Centers for Medicare & Medicaid Services
CMS eXpedited Life Cycle (XLC)

Physician Quality Reporting System (PQRS) Program Year 2016

Registry Extensible Markup Language (XML) Specification and Error Messages

Version: 1.2
12/15/2016

1. Introduction

The 2016 Registry Extensible Markup Language (XML) Specification and Error Messages are provided in this document and can be accessed via the following:

- Click [Registry XML Specification](#) to jump to the Registry XML Specification content.

- Click [Registry XML Error Messages](#) to jump to the Registry XML Error Messages content.

Please note, this Portable Document Format (PDF) is **not 508 compliant**. For a Section 508 compliant form of this information, please refer to the online version of this content.

2. 2016 Registry XML Specification

The following table provides the 2016 Registry XML Specification:

2016 Registry XML Specification								
XML Element	**Attributes**	**Description**	**Example**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
<?xml version="1.0" encoding="UTF-8" ?>	None	A header is required at the beginning of each XML file.	<?xml version="1.0" encoding="UTF-8" ?>					
<submission>	Type	Describes the setting for which data is being submitted.	<submission type="PQRS-REGISTRY" version="8.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="Registry_Payment.xsd">	N/A	PQRS-REGISTRY	Character	20	Yes
	Version	The version of the file layout.		N/A	8.0	Character	20	Yes
<file-audit-data>	None	Opening tag for file audit data. This tag and the entire <file-audit-data> section are required in the XML document. This tag contains no data.						
<create-date>	None	Sub-element of the file audit data element. The month, day, and year the XML file was created.	<create-date>01-23-2016</create-date>	N/A	MM-DD-YYYY (Must be a valid date)	Date	10	Yes
<create-time>	None	Sub-element of the file audit data element. The hour and minutes representing the time the file was created.	<create-time>23:01</create-time>	N/A	HH:MM (Military format with or without colon)	Time	5	Yes

2016 Registry XML Specification								
XML Element	**Attributes**	**Description**	**Example**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
<create-by>	None	Sub-element of the file audit data element. The entity that created the file.	<create-by>RegistryA</create-by>	N/A		Character	50	Yes
<version>	None	Sub-element of the file audit data element. The version of the file being submitted.	<version>1.0</version>	N/A		Character	20	Yes
<file-number>	None	Sub-element of the file audit data element. The number of the file.	<file-number>1</file-number>	N/A		Number	5	Yes
<number-of-files>	None	Sub-element of the file audit data element. Total number of files.	<number-of-files>1</number-of-files>	N/A		Number	5	Yes
</file-audit-data>	None	Closing tag for file audit data. This tag and the entire <file-audit-data> section are required in the XML document.						
<registry>	None	Sub-element of the submission element. Opening tag for file registry data. This tag is required in the XML document; however, it contains no data.						
<registry-name>	None	Sub-element of the registry element. The registry name.	<registry-name>Model Registry</registry-name>	Registry Name	Registry Name	Character	100	Yes
<registry-id>	None	Sub-element of the Registry Element. Used to identify the registry. Use Registry's Corporate TIN number.	<registry-id>125789123</registry-id>	Registry ID	Registry's 9 digit TAX Identification Number	Character	9	Yes

2016 Registry XML Specification								
XML Element	**Attributes**	**Description**	**Example**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
<vendor-unique-id>	None	Sub-element of the Registry Element. Unique identifier assigned to each Registry by CMS during the self-nomination/qualification process (this identifier is not the TIN).	<vendor-unique-id>A1234</vendor-unique-id>	Vendor Unique ID	• No spaces allowed • Space may be replaced with '_' (Underscore) • No special characters • Upper Case letters and Numbers • Max Length is 64 characters	Character	64	Yes
<submission-type>	None	Sub-element of the registry element. Used to identify the type of submission. 1. Individual Registry Submission 2. GPRO Registry Submission Note: Limit one XML file to a single submission type.	<submission-type>1</submission-type>	Submission Type	1. Individual Registry Submission 2. GPRO Registry Submission	Number	1	Yes
<submission-method>	None	Sub-element of the file registry element. Submission Method: Registry PQRS Codes for Satisfactory Reporting: • A=12 months, 50%, at least 9 measures covering 3 NQS domains • G=12 months, 20 patients, at least 1 measure group (G is not applicable for GPRO Registry Submission) Note: Limit one XML file to a single submission method.	<submission-method>A</submission-method>	Submission Method	A,G (12 month reporting period = January 1, 2016 through December 31, 2016)	Character	1	Yes

2016 Registry XML Specification								
XML Element	**Attributes**	**Description**	**Example**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
</registry>	None	Closing tag for registry. This tag is required in the XML document; however, it contains no data.						
<measure-group>	ID	Sub-element of the submission element. Opening tag for measure group. There could be multiple Measures Groups in a single XML file. This element repeats if there are multiple Measures Groups. ID of the Measures Group: • A = Diabetes Mellitus • C = Chronic Kidney Disease • D = Preventive Care • F = Rheumatoid Arthritis • H = Coronary Artery Bypass Graft • I = Hepatitis C • L = Heart Failure • M = Coronary Artery Disease • N = Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome • O = Asthma • P = Chronic Obstructive Pulmonary Disease • Q = Inflammatory Bowel	<measure-group ID="C">	N/A	A, C, D, F, H, I, L, M, N, O, P, Q, R, S, T, U, X, Y, Z, AA, AB, AC, AD, AE, AF, AG	Character	2	Yes

2016 Registry XML Specification								
XML Element	Attributes	Description	Example	Data Element	Valid Values	Data Type	Field Size	Data Required
		Disease • R = Sleep Apnea • S = Cataracts • T = Dementia • U = Parkinson's Disease • Y = Oncology • Z = Total Knee Replacement • AA = General Surgery • AB= Optimizing Patient Exposure to Ionizing Radiation • AC = Sinusitis • AD = Acute Otitis Externa • AE = Cardiovascular Prevention • AF = Diabetic Retinopathy • AG = Multiple Chronic Conditions • X = Not Applicable Note: If the submission-method is 'A' then the 'ID' attribute of measure-group should be 'X'.						
\<provider\>	None	Sub-element of the measure-group element. Opening tag for provider. This tag is required in the XML document; however, it contains no data. This element repeats if there are multiple providers.						

	**2016 Registry XML Specification**
XML Element	**Attributes**	**Description**	**Example**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
\<gpro-type\>	None	Sub-element of the provider element. Size of GPRO: • A = Large GPRO (100 or greater NPIs) • B = Medium GPRO (25-99 NPIs) • C = Small GPRO (2-24 NPIs)	\<gpro-type\>A\</gpro-type\> Note: When the gpro-type value is null use \<gpro-type xsi:nil="true"/\> for this tag.	GPRO Type	• A = Large GPRO • B = Medium GPRO • C = Small GPRO	Character	1	Conditional; only required if submission-type value is 2
\<npi\>	None	Sub-element of the provider element. National Provider Identifier as assigned by CMS.	\<npi\>1257894658\</npi\> Note: When the npi value is null use \<npi xsi:nil="true"/\> for this tag.	National Provider Identifier (NPI)	10 digit National Provider Identifier	Character	10	Conditional; only required if submission-type value is 1
\<tin\>	None	Sub-element of the provider element. The tax identification number for individual NPI.	\<tin\>125789465\</tin\>	Tax Identification Number (TIN)	9 digit Tax Identification Number	Character	9	Yes
\<email-address\>	None	Sub-element of the provider element. The email address of the provider's data submitted.	\<email-address\>johndoe@abc.com\</email-address\> Note: When the email-address value is null use \<email-address xsi:nil="true"/\> for this tag.	Email Address		Character	100	Optional

2016 Registry XML Specification								
XML Element	**Attributes**	**Description**	**Example**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
\<waiver-signed\>	None	Sub-element of the provider element. Participation waiver signed? A participation waiver indicates the eligible professional has given the registry permission to submit data on their behalf.	\<waiver-signed\>Y\</waiver-signed\>	Waiver Signed	Y,y	Character	1	Yes
\<encounter-from-date\>	None	Sub-element of the provider element. The month, day, and year of the first service encounter of the submission period ("From" date).	\<encounter-from-date\>01-15-2016\</encounter-from-date\>	N/A	MM-DD-YYYY (Must be a valid date)	Date	10	Yes
\<encounter-to-date\>	None	Sub-element of the provider element. The month, day, and year of the last service encounter of the submission period ("To" date).	\<encounter-to-date\>11-30-2016\</encounter-to-date\>	N/A	MM-DD-YYYY (Must be a valid date)	Date	10	Yes
\<measure-group-stat\>	None	Sub-element of the provider data element. Opening tag for measure group stat.	Note: If the measure-group 'ID' is 'X', do not include the \<measure-group-stat\> segment.					
\<ffs-patient-count\>	None	Sub-element of the measure group stat element. Total number of Medicare Part B FFS patients seen for the PQRS measure group.	\<ffs-patient-count\>2\</ffs-patient-count\>	Patient count for the PQRS Measure Group	Numeric value	Number	10	Conditional; only required if measure-group 'ID' value is not 'X'

2016 Registry XML Specification								
XML Element	**Attributes**	**Description**	**Example**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
<group-reporting-rate-numerator>	None	Sub-element of the measure group stat element. Number of instances of reporting for all applicable measures within the measure group, for each eligible instance (reporting numerator).	<group-reporting-rate-numerator>30</group-reporting-rate-numerator>	Number Eligible Instances Reported	Refer to PQRS Measure Group Specifications	Number	10	Conditional; only required if measure-group 'ID' value is not 'X'
<group-eligible-instances>	None	Sub-element of the measure group stat element. Number of eligible instances (reporting denominator) for the PQRS measure group.	<group-eligible-instances>30</group-eligible-instances>	Eligible instances for the PQRS Measure Group	Refer to PQRS Measure Group Specifications	Number	10	Conditional; only required if measure-group 'ID' value is not 'X'
<group-reporting-rate>	None	Sub-element of the measure group stat element. Percentage of reporting (Reporting Numerator/Reporting Denominator). Note:<group-reporting-rate-numerator>/<group-eligible-instances>	<group-reporting-rate>100.00</group-reporting-rate>	Reporting Rate for the PQRS Measure Group	0.00-100.00	Number	6	Conditional; only required if measure-group 'ID' value is not 'X'
</measure-group-stat>	None	Closing tag for measure group stat. Note: This tag is required in the XML document when the opening measure group stat tag is created.						

	**2016 Registry XML Specification**
XML Element	**Attributes**	**Description**	**Example**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
\<pqrs-measure>	None	Sub-element of the provider data element. Opening tag for PQRS measure. This tag is required in the XML document; however, it contains no data. This element repeats if there are multiple measures.						
\<pqrs-measure-number>	None	Sub-element of the PQRS-measure element. The PQRS measure number. Note: PQRS Registry Individual Measures and Measures Groups measures will be accepted.	\<pqrs-measure-number>119\</pqrs-measure-number>	PQRS Measure Number	Refer to PQRS Measure Specifications	Number	4	Yes
\<collection-method>	None	Sub-element of the PQRS-measure element. Method Registry collected data from Eligible Professionals. • A = EHR • B = Claims • C = Practice Mgmt System • D = Web Based Tool	\<collection-method>B\</collection-method>	Collection Method	• A = EHR • B = Claims • C = Practice Mgmt System • D = Web Based Tool	Character	4	Yes
\<pqrs-measure-details>	None	Sub-element of PQRS measure. This tag is required in the XML document; however, it contains no data. This element repeats if measure has multiple performance rates.						

2016 Registry XML Specification								
XML Element	**Attributes**	**Description**	**Example**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
\<measure-strata-num\>	None	Sub-element of the PQRS measure details. Measure stratification number identifies when a measure requires multiple performance rates to be submitted as defined in the measure specification. Note: If the multiple performance rates are not defined for the measure then it defaults to 1 else submit in the order as defined in the measure specification.	\<measure-strata-num\>1\</measure-strata-num\>	Measure Stratification Number	Refer to PQRS Measure Specifications	Number	2	Yes
\<eligible-instances\>	None	Sub-element of the PQRS measure details. Number of eligible instances (Reporting Denominator) for the PQRS measure.	\<eligible-instances\>100\</eligible-instances\>	Eligible instances for the individual PQRS Measure	Refer to PQRS Measure Specifications	Number	10	Yes
\<meets-performance-instances\>	None	Sub-element of the PQRS measure details. Number of instances of quality service performed (Performance Numerator).	\<meets-performance-instances\>70\</meets-performance-instances\>	Number Instances of Quality Service Performed	Refer to PQRS Measure Specifications	Number	10	Yes
\<performance-exclusion-instances\>	None	Sub-element of the PQRS measure details. Number of performance exclusions for the PQRS Measure.	\<performance-exclusion-instances\>20\</performance-exclusion-instances\>	Performance Exclusions Instances	Refer to PQRS Measure Specifications	Number	10	Yes

2016 Registry XML Specification								
XML Element	Attributes	Description	Example	Data Element	Valid Values	Data Type	Field Size	Data Required
<performance-not-met-instances>	None	Sub-element of the PQRS measure details. Number of instances which do not meet the performance criteria, even though reporting occurred.	<performance-not-met-instances>10</performance-not-met-instances>	Performance Not Met Instances	Refer to PQRS Measure Specifications	Number	10	Yes
<reporting-rate>	None	Sub-element of the PQRS measure details. Percentage of reporting (Reporting Numerator /Reporting Denominator). Note: <meets-performance-instances>+<performance-exclusion-instances>+<performance-not-met-instances>/<eligible-instances>	<reporting-rate>100.00</reporting-rate> Note: When the reporting-rate value is null use <reporting-rate xsi:nil="true"/> for this tag.	Reporting Rate	0.00-100.00	Number	6	Conditional; only required if measure-group is 'X' and reporting-rate is not a null value
<performance-rate>	None	Sub-element of the PQRS measure details. Note: Performance rate = performance numerator (PN) / performance denominator (PD) Where: PN = <meets-performance-instances> PD = (<eligible-instances>-<performance-exclusion-instances>)	<performance-rate>88.00</performance-rate> Note: When the performance-rate value is null use <performance-rate xsi:nil="true"/> for this tag.	Performance Rate	0.00-100.00	Number	6	

2016 Registry XML Specification								
XML Element	**Attributes**	**Description**	**Example**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
<risk-adjusted-measure-detail>	None	Sub element of pqrs-measure-details element. Note: This tag cannot be used if the measure is not risk adjusted measure.						
<population-ref-rate>	None	Sub element of the risk-adjusted-measure-detail. Population reference rate associated with the measure population.	<population-ref-rate>8.3000</population-ref-rate> Note: When the population-ref-rate is null use <population-ref-rate xsi:nil="true"/> for this tag.	Population Reference Rate	0.0000-9999999999.9999	Number	15	Value Optional
<risk-standardized-rate>	None	Sub element of the risk-adjusted-measure-detail. Risk adjusted and smoothed performance rate.	<risk-standardized-rate>7.0000</risk-standardized-rate> Note: When the risk-standardized-rate is null use < risk-standardized-rate xsi:nil="true"/> for this tag.	Risk Standardized Performance Rate	0.0000-9999999999.9999	Number	15	Value Optional
<lower-ci>	None	Sub element of the risk-adjusted-measure-detail. Lower Bound of the 95% Confidence Interval for the Risk Standardized Rate.	<lower-ci>6.9213</lower-ci> Note: When the lower-ci is null use <lower-ci xsi:nil="true"/> for this tag.	Lower Confidence Interval	0.0000-9999999999.9999	Number	15	Value Optional

2016 Registry XML Specification								
XML Element	**Attributes**	**Description**	**Example**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
<upper-ci>	None	Sub element of the risk-adjusted-measure-detail. Upper Bound of the 95% Confidence Interval for the Risk Standardized Rate.	<upper-ci>10.3910</upper-ci> Note: When the upper-ci is null use <upper-ci xsi:nil="true"/> for this tag.	Upper Bound of the 95% Confidence Interval	0.0000-9999999999.9999	Number	15	Value Optional
<performance-assessment>	None	Sub element of the risk-adjusted-measure-detail. Performance assessment based on outlier status determined by the 95% confidence Interval.	<performance-assessment>Average</performance-assessment> Note: When the performance-assessment is null use <performance-assessment xsi:nil="true"/> for this tag.	Performance Assessment	• BELOW AVERAGE • AVERAGE • ABOVE AVERAGE	Character	15	Value Optional
<risk-adjustment-description>	None	Sub element of the risk-adjusted-measure-detail. Description of how measure has been risk adjusted.	<risk-adjustment-description>Remove patients with X</risk-adjustment-description> Note: When the risk-adjustment-description is null use <risk-adjustment-description xsi:nil="true"/> for this tag.	Risk Adjustment Description	N/A	Character	300	Value Optional

2016 Registry XML Specification								
XML Element	**Attributes**	**Description**	**Example**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
<risk-reporting-rate>		Sub-element of risk-adjusted-measure-detail. Reporting rate for risk adjusted measures.	<risk-reporting-rate>95.0000</risk-reporting-rate> Note: When the risk-reporting-rate is null use <risk-reporting-rate xsi:nil="true"/> for this tag.	Risk Reporting Rate	0.0000-100.0000	Number	8	Value Optional
</risk-adjusted-measure-detail>	None	Closing tag for risk-adjusted-measure-detail. This tag is optional for risk adjusted measures in the XML document; however it contains no data.						
</pqrs-measure-details>	None	Closing tag for PQRS measure details. This tag is required in the XML document; however, it contains no data.						
</pqrs-measure>	None	Closing tag for PQRS-measure. This tag is required in the XML document; however, it contains no data.						
</provider>	None	Closing tag for provider. This tag is required in the XML document; however, it contains no data.						
</measure-group>	None	Closing tag for measure-group. This tag is required in the XML document; however, it contains no data.						

2016 Registry XML Specification								
XML Element	Attributes	Description	Example	Data Element	Valid Values	Data Type	Field Size	Data Required
</submission>	None	Closing tag for submission. This tag is required in the XML document; however, it contains no data.						

3. 2016 Registry XML Error Messages

The following table provides the 2016 Registry XML Error Messages:

Message Number	Data Element Name	XML Tag/Attribute	Condition	Message Description
SPEC_00001	Invalid XML File	INVALID XML FILE	The Data Element Tag/Attribute is invalid.	Invalid XML File (SPEC_00001).
SPEC_00002	File Number Number Of Files Registry Name Vendor Unique ID Registry ID Submission Method Measure Group NPI TIN Waiver Signed PQRS Measure Number Eligible Instances Meets Performance Instances Performance Exclusion Instances Performance Not Met Instances Reporting Rate Performance Rate Create Date Create Time Create By Encounter From Date Encounter To Date FFS Patient Count Group Reporting Rate Numerator Group Eligible Instances	<file-number> <number-of-files> <registry-name> <vendor-unique-id> <registry-id> <submission-method> <measure-group> <npi> <tin> <waiver-signed> <pqrs-measure-number> <eligible-instances> <meets-performance-instances> <performance-exclusion-instances> <performance-not-met-instances> <reporting-rate> <performance-rate> <create-date> <create-time> <create-by> <encounter-from-date> <encounter-to-date> <ffs-patient-count> <group-reporting-rate-numerator> <group-eligible-instances>	The Data Element Name tag is incorrect.	[Data Element Name] [XML Tag] tag is required (SPEC_00002).

Message Number	Data Element Name	XML Tag/Attribute	Condition	Message Description
SPEC_00002	Group Reporting Rate Version Measure Group Stat Provider File Audit Data Registry PQRS Measure Collection Method Email Address GPRO Type Submission Type PQRS Measure Details Population Reference Rate Risk Standardized Rate Lower Confidence Interval Upper Confidence Interval Performance Assessment Risk Adjustment Description Risk Reporting Rate Measure Stratification Number	<group-reporting-rate> <version> <measure-group-stat> <provider> <file-audit-data> <registry> <pqrs-measure> <collection-method> <email-address> <gpro-type> <submission-type> <pqrs-measure-details> <population-ref-rate> <risk-standardized-rate> <lower-ci> <upper-ci> <performance-assessment> <risk-adjustment-description> <risk-reporting-rate> <measure-strata-num>	The Data Element Name tag is incorrect.	[Data Element Name] [XML Tag] tag is required (SPEC_00002).
SPEC_00003	Submission Measure Group	version ID	The Data Element Name attribute is incorrect. e.g., Measure Group tag, attribute ID is required (SPEC_00003).	[Data Element Name] tag, attribute [XML Attribute] is required (SPEC_00003).

Message Number	Data Element Name	XML Tag/Attribute	Condition	Message Description
SPEC_00004	Submission Method	<submission-method>	The Data Element Name value is invalid.	[Data Element Name] [XML Tag] is not an allowable value (SPEC_00004).
	Waiver Signed	<waiver-signed>	Invalid values include:	
	Eligible Instances	<eligible-instances>	• Null	
	Meets Performance Instances	<meets-performance-instances>	• Space	
	File Number	<file-number>	• Format is invalid	
	Number Of Files	<number-of-files>	• Incorrect type	
	Registry Name	<registry-name>	• Incorrect length	
	Vendor Unique ID	<vendor-unique-id>	• Out of Range	
	Registry ID	<registry-id>		
	NPI	<npi>		
	TIN	<tin>		
	Email Address	<email-address>		
	PQRS Measure Number	<pqrs-measure-number>		
	Performance Exclusion Instances	<performance-exclusion-instances>		
	Performance Not Met Instances	<performance-not-met-instances>		
	Reporting Rate	<reporting-rate>		
	Performance Rate	<performance-rate>		
	Create Date	<create-date>		
	Create Time	<create-time>		
	Create By	<create-by>		
	Encounter From Date	<encounter-from-date>		
	Encounter To Date	<encounter-to-date>		
	FFS Patient Count	<ffs-patient-count>		
	Group Reporting Rate Numerator	<group-reporting-rate-numerator>		
	Group Eligible Instances	<group-eligible-instances>		
	Group Reporting Rate	<group-reporting-rate>		
	Version	<version>		
	Collection Method	<collection-method>		
	Submission Type	<submission-type>		
	Risk Standardized Rate	<risk-standardized-rate>		
	Lower Confidence Interval	<lower-ci>		
	Upper Confidence Interval	<upper-ci>		

Message Number	Data Element Name	XML Tag/Attribute	Condition	Message Description
SPEC_00004	Performance Assessment Risk Adjustment Description Risk Reporting Rate Measure Stratification Number	<performance-assessment> <risk-adjustment-description> <risk-reporting-rate> <measure-strata-num>		
SPEC_00005	Submission Measure Group	version ID	The Data Element Name's attribute value is invalid. Invalid values include: • Null • Space • Format is invalid • Incorrect type • Incorrect length e.g., Measure Group tag, attribute ID is not an allowable value (SPEC_00005).	[Data Element Name] tag, attribute [XML Attribute] is not an allowable value (SPEC_00005).

Revision History

Version	Date
1.0	03/29/2016
1.1	05/12/2016
1.2	12/15/2016