6)	<input type="checkbox"/> (b)(2)	<input type="checkbox"/> (d)(5)	
<input type="checkbox"/> (a)(7)	<input type="checkbox"/> (b)(3)	<input type="checkbox"/> (d)(6)	<input type="checkbox"/> (f)(6) <i>Optional & Amb. only</i>
<input type="checkbox"/> (a)(8)	<input type="checkbox"/> (b)(4)	<input type="checkbox"/> (d)(7)	
<input type="checkbox"/> (a)(9)	<input type="checkbox"/> (b)(5)	<input type="checkbox"/> (d)(8)	<input type="checkbox"/> (g)(1)
<input type="checkbox"/> (a)(10)	<input type="checkbox"/> (b)(6) <i>Inpt. only</i>	<input type="checkbox"/> (d)(9) <i>Optional</i>	<input type="checkbox"/> (g)(2)
<input type="checkbox"/> (a)(11)	<input type="checkbox"/> (b)(7)	<input type="checkbox"/> (e)(1)	<input type="checkbox"/> (g)(3)
<input type="checkbox"/> (a)(12)	<input type="checkbox"/> (c)(1)	<input type="checkbox"/> (e)(2) <i>Amb. only</i>	<input type="checkbox"/> (g)(4)
<input type="checkbox"/> (a)(13)	<input type="checkbox"/> (c)(2)	<input type="checkbox"/> (e)(3) <i>Amb. only</i>	

No inherited certification



Part 3: NVLAP-Accredited Testing Laboratory Information

Report Number: 2014-EHRA772108-2014-0417-00

Test Date(s): 4/16/2014

3.1 NVLAP-Accredited Testing Laboratory Information

ATL Name: ICSA Labs, an independent division of Verizon
Accreditation Number: 200697-0
Address: 1000 Bent Creek Boulevard, Suite 200
 Mechanicsburg, PA 17050
Website: <https://www.icsalabs.com/technology-program/onc-ehr>
Email: EHR@icsalabs.com
Phone: 717.790.8100
ATL Contact: Michelle Knighton
 For more information on scope of accreditation, please reference
<http://ts.nist.gov/standards/scopes/2006970.htm>

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

Michelle Knighton
ATL Authorized Representative

Health IT Test Lab Manager
Function/Title

Michelle Knighton 4/17/14
Signature and Date

3.2 Test Information

3.2.1 Additional Software Relied Upon for Certification

Additional Software	Applicable Criteria	Functionality provided by Additional Software
Meinberg NTP	314e1	Synchronize time clocks with the NIST time servers

No additional software required

3.2.2 Test Tools

Test Tool	Version
<input type="checkbox"/> Cypress	
<input type="checkbox"/> ePrescribing Validation Tool	

Test Tool	Version
<input type="checkbox"/> HL7 CDA Cancer Registry Reporting Validation Tool	
<input type="checkbox"/> HL7 v2 Electronic Laboratory Reporting (ELR) Validation Tool	
<input type="checkbox"/> HL7 v2 Immunization Information System (IIS) Reporting Validation Tool	
<input type="checkbox"/> HL7 v2 Laboratory Results Interface (LRI) Validation Tool	
<input type="checkbox"/> HL7 v2 Syndromic Surveillance Reporting Validation Tool	
<input checked="" type="checkbox"/> Transport Testing Tool	175, 177
<input checked="" type="checkbox"/> 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)	<input type="checkbox"/> §170.204(b)(1) HL7 Version 3 Implementation Guide: URL-Based Implementations of the Context-Aware Information Retrieval (Infobutton) Domain	<input type="checkbox"/> §170.204(b)(2) HL7 Version 3 Implementation Guide: Context-Aware Knowledge Retrieval (Infobutton) Service-Oriented Architecture Implementation Guide
(a)(13)	<input type="checkbox"/> §170.207(a)(3) IHTSDO SNOMED CT® International Release July 2012 and US Extension to SNOMED CT® March 2012 Release	<input type="checkbox"/> §170.207(j) HL7 Version 3 Standard: Clinical Genomics; Pedigree
(a)(15)(i)	<input type="checkbox"/> §170.204(b)(1) HL7 Version 3 Implementation Guide: URL-Based Implementations of the Context-Aware Information Retrieval (Infobutton) Domain	<input type="checkbox"/> §170.204(b)(2) HL7 Version 3 Implementation Guide: Context-Aware Knowledge Retrieval (Infobutton) Service-Oriented Architecture Implementation Guide

Criterion #	Standard Successfully Tested	
(a)(16)(ii)	<input type="checkbox"/> §170.210(g) Network Time Protocol Version 3 (RFC 1305)	<input type="checkbox"/> §170.210(g) Network Time Protocol Version 4 (RFC 5905)
(b)(2)(i)(A)	<input type="checkbox"/> §170.207(i) The code set specified at 45 CFR 162.1002(c)(2) (ICD-10- CM) for the indicated conditions	<input type="checkbox"/> §170.207(a)(3) IHTSDO SNOMED CT® International Release July 2012 and US Extension to SNOMED CT® March 2012 Release
(b)(7)(i)	<input type="checkbox"/> §170.207(i) The code set specified at 45 CFR 162.1002(c)(2) (ICD-10- CM) for the indicated conditions	<input type="checkbox"/> §170.207(a)(3) IHTSDO SNOMED CT® International Release July 2012 and US Extension to SNOMED CT® March 2012 Release
(e)(1)(i)	<input checked="" type="checkbox"/> Annex A of the FIPS Publication 140-2 <ul style="list-style-type: none"> • AES-128, SHA-1 	
(e)(1)(ii)(A)(2)	<input type="checkbox"/> §170.210(g) Network Time Protocol Version 3 (RFC 1305)	<input checked="" type="checkbox"/> §170.210(g) Network Time Protocol Version 4 (RFC 5905)
(e)(3)(ii)	<input checked="" type="checkbox"/> Annex A of the FIPS Publication 140-2 <ul style="list-style-type: none"> • AES-128, SHA-1 	
Common MU Data Set (15)	<input checked="" type="checkbox"/> §170.207(a)(3) IHTSDO SNOMED CT® International Release July 2012 and US Extension to SNOMED CT® March 2012 Release	<input checked="" type="checkbox"/> §170.207(b)(2) The code set specified at 45 CFR 162.1002(a)(5) (HCPCS and CPT-4)

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
<input type="checkbox"/> (a)(4)(iii)	Plot and display growth charts

Criterion #	Optional Functionality Successfully Tested
<input type="checkbox"/> (b)(1)(i)(B)	Receive summary care record using the standards specified at §170.202(a) and (b) (Direct and XDM Validation)
<input type="checkbox"/> (b)(1)(i)(C)	Receive summary care record using the standards specified at §170.202(b) and (c) (SOAP Protocols)
<input type="checkbox"/> (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)
<input type="checkbox"/> (b)(2)(ii)(C)	Transmit health information to a Third Party using the standards specified at §170.202(b) and (c) (SOAP Protocols)
<input type="checkbox"/> (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)
<input type="checkbox"/> 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)
<input type="checkbox"/> 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
<input checked="" type="checkbox"/> (a)(1)	1.2	1.5	<input type="checkbox"/> (c)(3)		
<input type="checkbox"/> (a)(2)			<input checked="" type="checkbox"/> (d)(1)	1.2	
<input checked="" type="checkbox"/> (a)(3)	1.2	1.4	<input type="checkbox"/> (d)(2)		
<input checked="" type="checkbox"/> (a)(4)	1.4	1.3	<input checked="" type="checkbox"/> (d)(3)	1.3	
<input type="checkbox"/> (a)(5)			<input type="checkbox"/> (d)(4)		
<input checked="" type="checkbox"/> (a)(6)	1.3	1.4	<input type="checkbox"/> (d)(5)		
<input checked="" type="checkbox"/> (a)(7)	1.3	1.3	<input type="checkbox"/> (d)(6)		
<input type="checkbox"/> (a)(8)			<input checked="" type="checkbox"/> (d)(7)	1.2	
<input checked="" type="checkbox"/> (a)(9)	1.3	1.3	<input type="checkbox"/> (d)(8)		
<input type="checkbox"/> (a)(10)			<input type="checkbox"/> (d)(9) <i>Optional</i>		
<input checked="" type="checkbox"/> (a)(11)	1.3		<input checked="" type="checkbox"/> (e)(1)	1.7	1.4
<input checked="" type="checkbox"/> (a)(12)	1.3		<input checked="" type="checkbox"/> (e)(2) <i>Amb. only</i>	1.2	1.6
<input type="checkbox"/> (a)(13)			<input checked="" type="checkbox"/> (e)(3) <i>Amb. only</i>	1.3	
<input type="checkbox"/> (a)(14)			<input type="checkbox"/> (f)(1)		
<input type="checkbox"/> (a)(15)			<input type="checkbox"/> (f)(2)		
<input type="checkbox"/> (a)(16) <i>Inpt. only</i>			<input type="checkbox"/> (f)(3)		
<input type="checkbox"/> (a)(17) <i>Inpt. only</i>			<input type="checkbox"/> (f)(4) <i>Inpt. only</i>		
<input type="checkbox"/> (b)(1)			<input type="checkbox"/> (f)(5) <i>Optional & Amb. only</i>		
<input type="checkbox"/> (b)(2)					
<input type="checkbox"/> (b)(3)			<input type="checkbox"/> (f)(6) <i>Optional & Amb. only</i>		
<input type="checkbox"/> (b)(4)					
<input type="checkbox"/> (b)(5)			<input checked="" type="checkbox"/> (g)(1)	1.6	1.8
<input type="checkbox"/> (b)(6) <i>Inpt. only</i>			<input type="checkbox"/> (g)(2)		
<input type="checkbox"/> (b)(7)			<input checked="" type="checkbox"/> (g)(3)	1.3	
<input type="checkbox"/> (c)(1)			<input checked="" type="checkbox"/> (g)(4)	1.2	
<input type="checkbox"/> (c)(2)					

*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:

- 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
<input type="checkbox"/> 2		<input type="checkbox"/> 90		<input type="checkbox"/> 136		<input type="checkbox"/> 155	
<input type="checkbox"/> 22		<input type="checkbox"/> 117		<input type="checkbox"/> 137		<input type="checkbox"/> 156	
<input type="checkbox"/> 50		<input type="checkbox"/> 122		<input type="checkbox"/> 138		<input type="checkbox"/> 157	
<input type="checkbox"/> 52		<input type="checkbox"/> 123		<input type="checkbox"/> 139		<input type="checkbox"/> 158	
<input type="checkbox"/> 56		<input type="checkbox"/> 124		<input type="checkbox"/> 140		<input type="checkbox"/> 159	
<input type="checkbox"/> 61		<input type="checkbox"/> 125		<input type="checkbox"/> 141		<input type="checkbox"/> 160	
<input type="checkbox"/> 62		<input type="checkbox"/> 126		<input type="checkbox"/> 142		<input type="checkbox"/> 161	
<input type="checkbox"/> 64		<input type="checkbox"/> 127		<input type="checkbox"/> 143		<input type="checkbox"/> 163	
<input type="checkbox"/> 65		<input type="checkbox"/> 128		<input type="checkbox"/> 144		<input type="checkbox"/> 164	
<input type="checkbox"/> 66		<input type="checkbox"/> 129		<input type="checkbox"/> 145		<input type="checkbox"/> 165	
<input type="checkbox"/> 68		<input type="checkbox"/> 130		<input type="checkbox"/> 146		<input type="checkbox"/> 166	
<input type="checkbox"/> 69		<input type="checkbox"/> 131		<input type="checkbox"/> 147		<input type="checkbox"/> 167	
<input type="checkbox"/> 74		<input type="checkbox"/> 132		<input type="checkbox"/> 148		<input type="checkbox"/> 169	
<input type="checkbox"/> 75		<input type="checkbox"/> 133		<input type="checkbox"/> 149		<input type="checkbox"/> 177	
<input type="checkbox"/> 77		<input type="checkbox"/> 134		<input type="checkbox"/> 153		<input type="checkbox"/> 179	
<input type="checkbox"/> 82		<input type="checkbox"/> 135		<input type="checkbox"/> 154		<input type="checkbox"/> 182	

Inpatient CQMs							
CMS ID	Version	CMS ID	Version	CMS ID	Version	CMS ID	Version
<input type="checkbox"/> 9		<input type="checkbox"/> 71		<input type="checkbox"/> 107		<input type="checkbox"/> 172	
<input type="checkbox"/> 26		<input type="checkbox"/> 72		<input type="checkbox"/> 108		<input type="checkbox"/> 178	
<input type="checkbox"/> 30		<input type="checkbox"/> 73		<input type="checkbox"/> 109		<input type="checkbox"/> 185	
<input type="checkbox"/> 31		<input type="checkbox"/> 91		<input type="checkbox"/> 110		<input type="checkbox"/> 188	
<input type="checkbox"/> 32		<input type="checkbox"/> 100		<input type="checkbox"/> 111		<input type="checkbox"/> 190	
<input type="checkbox"/> 53		<input type="checkbox"/> 102		<input type="checkbox"/> 113			
<input type="checkbox"/> 55		<input type="checkbox"/> 104		<input type="checkbox"/> 114			
<input type="checkbox"/> 60		<input type="checkbox"/> 105		<input type="checkbox"/> 171			

3.2.8 Automated Numerator Recording and Measure Calculation

3.2.8.1 Automated Numerator Recording

Automated Numerator Recording Successfully Tested			
<input checked="" type="checkbox"/> (a)(1)	<input checked="" type="checkbox"/> (a)(9)	<input type="checkbox"/> (a)(16)	<input type="checkbox"/> (b)(6)
<input checked="" type="checkbox"/> (a)(3)	<input checked="" type="checkbox"/> (a)(11)	<input type="checkbox"/> (a)(17)	<input checked="" type="checkbox"/> (e)(1)
<input checked="" type="checkbox"/> (a)(4)	<input checked="" type="checkbox"/> (a)(12)	<input type="checkbox"/> (b)(2)	<input checked="" type="checkbox"/> (e)(2)
<input type="checkbox"/> (a)(5)	<input type="checkbox"/> (a)(13)	<input type="checkbox"/> (b)(3)	<input checked="" type="checkbox"/> (e)(3)
<input checked="" type="checkbox"/> (a)(6)	<input type="checkbox"/> (a)(14)	<input type="checkbox"/> (b)(4)	
<input checked="" type="checkbox"/> (a)(7)	<input type="checkbox"/> (a)(15)	<input type="checkbox"/> (b)(5)	

Automated Numerator Recording was not tested

3.2.8.2 Automated Measure Calculation

Automated Numerator Recording Successfully Tested			
<input type="checkbox"/> (a)(1)	<input type="checkbox"/> (a)(9)	<input type="checkbox"/> (a)(16)	<input type="checkbox"/> (b)(6)
<input type="checkbox"/> (a)(3)	<input type="checkbox"/> (a)(11)	<input type="checkbox"/> (a)(17)	<input type="checkbox"/> (e)(1)
<input type="checkbox"/> (a)(4)	<input type="checkbox"/> (a)(12)	<input type="checkbox"/> (b)(2)	<input type="checkbox"/> (e)(2)
<input type="checkbox"/> (a)(5)	<input type="checkbox"/> (a)(13)	<input type="checkbox"/> (b)(3)	<input type="checkbox"/> (e)(3)
<input type="checkbox"/> (a)(6)	<input type="checkbox"/> (a)(14)	<input type="checkbox"/> (b)(4)	
<input type="checkbox"/> (a)(7)	<input type="checkbox"/> (a)(15)	<input type="checkbox"/> (b)(5)	

Automated Measure Calculation was not tested

3.2.9 Attestation

Attestation Forms (as applicable)	Appendix
<input checked="" type="checkbox"/> Safety-Enhanced Design*	A
<input checked="" type="checkbox"/> Quality Management System**	B
<input type="checkbox"/> Privacy and Security	

*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

Appendix A: Safety-Enhanced Design Attestation

1	170.314(g)(3) Safety-enhanced design	
1.1	Identify which of the following criteria are scheduled to be tested or inherited for certification.	
1.1.1	170.314(a)(1) Computerized provider order entry	<input checked="" type="checkbox"/>
1.1.2	170.314(a)(2) Drug-drug, drug-allergy interactions checks	<input type="checkbox"/>
1.1.3	170.314(a)(6) Medication list	<input checked="" type="checkbox"/>
1.1.4	170.314(a)(7) Medication allergy list	<input checked="" type="checkbox"/>
1.1.5	170.314(a)(8) Clinical decision support	<input type="checkbox"/>
1.1.6	170.314(a)(16) Electronic medication administration record (inpatient setting only)	<input type="checkbox"/>
1.1.7	170.314(b)(3) Electronic prescribing	<input type="checkbox"/>
1.1.8	170.314(b)(4) Clinical information reconciliation	<input type="checkbox"/>
1.2	<p>Document the applied user-centered design (UCD) processes for each applicable EHR technology capability submitted for testing. Provide the name, description, and citation for all UCD processes used.</p> <ul style="list-style-type: none"> • If a single UCD process was used for applicable capabilities, it would only need to be identified once. • If different UCD processes were applied to specific capabilities, be sure to indicate the criterion or criteria to which each UCD process applies. • If a modified UCD process was used for any of the applicable capabilities, an outline and short description of the UCD process must be provided. The description must also include identifying any industry-standard UCD process upon which the modified UCD process was based. 	
	NISTIR 7741: NIST Guide to the Processes Approach for Improving the Usability of Electronic Health Records	

1.3	<p>Submit a Usability Test Report for each criterion you selected in Question 1.1.</p> <ul style="list-style-type: none"> • Attach the Usability Test Report in a separate document. • Identify the name of the report(s) and any other supporting documentation materials in the field below. If more than one report is submitted, specify which report applies to which criteria. • Reports may be supplied in any format, though they must include the necessary information for all of the certification criteria submitted for testing and conform to the content and completion requirements of the Customized Common Industry Format Template for Electronic Health Record Usability Testing per NISTIR 7742. Failure to include all required elements will constitute automatic failure of the SED Attestation. • The official NISTIR 7742 report template can be located at http://www.nist.gov/itl/hit/upload/LowryNISTIR-7742Customized_CIF_Template_for_EHR_Usability_Testing_PublicationI_Version-doc.pdf
	See document 'Usability Test Report.pdf'

Appendix B: Quality Management System Attestation

1	170.314(g)(4) Quality management system
1.1	<p>If an industry standard QMS was used during the development, testing, implementation or maintenance of the EHR technology for any of the certification criteria, specify it/them by name (e.g. ISO 9001, IEC 62304, ISO 13485, 21 CFR Part 820, etc.). If an industry standard QMS was not used, please skip to Question 1.2.</p>
	n/a
1.2	<p>If a modified or "home-grown" QMS was used during the development, testing, implementation or maintenance of the EHR technology for any of the certification criteria, include an outline and short description of the QMS, which could include identifying any industry-standard QMS upon which it was based and modifications to that standard. If a modified or "home-grown" QMS was not used, please skip to Question 1.3.</p>
	Agile Software Development Life Cycle that incorporates usability and testing guidelines as set forth through the Sarbanes-Oxley Act of 2002.
1.3	<p>If no QMS was used during the development, testing, implementation or maintenance of the EHR technology for any of the certification criteria, please state that.</p>
	n/a

Test Results Summary Document History

Version	Description of Change	Date
1.0	Original	April 17, 2014

END OF DOCUMENT