

Integration Specification

Renal Association

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Contacts

Customer Info

Info	Detail
Website	https://renal.org/ , https://www.patientview.org/

Contacts

Primary Technical Contact?	Name	Email
Y	Tim Whitlock	Tim.Whitlock@renalregistry.nhs.uk
N	George Swinnerton	George.Swinnerton@renalregistry.nhs.uk

Support

Purpose	Notes	Details
Updates	Receive technical notices and developer announcements	Developer blog
	Receive updates about PKB server status	PKB status
	Receive updates about PKB news and events	PKB company blog PKB website and mailing list
Questions	Email this distribution list if you have a question about how to use our API correctly	integrations@patientsknowbest.com
Problems / Config changes	Raise a support ticket to report an error with our system, or to request a change to your interface configuration	help@patientsknowbest.com

Overview

This scope of the project is to migrate the existing Renal Patient View (RPV) platform to PKB for all existing patients and then all new patients.

Hospitals send data to the Renal Association (RA) registry database which is used as a source for the Renal Patient View platform and smartphone application. 74 trusts send data to the renal association database.

The Renal Association schemas are here:

- <https://github.com/renalreg/ukrdc-pv/blob/master/Schema/UKRDC-PV.xsd> -
- <https://github.com/renalreg/ukrdc/tree/master/Schema>

Phase 1

1. All patients added into the 'Renal Research' organisation using 'Renal Research' organisation HL7 credentials. This is to enable patients to be available for research by default rather than via an ad hoc manual process.
 - A one time load of all existing patients followed by,
 - An ongoing feed of new patients.
 - Demographics only
 - Email excluded
 - Only MSH and PID segments. I.e. no allergies/diagnosis/medications.
2. All patient data loaded per renal site using HL7 partner credentials. An organisation will be created on PKB representing each of the RA sites ~74 in advance. Data will be tagged by sending site (site determined by provided MSH-4 alias).
 - A one time load of all historical data for patients followed by,
 - An ongoing feed of new / updated data. This should include marking a patient deceased.

Data in scope for data loaded per renal site:

- Demographics (ADT^A28).
 - Email excluded initially. Note, this should be reviewed after each site engagement. If sites can include verified / reliable emails in their file transfer to Renal Association then Renal Association should include the email in messaging to PKB from that point.
 - ZRX medication segments included where available. No coding will be sent as this is not available in source files. See **Risk/Issue 1**
 - DG1 diagnosis segments included where available. See **Risk/Issue 1**
 - National identifiers will always be sent. Correct AA/TC will be sent in accordance with supported ranges.
<http://dev.patientsknowbest.com/home/hl7-api/identifiers#TOC-National-identifiers>

- Lab Test Results (ORU^R01).
 - The source PV data doesn't come in as orders so Renal Association artificially creates the ORU results. Thus it is highly unlikely there will be any overlap in lab order ids from Renal Association versus a trust lab feed.
 - PV has a set of local codes, these codes will be mapped to PKB supported LOINC codes. See [Appendix A](#).
 - Renal Association will apply standardised units to their test results. See [Appendix A](#).

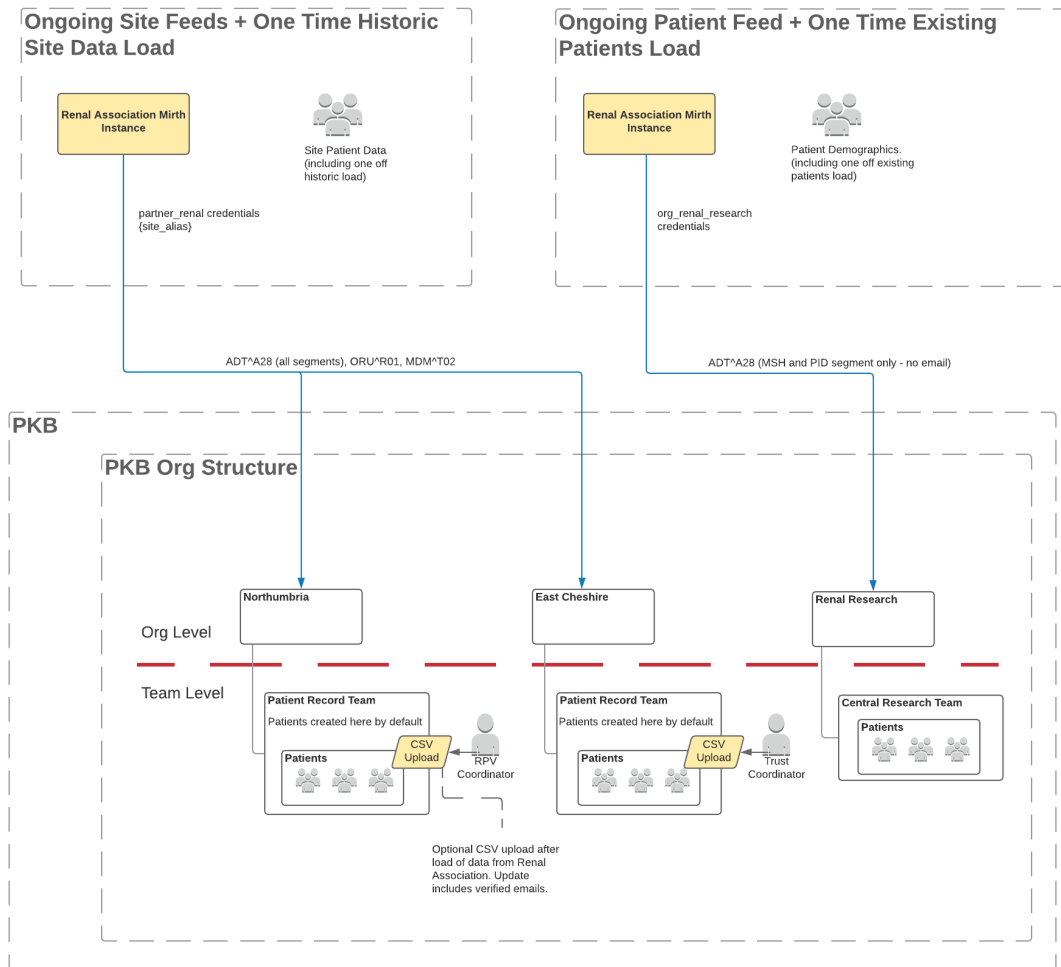
- Measurements (ORU^R01).
 - Pulse
 - Weight
 - Height
 - BP Systolic / Diastolic

- Documents (MDM^T02) - Letters.
 - Post clinic letters
 - GP correspondence
 - Mass letters e.g. a letter warning about COVID.
 - Filename with extension should be included. For example, a PDF will be shown inline without the patient having to download the file, but only if the filename ends with ".pdf".

- My Conditions Careplan (MDM^T02). HTML CarePlan. Note: the MyConditions Careplan may be superseded with a PKB careplan.
 - Transplant status.
 - List of NHS numbers sent to NHSBT.
 - NHBT send transplant status.
 - RRT status
 - RRT status. E.g. dialysis. Calculated result by the renal team, derived from data sent through.

Below is a visual representation of the above structure with Northumbria and East Cheshire as example RA sites.

RENAL ASSOCIATION DEPLOYMENT



Phase 2

- TBD....
- At a high level phase 2 will be organisations (including Renal Association) pulling data that has been loaded into PKB using APIs. This would be for research purposes. Likely pulling data based on patients in the 'Renal Research' organisation.

Notes

#	Description
1	Source IP Addresses (based on current implementation ideas)

	<p>Production 10.38.181.68 Staging 10.38.181.84 Dev 10.38.181.123 Desktops/Dev 62.255.13.162</p> <p>Update 20/01/21 - Renal Association confirmed they can access production endpoint and firewall rules are in place.</p>
2	<p>13/01/2021 - Weekly meeting. <u>New patients</u>.</p> <p>Agreement reached on creation of new patient records. The renal customer site will continue to add new patients to the files transferred to the Renal Association. Renal Association will identify the new record and send it to PKB as an ADT^A28. The presence of a record in the file transfer will provide the necessary basis of consent to add the patient record. Renal Association and PKB will process any data that is sent. It will be the responsibility of the trust to include or not include patients that they wish to be processed. PKB will not replicate the functionality flag 'Add to PV' that is in current PatientView. This is deemed to be a flawed process that would require manual patient record creation.</p>

Risk and Issues

#	Description
1	<p>There is a risk if the customer site also sends their own demographics A28/A31 feed at some point (or already do) with separate diagnosis, medication information then the feeds will end up overwriting each other's data.</p> <p>See http://dev.patientsknowbest.com/home/hl7-api/connecting-hl7-to-pkb/partner-connections#TOC-Considerations</p> <p>Update 11/09 - diagnosis and medications from renal association are usually - renal specific plus occasionally some tightly related. They do not have the full set of diagnosis / medications recorded on the PAS hence contention between a PAS and Partner feed is realistic.</p>
2	<p>Data point IDs. RA should reference partner considerations here: http://dev.patientsknowbest.com/home/hl7-api/connecting-hl7-to-pkb/partner-connections#TOC-Considerations.</p>
3	<p>Patients with multiple national identifiers. E.g. NHS and CHI. A patient record can have multiple national identifiers. These can be supplied via the HL7 feed. An appropriate AA/TC should be sent for each value. If a patient has an NHS and CHI for instance an A28/A31 should always include both....this prevents two records being created..one with NHS...one with CHI for the same person. http://dev.patientsknowbest.com/home/hl7-api/identifiers#TOC-National-identifiers</p>
4	<p>Rather than deltas. PV traditionally resends the last x months when they identify a change has occurred. I.e. now...going back 4 weeks. Optionally can extend that back further.</p> <p>Update 25/11/20 - Renal Association recognises this model will result in many unclear email notifications to the patient (i.e. resending the same data). Renal Association will endeavour to move away from this model but need to re-test.</p> <p>Update 6/01/20 - Renal Association confirmed that they will only send new or updated data. They need to check the behaviour with an A28.</p>

Integration Design

Architecture

Option	Details	Select	In-house?
Customer	<p>A Customer interacts with PKB APIs directly, using credentials issued to the organisation.</p> <p>A Customer is normally an organisation providing healthcare directly to patients, and will have user accounts to the web interface.</p> <p>A Customer is responsible for managing messaging issues. For example, the Organisation Administrator is responsible for manually reviewing queued HL7 messages.</p>	X	N/A
Partner	<p>A Partner integration interacts with PKB APIs on behalf of a Customer. The Partner must first be granted an identifier by PKB. This is a prerequisite to interacting with the APIs.</p> <p>Subsequently, the Partner can interact with PKB APIs if and only if a Customer (organisation or team) chooses to grant access. The Partner will have a level of access bounded by the Customer's level of access.</p> <p>For example, if a team grants access to a Partner, the Partner will not be able to view Patient data which was not available to the granting team.</p>	X	
App (incl. SSO)	<p>An App integration interacts with PKB APIs on behalf of a registered PKB user. The App must first be granted an identifier by PKB. This is a prerequisite to interacting with the APIs.</p> <p>Subsequently, the App can interact with PKB APIs if and only if a user chooses to grant access.</p> <p>This is the appropriate architecture for SSO implementations.</p>		

Connectivity Information

Overview

Colour any box that applies

	Customer	Partner		App
HL7 Messaging	HTTP basic; Username / Password (org_)	HTTP basic; Username / Password (partner_)		N/A
REST (FHIR/Custom)	N/A	OAuth2; System Client (Tethered Token)	OAuth2; System Client	OAuth2; User Client

Credentials

Environment: Sandbox

HL7

<https://sandbox.patientsknowbest.com:7443/services/hl7>

Customer

Username: org_renal_research	
Password: testing	
Issued on:	
Name	Renal Research
<u>Whitelisted IP(s)</u>	N/A for sandbox
<u>Interface default time zone</u>	Europe/London
Default team code	Patient records team
<u>Soft-matching</u>	none
<u>NHS number status checking</u>	no
<u>Auto create</u>	no

Partner

Username: partner_renal
Password: testing

Issued on: 2020-09-17	
Name	Renal Patient View
Whitelisted IP(s)	N/A for sandbox
Interface default time zone	Europe/London
Partner grant (defaults)	
Default team code	Dependent on granting org
Soft-matching	none
NHS number status checking	no
Auto create	yes
Partner grants	
renal_site1	Renal Association Site 1 [RAS1]
renal_site2	Renal Association Site 2 [RASite2]
renal_site_scot	Renal Assoc Scotland Site Test Team [rascot]
renal_site_ni	Renal Assoc N Ireland Site Test Team [ranist]
renal_site3	Renal Assoc 2021 Site 3 Test Team [ra2021s3t]
renal_site4	Renal Assoc 2021 Site 4 Test Team [ras4t]
renal_site5	Renal Assoc 2021 Site 5 Test Team [ras5t]
renal-site6	Renal Assoc 2021 Site 6 Test Team [rass6t]
re001	Southmead Renal Unit (Test)
crut	Canterbury Renal Unit (Test)
brut	Basingstoke Renal Unit (Test)
srut	Stafford Renal Unit (Test)

Test Site Logins

<https://sandbox.patientsknowbest.com>

Org	Team	User Type	Username	Password
Renal Association Site 1 [<RAS1>]				
	Patient Records Team		<patientview_prt>	

		Patient	charlotte.nelson.1@pkbtest.com	P4t!3ntv13w
		Team Professional	joelinton9@pkbtest.com	6zsdBi0rKjinOg b!
Renal Association Site 2 [<RASite2>]				
Patient Records Team [<renal_site2>]				
		Patient	sara.perez.1@pkbtest.com	P4t!3ntv13w
		Team Professional	acarroll7@pkbtest.com	Renal2020!
Renal Association Site 3 [<ra2021s3t>]				
Patient Records Team [<ras3tt>]				
		Patient	benrahma9@pkbtest.com	Renal2021!
		Team Professional	sinclair8@pkbtest.com	Renal2021!
Renal Association Site 4 [<ras4t>]				
Patient Records Team [<ras4tt>]				
		Patient	donnieneyen@pkbtest.com	Renal2021!
		Team Professional	sseagal@pkbtest.com	Renal2021!
Renal Association Site 5 [<ras5t>]				
Patient Records Team [<ras5tt>]				
		Patient	sgaya6@pkbtest.com	Renal2021!
		Team Professional	steale3@pkbtest.com	Renal2021!
Renal Assoc Scotland Site Test Team [<rascot>]				
Patient Records Team [<rascot>]				
		Patient	jenas7@pkbtest.com	Renal2021!
		Team Professional	beresford8@pkbtest.com	Renal2021!
Renal Assoc N Ireland Site Test Team [<ranist>]				
Patient Records Team [<ranistt>]				
		Patient	blanchflower4@pkbtest.com	Renal2021!
		Team Professional	milburn9@pkbtest.com	Renal2021!
Southmead Renal Unit (Test) [<smrut>]				

Patient Records Team [<smrtt2021>]			
	Team Professional	drossertest@pkbtest.com	Renal2021!
Canterbury Renal Unit (Test) [<crut>]			
Patient Records Team [<crtt2021>]			
	Team Professional	pfandangotest@pkbtest.com	Renal2021!

API Usage

HL7 Messaging

Specs: <http://dev.patientsknowbest.com/home/hl7-api>

Complete one box per trigger event

Message	ADT^A28 Renal Site Feed
Trigger	New patient created into source system
Purpose	To create the new patient in PKB
Details	
Corrective workflow	<ul style="list-style-type: none"> A31 to update the demographics
Risks / issues	See Risk/Issue 1
Client-side filtering	
Example	<pre>MSH ^~\& Renal Association renal_site2{renal_site2} HL7API PKB 20210210002302 ADT^A28^ADT_05 57dc6bee-fea2-449 e-bbaa-856e1d6c9510 P 2.7 EVN 20210210002302 PID 5765579183^^^NHS^NH Nunez^Matthew^^^Mr. 20000101 M Campbell Expressway^^Port Danielle^COUNTY^BS10 5NB^GB PV1 V Renal DG1 1000165718:0 ^Diabetic nephropathy^ F DG1 1000165718 80^^EDTA F </pre>

	ZRX ^^^20200102000000 ^Bumetanide 1mg tablet^^^^ ^ ^^^^^ ^^^^^
	ZRX ^^^20191130000000 ^Zomorph 10mg m/r capsule^^^^ ^ ^^^^^ ^^^^^
	ZRX ^^^20191130000000 ^Prednisolone 5mg tablet^^^^ ^ ^^^^^ ^^^^^
	ZRX ^^^20200102000000 ^Salbutamol 100micrograms breath-actuated dry powder inhaler^^^^ ^ ^^^^^ ^^^^^
	ZRX ^^^20200102000000 ^Macrogol ointment^^^^ ^ ^^^^^ ^^^^^
	ZRX ^^^20200102000000 ^MST Continus 10mg m/r tablet^^^^ ^ ^^^^^ ^^^^^
	ZRX ^^^20200102000000 ^Beclomet diprop+formoterl fumarate dihyd 100mcg/6mcg pdr inh^^^^ ^ ^^^^^ ^^^^^
	ZRX ^^^20190711000000 ^Pregabalin 150mg capsule^^^^ ^ ^^^^^ ^^^^^
	ZRX ^^^20080512000000 ^Finasteride 5mg tablet^^^^ ^ ^^^^^ ^^^^^
	ZRX ^^^20191130000000 ^Apixaban 5mg tablet^^^^ ^ ^^^^^ ^^^^^
	ZRX ^^^20080630000000 ^Allopurinol 100mg tablet^^^^ ^ ^^^^^ ^^^^^
	ZRX ^^^20150625000000 ^Pregabalin 75mg capsule^^^^ ^ ^^^^^ ^^^^^
	ZRX ^^^20180806000000 ^Mycophenolate mofetil 500mg tablet^^^^ ^ ^^^^^ ^^^^^
	ZRX ^^^20180806000000 ^Mycophenolate mofetil 500mg tablet^^^^ ^ ^^^^^ ^^^^^
	ZRX ^^^20190822000000 ^Movicol oral powder^^^^ ^ ^^^^^ ^^^^^
	ZRX ^^^20190822000000 ^Docusate sodium 100mg capsule^^^^ ^ ^^^^^ ^^^^^
Go-live dates	

Message	ADT^A28 - Renal Research Organisation
Trigger	Existing / New patient loaded into research organisation
Purpose	To add the patient to the Renal Research Organisation for future research purposes
Details	
Corrective workflow	<ul style="list-style-type: none"> • A31 to update the demographics

Risks / issues	See Risk/Issue 1
Client-side filtering	No allergies, diagnosis, medications should be sent. Email should be excluded in the one time historic load (whilst email address reliability is determined)
Example	MSH ^~\& Renal Association Research HL7API PKB 20210210002302 ADT^A28^ADT_05 57dc6bee-fea2-449e-bbaa-856e1d6c9510 P 2.7 PID 5765579183^^^NHS^NH Nunez^Matthew^^^Mr. 20000101 M Campbell Expressway^^Port Danielle^COUNTY^BS10 5NB^GB
Go-live dates	

Message	ORU^R01 Test Results
Trigger	Renal Association artificially create lab results from their data feeds.
Purpose	To add results to PKB
Details	-
Corrective workflow	<ul style="list-style-type: none"> ORU^R01 again with corrected data
Risks / issues	None
Client-side filtering	
Example	
Go-live dates	

Message	ORU^R01 Measurements
Trigger	Renal Association send measurements extracted from their source files.
Purpose	To add measurements to PKB
Details	-
Corrective workflow	N/A
Risks / issues	None
Client-side filtering	
Example	

Go-live dates	
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Message	MDM^T02 CP
Trigger	Renal Association collate a set of information and send as HTML Careplan 'MyConditions'.
Purpose	E.g. To add transplant status information from NHBT.
Details	-
Corrective workflow	<ul style="list-style-type: none"> MDM^T02 again with same identifier
Risks / issues	
Client-side filtering	
Example	<pre>MSH ^~\& Renal Association renal_site2{renal_site2} HL7API PKB 20210210002306 MDM^T02 385f1c18-f521-4308-9dcf- 5f74f471e9bf P 2.7 PID 5997194515^^^NHS^NH Huerta^Matthew^^^Mr. 20000101 M Mariah Tunnel^^Adamsfurt^COUNTY^BS10 5NB^GB TXA CP 20210130214415 RTD01/5997194515 AU OBX ED ^MyConditions^ ^TEXT^HTML^Base64^PFRBQk xFPgo8VFI+PFREPlJSVCBTdGF0dXM6UEQ8L1REPjxURD48L1 REPjwvVFI+CjxUUj48VEQ+PC9URD48VEQ+PEEgaHJlZj0iaH R0cDovL3d3dy5raWRuZXlwYXRpZW50Z3VpZGUb3JnLnVrL3 BkLnBocCI+RnJvbSB0aGUgS2lkbnV5IFBhdGllbnQgR3VpZG UsIHdpdGggYW5pbWF0aW9uczwwQT48L1REPjwvVFI+CjxUUj 48VEQ+PC9URD48VEQ+PEEgaHJlZj0iaHR0cDovL2VkcmluLm 9yZy9yZW4vZWRYZW4taW5mby9wZXJpdG9uZW50Z3VpZGUb lzLyI+RnJvbSBFZjJFTjwvVFI+CjxUUj48VE Q+PC9URD48VEQ+PEEgaHJlZj0iaHR0cDovL2VkcmluLm9yZy 9yZW4vZWRYZW4taW5mby9kaWV0LWluLXJlbnFSLWZhaWx1cm UvIj5EaWV0IGZvcilBwZW9wbGUgd210aCBraWRuZXkgZGZlZm FzZTwvQT48L1REPjwvVFI+CjxUUj48VEQ+PC9URD48VEQ+PE EgaHJlZj0iaHR0cHM6Ly93d3cua2lkbnV5Lm9yZy51ay93aG F0LWlzLXB1cm10b25lYWwtZG1hbHlzaXMiPkluZm8gb24gcG VyaXRvbmVhbCBkaWVseXNpcyBmcm9tIHRoZSBOS0Y8L0E+PC 9URD48L1RSPgo8VFI+PFREPlByaW1hcnkgRGlhZ25vc2lZoi A8L1REPjxURD48L1REPjwvVFI+CjxUUj48VEQ+PC9URD48VE Q+PEEgaHJlZj0iaHR0cDovL3d3dy5lZHZJlbi5vcmevcGFnZX MvZWRYZW5pbmZvL2NrZC1jaHJvbmljLXJlbnFSLWZhaWx1cm UtYW5kLWl0cy1wcm9ncmVzc2lvi5waHAiPkNocm9uaWMgcmlu VUyYwZmZpbHVyZSAoRWRSRU4pPC9BPjwvVEQ+PC9UUj4KPF RSPjxURD48L1REPjxURD48QSBocmluPSJodHRwOi8vd3d3Lm VkcmluLm9yZy9yZWdlcy9lZHZJlbnluZm8vYmxvb2QtcHJlc3 N1cmUtYW5kLWtpZG5leS1kaXNlYXNlLnBocCI+Qmxcv2QgcH Jlc3N1cmUgYW5kIGtpZG5leSBkaXNlYXNlICFhZjZFTikgIC AgICAgICAgICAgICAgQmxcv2QgcHJlc3N1cmUgYW5kIGtpZG</pre>

	5leSBkaXNlYXNlPC9BPjwvVEQ+PC9UUj4KPFRRSPjxURD5PdG hlciBEaWFnbm9zaXM6PC9URD48VEQ+PC9URD48L1RSPgo8L1 RBQkxFPgo= PV1 V Renal
Go-live dates	

Message	MDM^T02 Document
Trigger	Renal Association send a clinic letter
Purpose	To add transplant status information from NHBT.
Details	-
Corrective workflow	<ul style="list-style-type: none"> MDM^T02 again with same identifier
Risks / issues	None
Client-side filtering	
Example	<pre>MSH ^~\& Renal Association renal_site3{renal_site3} HL7API PKB 20210210002312 MDM^T02 660bc845-6ffe-4f85-b1a7- 671238837321 P 2.7 PID 5396187778^^^NHS^NH Reyes^Sara^^^Mrs. 20 000101 F Alexis Hills^^Shellychester^COUNTY^BS10 5NB^GB TXA CL 20201208000000 1000289874:160738 5600000 AU OBX ED ^TEXT^PDF^Base64^JVBERi0xLjcKcKjEgMcbvY mogICUgZW50cnkgcG9pbmQKPDwKICAvVHlwZSAvQ2F0YWxvZ wovUGFnZXMGmIAwIFIKPj4KZW5kb2JqCgoyIDAgb2JqCjw8C iAgL1R5cGUGL1BhZ2VzCi9NZWRpYUJveCBbIDAqMCAyMDAgM jAwIF0KICAvQ291bnQgMQogIC9LaWRzIFsgMyAwIFIgXQo+P gplbmRvYmoKCjMgMcbvYmoKPDwKICAvVHlwZSAvUGFnZQogI C9QYXJlbnQgMiAwIFIKICAvUmVzb3VyY2VzIDw8CiAgICAvR m9udCA8PAogICAgICAvRjEgNCAwIFIGCiAgICAvPgogID4+C i9Db250ZW50cyA1IDAqUGo+PgplbmRvYmoKCjQgMcbvYmoKP DwKICAvVHlwZSAvRm9udAogIC9TdWJ0eXB1IC9UeXB1MQogI C9CYXNlRm9udCAvVGltZXMtUm9tYW4KPj4KZW5kb2JqCgo1I DAgb2JqICAlIHhZ2UgY29udGVudAo8PAogIC9MZW5ndGggN DQKp4Kc3RyZWFTcKJUCjcwIDUwIFRECI9GMSAxMiBUZgooS GVsbG8sIHdvcmxkISkgVGokRVQKZW5kc3RyZWFTcmVuZG9ia goKeHJlZgowIDYKMDAwMDAwMDAwMCA2NTUzNSBmIAowMDAwM DAwMDEwIDAqMDAwIG4gCjAwMDAwMDAwNzkgMDAwMDAgbiAKM DAwMDAwMDE3MyAwMDAwMcbuIAowMDAwMDAwMzAxIDAqMDAwI G4gCjAwMDAwMDAzODAgMDAwMDAgbiAKdHJhaWxlcg08PAogI C9TaXplIDYKICAvUm9vdCAxIDAqUGo+PgpdZGFydHhyZWYKN DkyCiUlRU9G PV1 V Renal </pre>

Go-live dates	
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Checklist

A selection of checklists; delete as applicable.

HL7: Demographics

Customer has acknowledged, and where relevant tested, that...

Issue	Comments
...an A28 and A31 are processed identically.	
...patients are always created into a team. A creation triggered at the org level will create the patient into the default team for that org. Updates to a patient sent from a different team will update the demographics but do not add the patient to that team.	
...the HL7 Null Value ("") must be used during demographic updates to remove an existing field. Blank fields during an update will remain unmodified.	
...PKB does not yet support merges.	
...soft-matching behaves differently for demographic updates. NHS status number is used. See the docs for details.	
...MSH-7 is inspected and compared to the last modification timestamp of the patient's demographics. Stale demographic updates will be silently ignored.	
... the HL7 API has a subset of email manipulation functionality. For example, a first email address cannot be added to an existing medical record.	
...the auto create feature determines whether patient records will be created via non-demographic messages. Disabled by default, this means non-demographic messages will not create new medical records.	
...there are 3 flavours of "NHS number": England & Wales / Scotland / NI. PKB requires the correct AA/TC values to be set and will reject incorrect values based on these.	

HL7: Laboratory results

Customer has acknowledged, and where relevant tested, that...

Issue	Comments
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<p>...the content patterns provided match the content patterns supported by PKB.</p> <p>http://dev.patientsknowbest.com/home/hl7-api/messages/oru-r01/laboratory#TOC-Content-patterns</p>	
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HL7: Measurements

Customer has acknowledged, and where relevant tested, that...

Issue	Comments
<p>...all the measurements they wish to send have had the correct SNOMED code confirmed by PKB and are documented in this Integration Specification.</p>	

HL7: Partner connections

Customer has acknowledged, and where relevant tested, that...

Issue	Comments
<p>...data flows only when authorisation is granted. Consider where the first authorisation will come from after going live.</p>	
<p>...HL7 messages are queued for owning Organisation Administrator. There is no Organisation Administrator for the Partner.</p>	
<p>...the data point ID namespace is shared with the granting Organisation.</p>	

HL7: General

Customer has acknowledged, and where relevant tested, that...

Issue	Comments
<p>...PKB has support for code sets. The correct code sets have been supplied and checked by the Organisation Administrator.</p>	
<p>...if this is a gainshare project where HL7 credentials are shared with Synertec then the soft matching</p>	

check will apply to both feeds. Synertec can only support postalCode typically. Postcode does change frequently.	
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General

Issue	Comments
Testing overview	<Summarise testing performed by customer>
Connection monitoring	<Summarise customer's ability to monitor the health of the interface>
Retries & error handling	<Summarise customer's approach to message retries and error handling>
Misc support issues	<Summarise any additional miscellaneous support issues>

Appendix A - LOINC Mapping

Renal Test Code	LOINC	Units
acr	14959-1	mg/mmol
adjustedcalcium	19072-8	mmol/L
albumin	1751-7	g/L
alp	6768-6	U/L
alt	1742-6	U/L
amy	1798-8	U/L
ast	1920-8	U/L
bili	14631-6	umol/L
calcium	1994-3	mmol/L
cholesterol	14647-2	mmol/L
creatinine	14682-9	umol/L
crp	1988-5	mg/L
egfr	69405-9	ml/min/1.73m2
ferritin	2276-4	ng/mL or ug/L
ft3	14928-6	pmol/L
ft4	14920-3	pmol/L
ggt	2324-2	U/L
glucose	14749-6	mmol/L
hb	718-7	g/L
hba1c	59261-8	mmol/mol
hbv	13952-7	<i>N/A - ST data type</i>
hco3	1959-6	mmol/L
hct	4544-3	%
hcv	16128-1	<i>N/A - ST data type</i>
hdl	14646-4	mmol/L
inr	6301-6	<i>No unit sent.</i>
iron	14798-3	mmol/L
ironsat	2502-3	%
ktv	13451-0	ratio
ldh	2532-0	U/L
ldl	39469-2	mmol/L
lhratio	44915-7	ratio
lipase	3040-3	U/L
lithium	14334-7	mmol/L

magnesium	2601-3	mmol/L
neutophils	751-8	billion/L or 10 ⁹ /L
pcr	34366-5	mg/mmol
phosphate	14879-1	mmol/L
platelets	777-3	10 ⁹ /L
potassium	2823-3	mmol/L
psa	2857-1	ng/mL
pth	14866-8	pmol/L
ret-he	42810-2	pg
sirolimus	29247-4	ng/mL
sodium	2951-2	mmol/L
t4	3024-7	ng/L
tacrolimus	11253-2	ng/mL
testosterone	2986-8	ng/dl
tg	2571-8	mg/dL
tpmt	91141-2	mU/l
transferrin	3034-6	%
trop	6598-7	ng/mL
tsh	3016-3	mU/L
ualbumin	6942-7	mg/L
ucreatinine	14683-7	mmol/L
updipstick	20454-5	<i>N/A - ST data type</i>
uprotein	2888-6	g/L
urate	14933-6	mmol/L
urea	14937-7	mmol/L
urr	54456-9	ratio
vitb12	2132-9	ng/L or pg/mL
vitd	46269-7	nmol/L
wbc	6690-2	billion/L or 10 ⁹ /L

History

Date	Attendees	Notes
2020-11-18	David, Tim, Darryl, Retha	Tim reported a high number of 'patient not found' messages in testing. He is going to check this scenario but requested autocreate is enabled to help alleviate these.

		<p>Tested thus far:</p> <p>ADT</p> <ul style="list-style-type: none">- diagnosis- medications <p>ORU</p> <ul style="list-style-type: none">- measurements- lab results <p>MDM</p> <ul style="list-style-type: none">- care plan (transplant status)- care plan (care view) <p>Not tested yet:</p> <ul style="list-style-type: none">- PDF letters (MDM^T02)- Historical data load.
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