Integrating with Outcomes Star Online

Setup Guide

Version 2.1

Date: 8/9/2023

1 Introduction

The purpose of this guide is to assist development teams in the use of the Star Online API functionality.

Please note the Glossary of Terms at the end of the document which explains the meaning / use of the data fields as well as other useful information.

2 Setup Process

Analysis

You will initially need to think about the different Endpoints available in SOL to send and receive data and work out how best they will fit into your current workflow and business processes.

For example – when a new Patient record is created on your Primary System, do you want your Practitioners to press a button on your Primary system (if that customisation is possible for you) that will then trigger the **POST /api/patients** endpoint to create the new record in SOL. Or do you want to setup the API so that it will just run at a set time (e.g. daily) and use the **POST /api/patients** endpoint to create new records in SOL as a batch?

Another example could be the export of latest stars created in SOL - **GET /api/patients/{id}/latest-stars**, how often do you want to tell your system to export these PDF files? Where are you going to save them in your system and how are your users going to access them?

A third question for consideration if you are intending to use the **POST /api/patients** endpoint is whether you are going to use the Duplicate check endpoint- GET **/api/patients-duplicate** as well? There is more information on this process in a later section in Section 6 of this guide.

Test Environment

When you are ready to start development, there is a Swagger site available online where you can view the Request body required by each endpoint and also view the Response codes and their various meanings.

The Triangle support team will provide you with access to a developer sandbox where you will have a test account that you can use to send data to / export data from. This test account will have an Integration Lead user licence – you will need to decide which email address will be used as the Integration lead. This person will be able to create the API key(s). See more information on this process in Section 3 of this document.

The Triangle Support Team will need to setup this Integration Lead user. They will also be able to setup test Account Lead and Practitioner accounts on this test account so that you can fully test the processes related to **POST /api/patients.** The document titled **Test Data Guide** guides you through the steps needed to setup your sandbox account for testing.

Who should be the Account Lead on the Sandbox at my organisation?

It probably makes the most sense to have the person who is leading the API integration project at your organisation assigned to the Account Lead role on the SOL Sandbox. This may not be the same person who is your Account Lead on the live SOL site. This Account Lead will need some knowledge of SOL as they will need to add some test data. But they will also be able to add Practitioner users to the Sandbox environment and these users will be able to assist with data entry and testing.

Who should be the Integration Lead at my organisation? (Sandbox & Live)

If you have an in-house tech team that develop your Primary System then the person responsible for managing the API development should have this Integration Lead role on SOL. If you use a 3rd party provider for your Primary System then we would recommend that the person in your organisation who is the primary contact for your software provider should take on this role.

Go Live

When you are ready to go live, the Triangle Support Team will need to add the Integration Lead user to your live account so that this user can then generate a new API key. You will also need to update the Request URL to point at the live server.

Import SOL Patient IDs into your Primary system

You will need to be able to store the SOL Patient ID in your system as a Foreign Key in your Patient records to be able to successfully use the Endpoints. Use the **GET /api/patients** endpoint for this task.

Import SOL Practitioner IDs into your Primary System

This is optional but if you wish to be able to enable your practitioners to manually post new patients into SOL or edit existing Patient records in SOL via the API then you need this data.

Use the **GET /api/practitioners** endpoint for this task.

Note that having knowledge of the Practitioner ID will also be useful if you wish to Request data in the following Endpoints which have an option to restrict the data returned by Practitioner Service assignment:

GET /**api/patients/{id}**

GET /api/patients

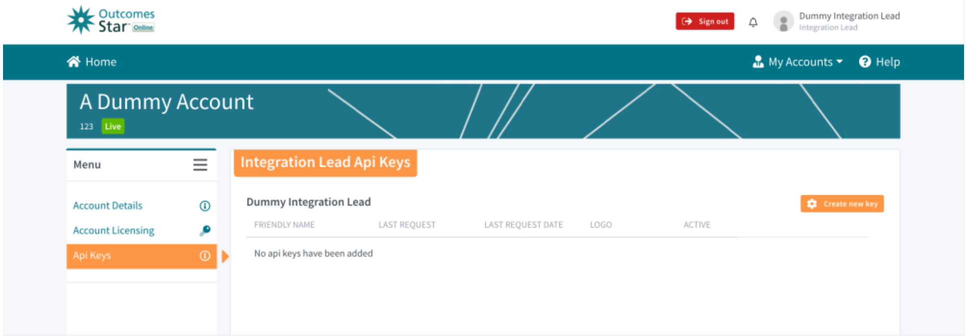
GET patients{id}/latest-stars

GET patients/{id}/all-stars

GET patients/{id}/star-summary-download

3 Generation and Use of API keys

The API keys are generated on SOL – Your organisation will be given a licence for the Integration Lead role by the Triangle Support Team. This IL user can then login to SOL and generate one or more keys for use in the API. If you are intending to setup multiple systems to integrate with the SOL API then we recommend that each system should use its own API key as this will make auditing and troubleshooting easier.



A Dummy Account

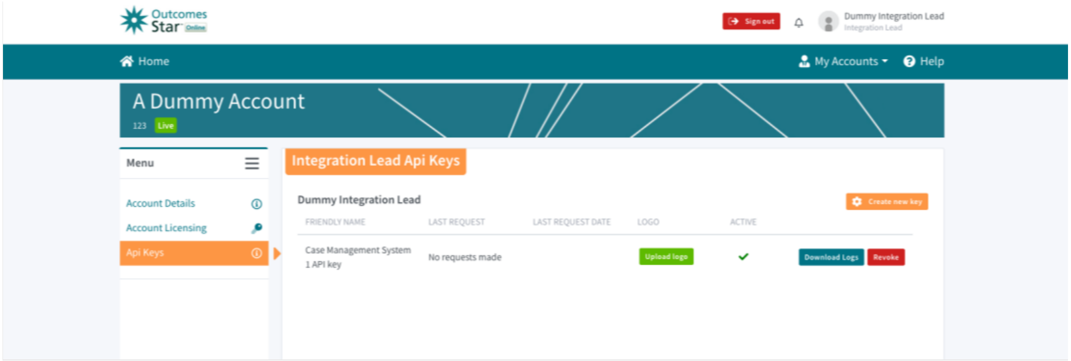
123 Live

Integration Lead Api Keys

Dummy Integration Lead

FRIENDLY NAME	LAST REQUEST	LAST REQUEST DATE	LOGO	ACTIVE
No api keys have been added				

Once you have generated and named the API key – you will then need to *save this securely elsewhere* as it will not be retrievable on SOL for security reasons.



A Dummy Account

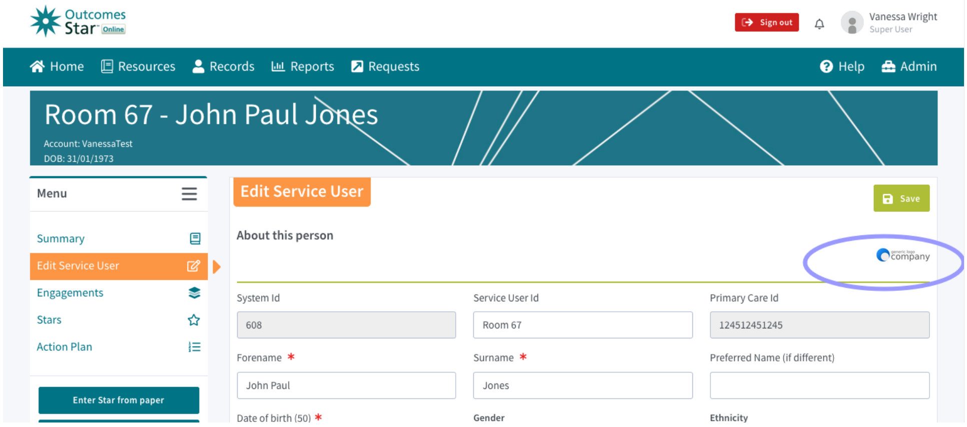
123 Live

Integration Lead Api Keys

Dummy Integration Lead

FRIENDLY NAME	LAST REQUEST	LAST REQUEST DATE	LOGO	ACTIVE	
Case Management System 1 API key	No requests made		Upload logo	✓	Download Logs Revoke

You can also then upload a logo for the software that will be integrating with SOL and this will then be displayed on the SOL Service User Details interface. Note also the **Download Logs** button – this is a useful auditing feature that enables you to download an extract detailing API activity. There is also a feature on this interface to **Revoke** a given API key if needed.



Room 67 - John Paul Jones

Account: VanessaTest

DOB: 31/01/1973

Edit Service User

About this person

System Id: 608

Service User Id: Room 67

Primary Care Id: 124512451245

Forename *: John Paul

Surname *: Jones

Preferred Name (if different):

Date of birth (50) *

Gender

Ethnicity

NOTE: If the staff member leaves who held the Integration Lead role and you wish to retain the existing API key(s) then you can overwrite their user record in SOL with the details of the new staff member and the existing API key(s) will remain active.

API Security - IP limiting

The API includes an optional feature that you can use to restrict access to the API by the IP address of your server that will be managing the integration.

When you create the API key you are prompted to enter an IP address. You can enter multiple IP addresses separated by a comma if needed. You can also leave it blank or enter a default value of a * which allows any IP address to make a valid request. Then whenever a request is made, we will make sure that it originated from an accepted IP address.

4 Consent permissions in SOL

In line with GDPR legislation, SOL has a consent feature that is managed at an Account Level by the Account Lead. When activated, this means that SOL requires the Service User to give consent before a record can be created.

When this feature is activated, the API will only create or edit an existing Patient record via the API if the Service User has actively given consent. On the endpoints:

PUT /api/patients/{id}

POST /api/patients

7

POST /api/patients/batch

The following data items are included in the Request body:

ConsentGiven (true/false)
ConsentGivenByPatientRepresentativeDetails (optional)

The ConsentGiven must = true for the endpoint to succeed. If ConsentGiven = false then a 400 (Bad Request) will be returned.

Please note, it your organisation's responsibility to ensure the process for obtaining and recording service user data is in line with the data privacy policies and legislation affecting your organisation, such as GDPR.

5 Troubleshooting and contacting the Support Team

Contacting SOL:

If you need any support with using the API please contact the Triangle Helpdesk support@staronline.org.uk

Please state clearly that you are part of the Integration pilot.

Correcting errors:

Generally the **PUT /api/patients/{id}** can be used to correct any errors in data that you may have sent to SOL. If you post a large amount of data to SOL incorrectly then you would need to contact the support team to arrange for a possible manual fix by our developers.

6 Description of Endpoints

Patients

Endpoint Name	**GET /api/patients/{id}**
Description	Use this Endpoint to return data about a specific Service User record.
Use Case(s)	Use this endpoint if you wish to extract data about a specific service user If you pass the Practitioner ID then the Total Number of Stars Finalised returned will only be a count of stars from the Services that this Practitioner is assigned to.
Request body	SOL Patient ID Practitioner ID - optional
Response body	PatientID Forename Surname ServiceUserID DateOfBirth ConsentGiven PatientUrl DateCreated Total Stars Finalised

Endpoint Name	**PUT /api/patients/{id}**
Description	This endpoint can be used to update existing Service User records in SOL.
Use Case(s)	If any edits to Service User records are made on the primary system to the data fields that are shared with SOL, then you can use this endpoint to send this updated data to SOL via

	the API. Note that you send all the fields related to the service user and they will all be updated in SOL. You should also use this Endpoint when you first start the integration to populate the Primary Care ID to existing Patient records in SOL.
Request body	PatientID ServiceUserID Forename Surname DateOfBirth Consent Given ConsentGivenByPatientRepresentativeDetails (optional) PractitionerID (Mandatory) PrimaryCareID

Endpoint Name	**GET /api/patients**
Description	Use this Endpoint to return a list of all Service Users
Use Case(s)	Use this endpoint if you wish import a large amount of data on all service users regarding their activity on SOL. If you pass the Practitioner ID then only Patients assigned to that Practitioner will be returned
Request body	Practitioner ID (optional) PageNumber PageSize OrderBy (None/ Forename/ Surname/ PrimaryCareID/ DOB/ DateCreated) OrderByDescending (True/False)
Response body	PageNumber PageSize TotalItems Items PatientId Forename Surname DateOfBirth DateCreated PrimaryCareId

	Service User ID Patient URL Consent given

Endpoint Name	**POST /api/patients**
Description	Use this Endpoint to post a new Service User record from your primary system to the SOL. The API will then return the SOL record ID and URL to access the new record in SOL. Note that with this Endpoint it will still be necessary to assign the correct Service to the new Patient in SOL. If this Endpoint is triggered manually by the Practitioner in your Primary System, the Endpoint will return a URL which you can then use to code a redirect for the Practitioner to SOL where they will be directed to the correct screen to enable the Service Assigment to happen. If they do not do this then the record will be saved with a status of Pending in SOL and only the Account Lead OR the practitioner in question will be able to retrieve the record and assign the Services to the new Patient as required.
Use Case(s)	The practitioner has created a new Service User record in their Primary system and they want to quickly be able to create a corresponding record in SOL. Once the new record in the primary system has been saved, the practitioner can press a button in their primary system (or this could be setup as an automated event) which will then automatically trigger the creation of the record in SOL and the Endpoint response will provide a link which, if then added to the primary system record, will allow the user to navigate directly from the record in the Primary system to the corresponding Service User record in SOL. (Note that if Single Sign On is not implemented the user will have to login first and then be redirected to the Service User record)
Request body	PrimaryCareId ServiceUserID Forename Surname DateOfBirth ConsentGiven (true/false) ConsentGivenByPatientRepresentativeDetails (optional) PractitionerId (mandatory)
Response body	PatientID

11

	PatientUrl

Endpoint Name	POST /api/patients/batch
Description	Use this Endpoint to post multiple new Service User records from your primary system to the SOL. The API will then return the new SOL record IDs and URLs to access the new records in SOL. Note that with this Endpoint it will still be necessary to assign the correct Service to the new Patient in SOL. The Account Lead or Practitioner in question will then need to login to SOL and deal with all these pending records and assign the Services to the new Patient records as required.
Use Case(s)	The practitioners have created new Service User records in their Primary system and they want to quickly be able to create a corresponding record in SOL. The API can be coded to periodically collect data of all new records on the Primary system and by use of this endpoint it will then automatically trigger the creation of the record in SOL and the Endpoint response will provide a link which, if then added to the primary system record, will allow the user to navigate directly from the record in the Primary system to the corresponding Service User record in SOL. (Note that if Single Sign On is not implemented the user will have to login first and then be redirected to the Service User record)
Request body	PrimaryCareId ServiceUserID Forename Surname DateOfBirth ConsentGiven (true/false) ConsentGivenByPatientRepresentativeDetails (optional) PractitionerId (mandatory)
Response body	PatientId (Guid) PatientUrl (string)

Patients Duplicate

Endpoint Name	**POST** /api/patients-duplicate
Description	Use this Endpoint by sending details of a Service User in the request body for the API to then check for potential matches already created in SOL and to then return data about these matching records in the response. The logic for matching records as potential duplicates is the same as the duplicate check on the SOL interface: Partial match forename + partial match surname + DOB match OR Exact match forename + partial match surname + DOB match OR Partial match forename + exact match surname + DOB match OR PrimaryCareID matches an existing record exactly and exists within the account
Use Case(s)	When creating a new Service User record in the Primary software, before you use the POST Patient Endpoint to create a new records in SOL you may first wish to check for potential duplicate records. The API will then search the SOL database and return the following data for any potential matches: You can then display this data to the end user within the primary software and they can choose to either select one of the matching records and link that to their record in the Primary software OR they can create a new record using POST Patient.

13

Request body	Forename (mandatory) Surname (mandatory) DateOfBirth (mandatory) PrimaryCareId (optional) ServiceUserID (optional)
Response body	PatientId PrimaryCareId PatientURL

14

Endpoint Name	**POST** /api/patients-extract/full-excel
Description	This endpoint can be used to return the Patients Extract of data in excel format- this is the same extract that is also available via the SOL admin interface. Different data is held on different sheets of the XLS – so you can use the Request body to select the sheets that you wish to have returned. You can also define the filename of the download in the Request body.
Use Case(s)	If you wish for your system to automatically retrieve the Full Data Extract for use in your reporting / BI system then you can use this endpoint to obtain the extract for retrieval from a location on the SOL server.
Request body	fileNameWithoutExtension IncludeAccountDetails IncludeAssociatedUsers IncludeAssociatedServices IncludeLicences IncludeServiceUsers IncludeStarEntries IncludeEngagements IncludeActionPlans IncludeNotes
Response body	ExtractDownload

Endpoint Name	**POST** /api/patients-extract/full-csv
Description	This endpoint can be used to return the Patients Extract of data in CSV format- this is the same extract that is also available via the SOL admin interface. Different data is held on different CSV files - so you can use the Request body to select the files that you wish to have populated with data as well as the filename of the zip file. Note that all 8 CSV files will always be returned in the zip file, they just may not all be populated according to your Request.

Use Case(s)	If you wish for your system to automatically retrieve the Full Data Extract for use in your reporting / BI system then you can use this endpoint to obtain the extract for retrieval from a location on the SOL server.
Request body	fileNameWithoutExtension IncludeAccountDetails IncludeAssociatedUsers IncludeAssociatedServices IncludeLicences IncludeServiceUsers IncludeStarEntries IncludeEngagements IncludeActionPlans IncludeNotes
Response body	ExtractDownload

Endpoint Name	**POST /api/patients-extract/service-and-star-excel**
Description	This endpoint can be used to return the Patients Extract of Service and Star data that is also available via the SOL admin interface as an Excel download. You can use the Request body to define which sheets of data you wish to have returned and also the filename of the download.
Use Case(s)	If you wish for your system to automatically retrieve the Service User Data Extract of services and stars for use in your reporting / BI system, then you can use this endpoint to obtain the extract for retrieval from a location on the SOL server.
Request body	Filenamewithoutextension IncludeServiceUsers IncludeStarEntries IncludeActionPlans
Response body	ExtractDownload

Endpoint Name	**POST /api/patients-extract/service-and-star-csv**

Description	This endpoint can be used to return the Patients Extract of Service and Star data that is also available via the SOL admin interface as a zip file of CSV files. You can use the Request body to define which CSV files you wish to have populated and also the filename of the download. Note that all 8 CSV files will always be returned in the zip file, they just may not all be populated according to your Request.
Use Case(s)	If you wish for your system to automatically retrieve the Service User Data Extract of services and stars for use in your reporting / BI system, then you can use this endpoint to obtain the extract for retrieval from a location on the SOL server.
Request body	Filenamewithoutextension IncludeServiceUsers IncludeStarEntries IncludeActionPlans
Response body	ExtractDownload

PatientsFHIR

We have 2 endpoints that use the FHIR (Fast Healthcare Interoperability Resources) specification to define the different data items sent to and from SOL. The mapping of the data items is as per the R4B data format, detailed as follows:

Identifier / Usual : PrimaryCareID

Identifier / Secondary: ServiceUserID

Name/ Family: FamilyName

Name/ Given: GivenNames

BirthDate : DateOfBirth (YYYY-MM-DD)

Endpoint Name	**GET /api/patients-fhir/{id}**
Description	Use this Endpoint to return data about a specific Service User record in the FHIR R4B format.
Use Case(s)	Use this endpoint if you wish to extract data about a specific service user If you pass the Practitioner ID then the Total Number of Stars returned will only be a count of stars from the Services that this Practitioner is assigned to.
Request body	SOL Patient ID (Guid) Practitioner ID (Guid) - optional
Response body	PatientId (Guid) Forename (string) Surname (string) Service User ID DateOfBirth (YYYY-MM-DD)

Endpoint Name	**POST /api/patients-fhir**

Description	Use this Endpoint to post a new Service User record from your primary system to the SOL using the FHIR R4B format. The API will then return the SOL record ID and URL to access the new record in SOL. Note that the parameters of: Practitioner ID Consent Given ConsentGivenByRepresentativeDetails Are requested as well as the Response body as they are not within the FHIR format. Note that with this Endpoint it will still be necessary to assign the correct Service to the new Patient in SOL. If this Endpoint is triggered manually by the Practitioner in your Primary System, the Endpoint will return a URL which you can then use to code a redirect for the Practitioner to SOL where they will be directed to the correct screen to enable the Service Assigment to happen. If they do not do this then the record will be saved with a status of Pending in SOL and only the Account Lead OR the practitioner in question will be able to retrieve the record and assign the Services to the new Patient as required.
Use Case(s)	The practitioner has created a new Service User record in their Primary system and they want to quickly be able to create a corresponding record in SOL. Once the new record in the primary system has been saved, the practitioner can press a button in their primary system (or this could be setup as an automated event) which will then automatically trigger the creation of the record in SOL and the Endpoint response will provide a link which, if then added to the primary system record, will allow the user to navigate directly from the record in the Primary system to the corresponding Service User record in SOL. (Note that if Single Sign On is not implemented the user will have to login first and then be redirected to the Service User record)
Request body	**FHIR format:** PrimaryCareId - Identifier / Usual ServiceUserID - Identifier / Secondary: Forename - Name/ Family Surname - Name/ Given DateOfBirth – BirthDate (YYYY-MM-DD) ConsentGiven (true/false)

19

	ConsentGivenByPatientRepresentativeDetails (optional) PractitionerId
Response body	PatientId (Guid) PatientUrl (string)

Endpoint Name	**GET patients{id}/latest-stars**
Description	Use this endpoint to receive the URL for accessing the latest completed star PDF’s for a specific Service User. Once this endpoint has been used to get the URL you can then use the **GET patients/{id}/star-summary-download** endpoint to download the actual PDF.
Use Case(s)	To receive the latest Star PDF’s for a specific Service User send the patient ID in the request body. Receive the PDF’s for download from the SOL servers.
Request body	PatientId Practitioner ID (optional)
Response body	StarTypeName CompletedDate PdfDownloadUrl

Endpoint Name	**GET patients/{id}/all-stars**
Description	Use this endpoint to receive the URL for accessing ALL completed star PDF’s for a specific Service User. Once this endpoint has been used to get the URL you can then use the **GET patients/{id}/star-summary-download** endpoint to download the actual PDF.
Use Case(s)	To receive all the completed Star PDF’s for a specific Service User send the patient ID in the request body. Receive the URL for download of PDF’s.
Request body	PatientID Practitioner ID (optional)
Response body	StarTypeName CompletedDate PdfDownloadUrl

Endpoint Name	**GET patients/{id}/star-summary-download**

Description	Use this endpoint after using the Patients/{id}latest-stars endpoint to obtain the Star ID. Use the Star ID in the request of this endpoint to obtain the URL from where the PDF file(s) can be downloaded.
Use Case(s)	To receive all the completed Star PDF's for a specific Service User send the patient ID and Star ID in the request body. Receive the URL for download of PDF's.
Request body	PatientID Star ID Practitioner ID (optional)
Response body	PdfDownloadUrl

Practitioner

Endpoint Name	**GET /api/practitioners/{id}**
Description	Use this endpoint to return details of a specific Practitioner
Use Case(s)	This endpoint can be used to obtain details about the Practitioner and a URL for the login screen on SOL with the Practitioner email address pre-populated which can be of use if you wish to add a shortcut to SOL from your case management system. Note that if you are using Single Sign On (SSO) with SOL then if your practitioner is shown a link to click in your primary system to view SOL then using the URL returned in this endpoint will enable them to login automatically.
Request body	StarOnlineID (PractitionerID)
Response body	StarOnlineID Email Forename Surname StarOnlineLoginURL

22

Endpoint Name	**GET /api/practitioners**
Description	Use this endpoint to return details of all the Practitioners saved in your account on SOL.
Use Case(s)	This endpoint is one that you will need to use as part of the intial setup process for the API to obtain the StarOnlineID for each of your Practitioners as you will need to save this data item in your primary case management system against a practitioner record so you can then use some of the other endpoints in the SOL.
Request body	pageNumber pageSize orderBy orderByDescending
Response body	PageNumber PageSize TotalItems Items StarOnlineID Email Forename Surname StarOnlineLoginURL

7 Glossary of Terms

Account Lead - this user is responsible for setting up and administering the Star Online account and being the first point of contact for questions from your colleagues using the system. The Account Lead does not need to have any advanced technical skill, but does to be aware and compliant with the organisation's data protection policies.

FHIR - Fast Healthcare Interoperability Resources. The global standard that defines how data can be shared between different Healthcare Information Systems.

Integration Lead - this user can log into Star Online and generate API key(s). No other user is able to generate these keys.

Patient – This term refers to a Service User. We have used this expression in order to be compliant with FHIR data format.

Patient URL – this is the URL that will link the user directly to the Patient record in SOL – note that the user may need to login first and if they do not have the correct service assignment in SOL then this Patient record may not be displayed to them.

Primary Care ID – this is a term for the Primary Key used in the database of your Primary Care System for a patient record. This may not be the same as the ID displayed on the UI for the Patient record.

Primary software - the software sending data / receiving data, will usually be a case management/electronic patient record system

Service User ID – this is the free text field in SOL (called Service User ID on screen on the Edit Service User screen) that you may have used to add a User's NHS number, room number, Primary System ID or any other data that you use to uniquely identify your service user.

SOL - Outcomes Star Online