How to Externally Validate Test Case JSON

Currently MADIE does not perform FHIR validations on the QI-Core STU6 test case JSON. This guide details how to validate your test case JSON with the HL7 FHIR validator. This validator can be found at <u>https://validator.fhir.org/</u>

Follow the steps below to validate your test case JSON. in the validator with the same rules MADIE will have once validations are turned on.

1. Navigate to https://validator.fhir.org/ in your preferred web browser

Walidate Options		English + exchir.org
	Validate Resources Manually enter, or upload resources for validation.	
	ENTER RESOURCE UPLOAD RESOURCES	
Code		
Enter Resource Manually		

Image: HL7 Validator landing page

2. Select the Options tab in the upper tab

Walidate Options			English v e tx/hir.org
	Validate I Manually enter, or uploa	Resources d resources for validation.	
	ENTER RESOURCE	UPLOAD RESOURCES	
Code			
Enter Resource Manually			

Image: HL7 Validator Landing page – Options Tab Highlighted

3. Scroll down to the FHIR version. Your test case would have been written in MADiE based on FHIR 4.0.1, so select 4.0.1

Fŀ	IIR versio	n	
	The validate	or checks t	the resource against the base specification. By default, this is specification version 4.0.1.
	4.0.1	~	

Image: FHIR Version Selector

- 4. Next, set the Implementation Guides. To validate like MADIE will, users need to select **hl7.fhir.us.qicore** version **6.0.0**. Users can add other implementation guides if they wish, but it may provide different results than MADIE
 - a. First, search for "qicore" in the Select IG drop down. Select one of the qicore options (it doesn't matter which one)

I	mplementation (Guid	25
	You can validate agai	inst or	e or more published implementation guides. Select IGs using the dropdown menus below and click the Add button to include them in your validation.
	Select IG	^	No Compatible versions V Add O
	Q <u>qicore</u>		
	hl7.fhir.us.qicore		
	hl7.fhir.us.qicore		
	hl7.fhir.us.qicore	e	profiles you wish to validate against. These are usually clearly specified on the page where the profile is published.

Image: Implementation Guide – Select IG Drop Down

b. Select the IG version. Select 6.0.0. Note: if you haven't set FHIR version first, then you will not have the correct versions in the drop down.

Yo	ou can validate against one or mo	re published impleme	ntation guide	. Select IGs using the dropdown menus below and click the Add button to include them in you	r validation.
	hl7.fhir.us.qicore 🗸	Select IG version	^	Add •	
Se	elected IGs (0)	7.0.0-ballot			
	6.0.0-ballot				
Prot	riles	6.0.0			
Tł	ne canonical URLs for the profiles	5.0.0-ballot	ainst. These	are usually clearly specified on the page where the profile is published.	
	http://	5.0.0		Add 👁	
		4.9.0			

Image: Implementation Guide – Select IG Version

c. Finally, select "Add"

Implementation Guides		
You can validate against one or mor hI7.fhir.us.qicore v Selected IGs (0)	e published imp	mentation guides. Select IGs using the dropdown menus below and click the <i>Add</i> button to include them in your validation

Image: Implementation Guide – Add Button

5. No other options need to be set or changed. So, navigate back to the Validate Tab

ML7 FHIR Validate Options	English v exchir.org	
Allow Example URLs (-allow-example-urls)	~	
Check IPS Codes (-check-ips-codes)	~	
FHIR version		
The validator checks the resource against the base specification. By default, this is specification version 4.0.1.		
Implementation Guides		
You can validate against one or more published implementation guides. Select KS using the dropdown menus below and click the Add button to include them in your validation.		
Select IG 🗸 No Compatible versions 🗸 Add O		
Selected IGs (0)		
Profiles		
The canonical URLs for the profiles you wish to validate against. These are usually clearly specified on the page where the profile is published.		
http:// Add O		
Added Profiles (0)		
Extensions		

Image: Options Tab – Highlighting Validation

6. Open the test case to validate in MADiE



Image: MADiE Test Case Edit Page

- 7. Select all the JSON and copy it to your clipboard
- 8. Paste the JSON into the HL7 validator Code text area

ML7FHIR Validate Options	English v exchir.org
Code ("system": "http://terminology.hl?.org/CodeSystem/organization-type",	
Validate > Common Validation Options	

Image: Validator Code

9. Click "Validate", leaving "Common Validation Options..." Drop down empty. This process may take a few minutes to complete.

MILT FHIR' Validate Options	English • tx:fhir.org packages2.fhir.org
Code	
<pre>{ "system": "http://terminology.hl7.org/CodeSystem/organization-type", "code": "pay", " "name": "Blue Cross Blue Shield of Texas", "telecom": {</pre>	
Validate > Common Validation Options •	

Image: Validator Validate Button

10. Scroll down to see results. The left side column shows your test case JSON and where the Fatals, Errors, Warnings, or Information appear. The right column shows

Coptions	Language • • • tx.thir.org English • • • packages2.thir.org
Results (37) C Fatals C Errors Warnings C Information	
<pre>{</pre>	Warring Lies: 8. Constraint failed: dom-6: 'A resource should have narrative for robust management' (defined in thtp://hl?.org/fhi/StructureDefinition/DomainResource) (Best Practice Recommendation)
9 "resourceType": "Petient", 10 "G" "JF6c12-043-484-9125-04CH0972112e", 11 "peties": { 12 "peties": { 13 "http://hl7.org//hlr/us/qicore/StructureDefinition/qicore-potient" 14]	Information The definition for the Code System with URI Like: 22. 'urnroid:2.16.440.1.113853.6.238' doesn't provide any codes so the code Collis cannot be validated
<pre>}; "extension": [[url": "Hep://hl/.org/fhir/us/core/StructureDefinition/us-core-race",</pre>	Information The definition for the Code System with URI Line: 40, 'urn:oid:2.16.840.1.113883.6.238' doesn't provide any codes so the code cannot be validated
12 "valueGoing": [21 "system": "unoi:12:16.640.1.113483.6.23#", 26 "code": 1802-5", 27 "disploy: "Americon India or Alaska Native", 28 "system": "unoi: "Loss and the system": "Loss and the system": "Loss and the system: "Loss and	Warning Lice: 82, Colis Constraint failed: dom-6: 'A resource should have narrative for robust imanagement' (defined in tht)/hl?ory/ht/StructureDefinition/DomainResource) (Best Practice Recommendation)
<pre>20 30 30 31 31 32 34 34 35 4 36 4 36 4 36 4 37 4 38 5 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5</pre>	Harning Lies: 97, Coli3: 4 definition for CodeSystem 'http://snomed.info/sct' version '2022-03' could into the found, so the code cannot be validated. Valid versions: [http://snomed.info/sct/loss/10046104/version/2024093.http://snomed.info/sct/ 1000172109/version/2023115,http://snomed.info/sct/20100015501/version/202093.http://snomed.info/sct/ 203067,http://snomed.info/sct/20230731,http://snomed.info/sct/ 5016/version/202303.http://snomed.info/sct/2023073,http://snomed.info/sct/ 0.http://snomed.info/sct/543100005109/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/2543100005109/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/2543100000107/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/2543100000107/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/2543100000107/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/2543100000107/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/2543100000107/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/2543100000107/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/2543100000107/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/2543100000107/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/2543100000107/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/2543100000107/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/2543100000107/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/25431000107/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/254310000107/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/2543100000107/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/2543100000107/version/2024031,http://snomed.info/ 2023110.http://snomed.info/sct/2543100000107/version/2023101,http://snomed.info/ 2023110.http://snomed.info/sct/25430100000107/version/2023101,http://snomed.info/ 2023110.http://snomed.info/sc
<pre>61</pre>	2024139,mcpt;//mcmme.into/scr/#38210000010///PEBioh/2023411,http://Mcomme d.info/scr/po000000000207000/vesion/202371,http://smomed.info/scr/900000 000000207008/vesion/20240201,http://snomed.info/scr/9000000000207008/vers ion/20240801]

you the detailed message around the Fatals, Errors, Warnings, or Information.

Image: Validation Results

11. If you only want to see Fatals and Errors, use the switches to switch off Warnings and Information. You can filter with these however you wish.

	Larguage English v @ packages2.thir.org
Results (4) Fatals Errors Warnings Information	
1 [["resourceType": "Bundle", 1 "id": "52/06431943042abce6c00", "type": "collection", 5 "entry": [[6]	Error Wrong Display Name 'Blood pressure panel' for http://loinc.org#65354-9. There Line: 278, Col:10 'Blood pressure panel with all children optional'
1 "resource": [] 1 "resource": []	Error Wrong Display Name 'Blood pressure panel' for http://loinc.org#85354-9. There Lime: 152, are no valid display names found for language(s) 'en'. Default display is Coli0 'Blood pressure panel with all children optional'
<pre>14] 15 }, 16 ************************************</pre>	Error Coverage.relationship: minimum required = 1, but only found 0 (from Line: 405, http://hl7.org/fhir/us/qicore/StructureDefinition/qicore-coverage[6.0.0)
20 { 21 'url': 'ombCategory', 7 'vulteColing': { 23 'system': 'urn'(alf2.16.840.1.113883.6.238", 24 'code': '1002-5', 25 'dislpd'', 'American Indian or Alaska Mativa',	Errer Constraint failed: us-core-15: 'Member Id in Coverage.identifier or Line: 405, Coverage.mubscriberId SHALL be present' (defined in http://hl7.org/fhir/us/core/StructureDefinition/us-core-coverage)
27 27 28 4 4 50 51 52 53 54 54 54 54 54 54 54 54 54 54	
<pre>35 { "url: "http://hl7.org//hir/us/core/StructureDefinition/us-core-ethnicity", 35 ************************************</pre>	
<pre>f 40</pre>	

Image: Validation Results – Filtered

- 12. To resolve any Fatals, Errors, Warnings, or Information users can do one of the following
 - a. Edit in MADiE
 - i. Users would navigate back to MADiE Test cases.
 - ii. Edit the JSON.
 - iii. Then delete the JSON in the HL7 validator code text area.

- iv. Complete Steps 6-11 to see how the new JSON validates.
- v. Continue to repeat these steps until your JSON is in a satisfactory state.
- b. Edit in the validator
 - i. Scroll up to the HL7 validator code text area.
 - ii. Find the line of JSON to change and make your updates.
 - iii. Click "Validate" to see how the updates to the JSON validate.
 - iv. Repeat these steps until your JSON is in a state you are happy with.
 - v. Select all of the JSON in the HL7 validator code text area and copy it.
 - vi. Navigate back to MADiE.
 - vii. Replace the test case JSON with the copied JSON.
 - viii. Save the MADiE Test Case.



Image: MADiE Test Case Edit – Save Button