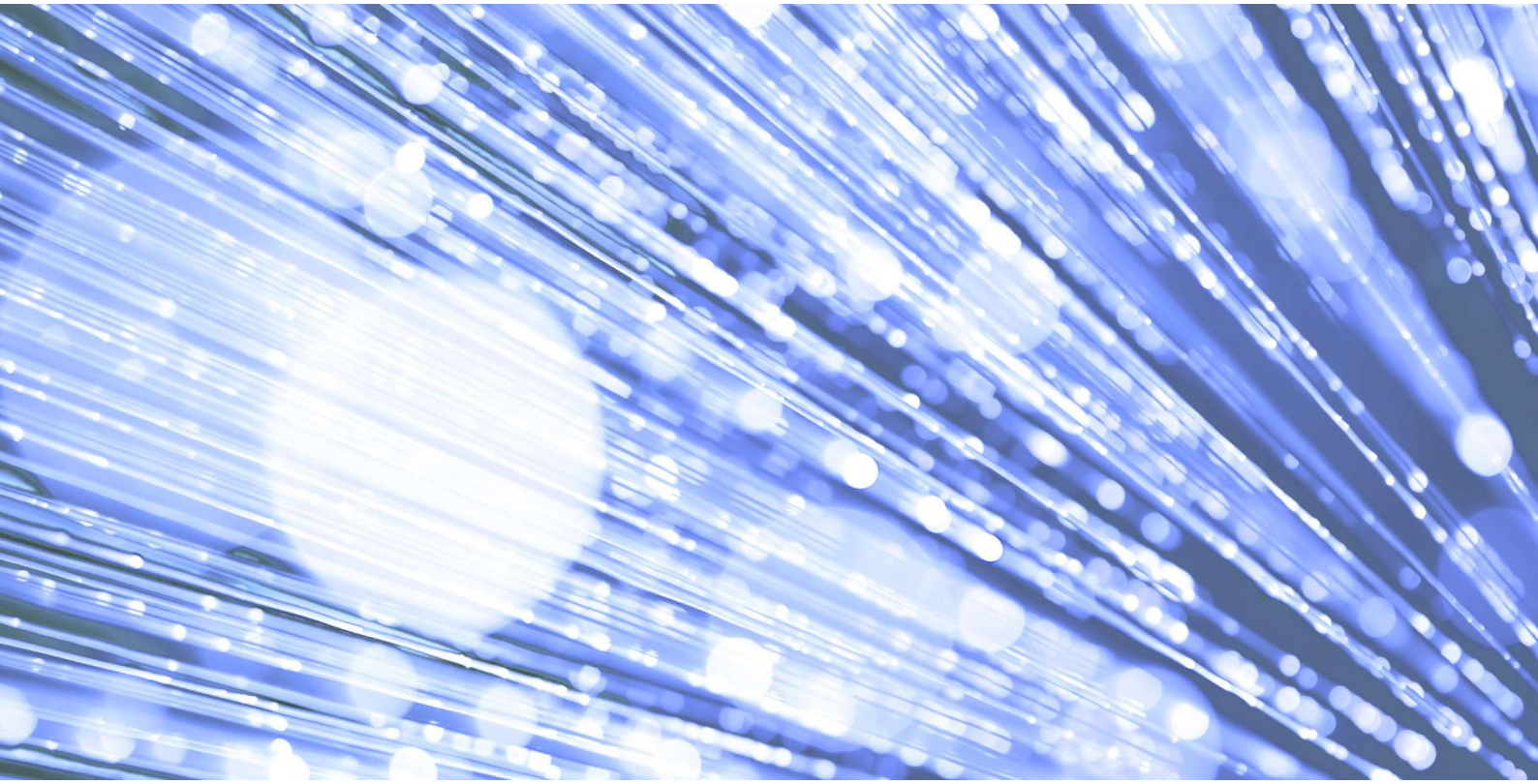
NHS Digital

# Provider guidance

## National Record Locator

Published 19th September 2019



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# Contents



# Version History

| Version | Date | Summary of Changes |
|---|---|---|
| V0.1 | 28/08/2019 | First Draft for review |
| V0.2 | 13/09/2019 | Updates following NRL, DCH and Maternity review |
| V1.0 | 19/09/2019 | Published version following further review cycle |
| V2.0 | 30/09/2019 | Uplifted to V2.0 to differentiate from guidance issued during phase 1 |

# Glossary

| Abbreviation | Definition |
|---|---|
| **ASID** | Accredited System ID. A unique ID code that identifies from which system a request to the NRL is made. |
| **Dynamic record** | A dynamic document or record is one which returns the latest, most recent available information at the time of retrieval. A dynamic record's contents is not guaranteed to be the same from one point in time to another in the future. |
| **EPR** | Electronic Patient Record system |
| **NBO** | National Back Office – NHS Digital function that is responsible for the management of NHS Numbers and PDS records |
| **NRL** | National Record Locator |
| **NRL consumer organisation** | An organisation that accesses / views record pointers from the NRL |
| **NRL provider organisation** | An organisation that publishes record pointers to the NRL |
| **ODS code** | Organisation Data Service Code. Code that identifies an organisation on the Spine Directory Service. |
| **Pointer** | A reference to a record that describes how it can be retrieved. The pointer is held on the NRL. |
| **RBAC codes** | Role based access control codes. Controls that determine what permissions users have on IT system e.g. what clinical records they can view |
| **Subject access request** | Request from a patient to find out how an organisation is processing their personal data |
| **SCR** | Summary Care Record |
| **SCRa** | Summary Care Record application |
| **SSP** | Spine Secure Proxy – acts as a broker to control and protect access to IT systems that expose records to the NRL |
| **Static record** | A static document or record is one in which the contents and exact representation will not change from the time of creation. Any updates to the content would result in a new version being created. |
| **URL** | A web address |

# Introduction to NRL

The National Record Locator (NRL) enables an authorised clinician, care worker and/or administrator, in any health or care setting, to access a patient's information to support that patient's direct care.

This is achieved by way of a national index of pointers that are essentially bookmarks that can tell authorised clinicians, care workers and/or administrators what shared records may exist for a patient and where they exist.

Pointers are created by the organisations that own the medical records. These pointers can then be viewed by other organisations in their own electronic clinical/care systems and/or SCRa. The information held on the pointer can then be used to retrieve and view the record itself (see figure 1). In some cases, the record will not be available to retrieve but instead contact details to the owner of the record will be provided (see figure 2). This will enable a verbal retrieval of information contained in the record. For a more detailed explanation of the data processing see the appendix.

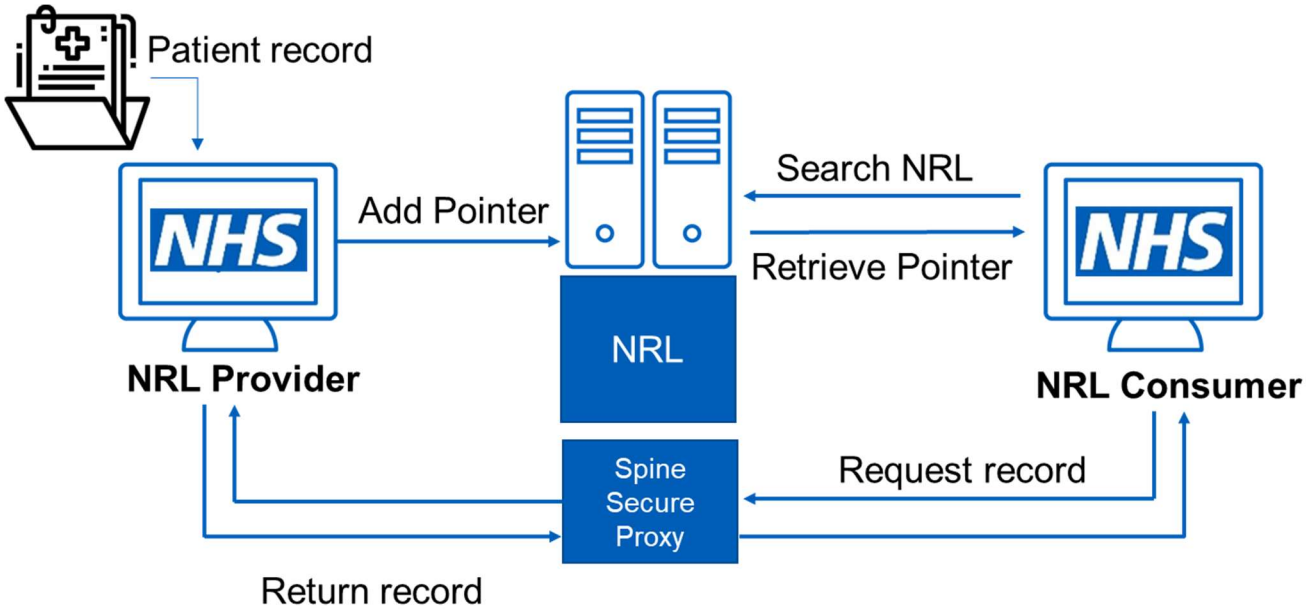


*Figure 1: NRL overview of record retrieval*

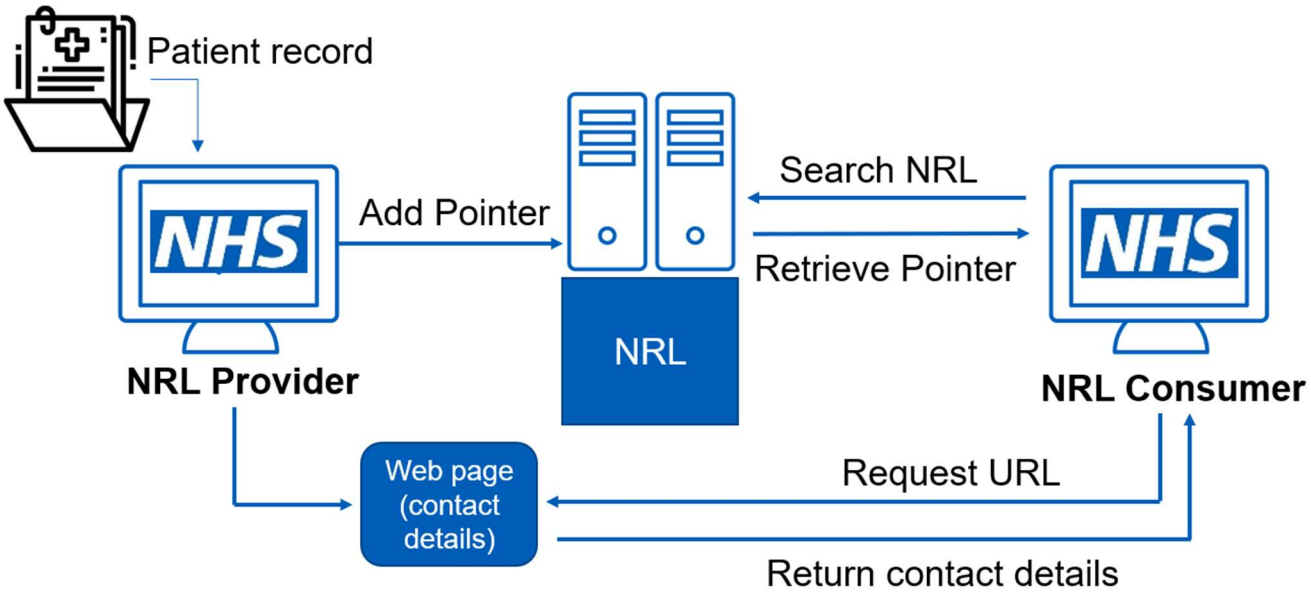


*Figure 2: NRL overview of contact details retrieval*

# How your Trust can use the NRL

The NRL will allow your Trust to share records that you hold for your patients across organisational and regional boundaries. This means that your records can be taken into account when your patients interact with other services throughout the NHS. This should help your patients receive more informed and personalised care.

When other Trusts come into contact with a patient, they will be able to search the NRL to see what records are available to them. If you have made records available on the NRL for this patient, the other Trust will be able to see the pointer to them and retrieve any records that they think will help in the care they are providing. The access to records will be protected by a number of controls to ensure they are only viewed by those with an appropriate need.

NRL Consumers can connect to the NRL either by their own system or using the national portal, the Summary Care Record application (SCRa). Where they use the SCRa they will see the information described in *table 1* for each pointer. A prototype of how this will be displayed in the SCRa is illustrated in *figure 3*.

| | |
|---|---|
| **Creation date** | The date on which the mental health crisis plan itself was created. It may not reflect when the pointer was created. |
| **Record type** | The record type refers to the type of clinical record the pointer is for. |
| **Record owner** | The record owner refers to the organisation that created the record. |
| **Contact details information** | By clicking on the contact details information, a separate page will be opened that describes how the crisis team or other appropriate individual / team can be contacted, such as a phone number and name of the crisis care team, to obtain further information on the crisis plan. |

| | |
|---|---|
| **Clinical setting** | The clinical setting where the record was created, reflecting the clinical speciality e.g. Midwifery Service, Health Visiting Service |

*Table 1: Pointer display information*

| Record creation date | Record type | Record owner | Clinical setting | Record |
|---|---|---|---|---|
| 06-Sep-2018 | Mental health crisis plan | Leeds Teaching Hospitals<br>*No contact information is available* | Mental health dual diagnosis service | View document |
| 01-Jun-2016 | End of life care plan | Leeds Teaching Hospitals<br>View contact information (opens in a new tab) | Palliative medicine | View document |

*Figure 3: Prototype of pointer results display on SCRa*

Where an NRL Consumer uses their own system, the information displayed may vary slightly. There is additional data on the pointer that could be displayed to users to help the understand which pointer is the most useful to them. The most obvious examples are illustrated in table 2.

| | |
|---|---|
| **Period of care** | The period refers to the time period over which the service that is described by the record was provided. |
| **Record category** | The record class refers to the general category of the record. This is broader than the Record Type and can therefore be used to help narrow down to the required Record Type. |

*Table 2: Additional pointer data items*

If an NRL Consumer contacts your Trust to find out information about one of your patient records following the use of the NRL, your organisation's existing processes should be followed to verify the clinician's identity and to ensure that it is a valid enquiry. This is to ensure that patient information is not shared inappropriately.

# Clinical service contact details

Each pointer you publish on the NRL will refer to a record you hold about a patient. The pointer can then either specify how that record can be retrieved or contain contact details to the appropriate individual/team who can provide more information about the record. It's possible that a pointer may do both. Contact details will be retrieved directly by the NRL Consumer from a publicly available webpage or PDF maintained by the NRL Provider. The retrieval is not brokered by the Spine Secure Proxy.

If you choose to publish pointers that refer to contact details, you are responsible for ensuring that they are accurate and up to date. It is important that the contact details are as useful as possible to NRL Consumers who view them. The guidelines beneath have been created to aid this and to also provide a level of consistency when NRL Consumers view contact details from different NRL Providers:

1. The contact details (name and phone number) for the individual or team who can provide information on the record shall be provided
2. The contact details will contain a work telephone number. It shall not be a personal number where this may not be answered when an individual is absent from work, unless mitigating actions are put in place, such as diverting to an alternative number
3. The telephone number:
    a. shall not go directly to a voicemail/answerphone
    b. can go through a generic/Trust level switchboard to reach the identified individual
4. The hours of availability for the telephone number shall be clearly stated e.g. 8am-6pm
5. During out of hours, alternative contact details shall be provided where available (also meeting points 3, 4, and 5)
6. If there is not an out of hours option available, or the out of hours option does not cover all hours, this shall be made clear
7. Contact details for individuals or teams that are not involved in the care of the patient shall not be provided i.e. the contact details should be specific. This is to avoid confusion for those consuming the contact details.

# Pointer lifecycle

There are a number of scenarios in the lifecycle of a pointer that will require you to take action to ensure they are correctly managed. The guidance beneath summarises each scenario, the suggested action to be taken and links to relevant technical guidance that support the action.

There is also a detailed, technical description of the pointer lifecycle on the NRL specification. As an NRL provider you are responsible for managing a pointer through its lifecycle and ensuring it is accurately represented on the NRL index.

## Pointer created in error

| | |
|---|---|
| **Description** | A pointer to a patient's record may be created in error. This could be for a number of reasons including administrative and technical errors, for example:<br>• patient incorrectly marked as having the specified record type<br>• record the pointer refers to contains incorrect information<br>• pointer does not refer to the correct record |
| **Action** | **Update pointer:**<br>The status of the pointer shall be updated to 'entered-in-error' so that it is clear to NRL Consumers that the pointer is erroneous.<br>The pointer should not be deleted, as a reason for deletion is not recorded. It will therefore not be known that the delete took place |

| | |
|---|---|
| | due to a pointer being created in error. This could hinder future processes such as the investigation of adverse incidents. |
| **Supporting technical guidance** | https://developer.nhs.uk/apis/nrl/pointer_errors.html<br>https://developer.nhs.uk/apis/nrl/api_interaction_update.html |

*Table 3: Pointer created in error*

# Period of care ends

| | |
|---|---|
| **Description** | Where a record is only relevant to the period of care that was provided and that period of care comes to an end. This could cover different scenarios, for example:<br>• a patient is discharged from care<br>• death of a patient |
| **Action** | **Update the Period of Care:**<br>Update the end date on the period of care property of the pointer. This tells an NRL Consumer that the period of care that the record refers to has come to an end. This will help them to distinguish between records where the period of care is still open.<br>The period of care property is updated by using the supersede function.<br>Once the period of care has ended, it is the decision of the NRL Provider how long that pointer should remain on the NRL. This will depend on local clinical and business processes. Guidance is provided later in this document for when a record reaches the end of its retention period, where it is advised that the pointer is deleted. |
| **Supporting technical guidance** | https://developer.nhs.uk/apis/nrl/api_interaction_supersede.html |

*Table 4: Period of care ends*

# Patient opts out of their record being shared via the NRL

| | |
|---|---|
| **Description** | A patient requests that their record is not shared on the NRL after a pointer has been created. |
| **Action** | **Delete pointer:**<br>The pointer shall be deleted so that the patient's request is honoured on the NRL. |
| **Supporting technical guidance** | https://developer.nhs.uk/apis/nrl/overview_interactions.html<br>See section *Pointer removal*<br>https://developer.nhs.uk/apis/nrl/api_interaction_delete.html<br>Note that this is a 'soft' delete. See the appendix for further details. |

| | |
|---|---|
| **Additional guidance** | The patient record sharing preferences model applied by your Trust will depend on local information governance procedures. This guidance assumes that a decision has been reached to uphold the patient's preference.<br><br>Where a patient requests that their record is not shared on the NRL before a pointer has been created it is assumed that a pointer will not be created unless that decision is reversed. |

*Table 5: Patient opt out*

# Referenced record is updated

| | |
|---|---|
| **Description** | The record that the pointer refers to is updated. For example, this could be the result of a scheduled review or a change of circumstances.<br><br>The actions required will depend on whether the record is static or dynamic. |
| **Action**<br><br>Static record | **Pointer superseded by new pointer:**<br><br>A new pointer with a status of 'current' is created for the updated record.<br><br>This is linked to the original pointer whose status is now changed to 'superseded'. |
| **Action**<br><br>Dynamic record | **No action required**<br><br>A dynamic record always provides the latest version of a record. When a dynamic record is updated the current pointer can be retained as this will return the latest version of the record. |
| **Supporting technical guidance** | https://developer.nhs.uk/apis/nrl/api_interaction_supersede.html |

*Table 6: Crisis plan updated*

# Contact details are updated

| | |
|---|---|
| **Description** | The contact details that the pointer refers to are updated. For example, this could be the result of a change to the team the patient is under the care of, or a change to their contact details.<br><br>The actions required will depend on whether there are changes to the contact details URL or not. |
| **Action**<br><br>Contact details have same URL | **No action required:**<br><br>If the updated contact details are reached via the same URL and no other changes are required on the pointer model, then no action is required. The current pointer is still relevant. |
| **Action**<br><br>Contact details have new URL | **Pointer superseded by new pointer:**<br><br>If the updated details are reached via a new URL then a new pointer must be created. |

| | |
|---|---|
| | A new pointer with a status of ‘current’ is created for the updated contact details URL.<br><br>This is linked to the original pointer whose status is now changed to ‘superseded’. |
| **Supporting technical guidance** | https://developer.nhs.uk/apis/nrl/api_interaction_supersede.html |

*Table 7: Contact details are updated*

# Reference record reaches end of retention period

| | |
|---|---|
| **Description** | The referenced record reaches the end of its retention period. Typically, this is after a period of time has elapsed since the discharge or death of a patient. For some records it may be when a patient reaches a certain age.<br><br>Depending on the record type, the action at the end of the retention period will vary but for a large number, the action is to destroy the record. This will determine what action is required to maintain the pointer on the NRL.<br><br>For more guidance on retention periods see the Records Management Code of Practice for Health and Social Care 2016 |
| **Action**<br><br>Referenced record will no longer be available | **Delete pointer**<br><br>A pointer should be deleted if the referenced record will no longer be available for retrieval e.g. because it has been destroyed or archived. |
| **Action**<br><br>Reference record will remain available | **No action required**<br><br>If at the end of the retention period, it is decided that it is still necessary to retain the record then its pointer can remain on the NRL. No action is required until the record next reaches the end of its retention period. |
| **Supporting technical guidance** | https://developer.nhs.uk/apis/nrl/overview_interactions.html<br><br>See section *Pointer removal*<br><br>https://developer.nhs.uk/apis/nrl/api_interaction_delete.html<br><br>Note that this is a ‘soft’ delete. See the appendix for further details. |

*Table 8: Retention period ends*

# Merge of NHS Numbers

| | |
|---|---|
| **Description** | Data quality incidents can occur where a patient has more than one NHS number. When duplicate NHS Numbers are confirmed the records are merged, leaving the patient with a single, unique NHS Number.<br><br>Where an NRL pointer is related to the NHS number that is not retained, an NRL Consumer will not be able retrieve it. |

| | |
|---|---|
| **Action**<br>When pointer is held against the retained NHS number | **No action required:**<br>The pointer is held against the correct NHS number. |
| **Action**<br>When pointer is held against a non-retained NHS number | **Create new pointer against the retained NHS number:**<br>A new pointer must be created against the retained NHS number otherwise an NRL Consumer will not be able to find the pointer for this patient.<br>**Update original pointer:**<br>As the pointer is now erroneous i.e. it refers to the wrong NHS number, the status of the pointer shall be updated to 'entered-in-error'. This ensures the NRL does not contain redundant pointers. |
| **Supporting technical guidance** | https://developer.nhs.uk/apis/nrl/overview_interactions.html<br>See section *Pointer creation*<br>https://developer.nhs.uk/apis/nrl/pointer_errors.html<br>https://developer.nhs.uk/apis/nrl/api_interaction_update.html |

*Table 9: NHS number merge*

# NHS number confusion

| | |
|---|---|
| **Description** | A confusion is where one NHS Number is being used by two or more NHS patients. The effect of a confused NHS number is that the patients involved may either have:<br>• additional information in their clinical record which does not belong to them i.e. NRL pointer which belongs to another patient<br>• an incomplete clinical record, on which a clinician may make a clinical judgement or may have made a clinical judgement in the past i.e. missing an NRL pointer<br>The NBO at NHS Digital will investigate and confirm the correct NHS number for the patient. A patient will either:<br>• retain the same NHS number with the other patients separated from it<br>• have a new NHS number created |
| **Action**<br>Patient retains the confused NHS number | **No action required:**<br>The pointer is held against the correct NHS number. |
| **Action**<br>Patient has new NHS number created | **Create new pointer against the new NHS number:**<br>A new pointer must be created against the new NHS number otherwise an NRL Consumer will not be able to find the pointer for this patient. |

| | |
|---|---|
| | **Update pointer held against the confused NHS number:**<br>As the original pointer is now erroneous i.e. it refers to the wrong NHS number, the status of the pointer shall be updated to 'entered-in-error'. This ensures the NRL does not contain redundant pointers. |
| **Supporting technical guidance** | https://developer.nhs.uk/apis/nrl/overview_interactions.html<br>See sections *Pointer creation* and *Pointer removal*<br>https://developer.nhs.uk/apis/nrl/pointer_errors.html<br>https://developer.nhs.uk/apis/nrl/api_interaction_update.html |

*Table 10: NHS number confusion*

# I-flag

| | |
|---|---|
| **Description** | An 'invalid' flag may be applied in a number of different circumstances where it is concluded that an NHS number should no longer be in use:<br>• Following the adoption of a child when the child has a new NHS number created<br>• Following gender reassignment where an individual chooses to have a new NHS number<br>• Where a new NHS number is created for the purpose of identity protection<br>In most cases the patient will have a new NHS number created. A consumer will not be able to view a patient's pointer unless a new one is created against this new NHS number.<br>The application of an I-flag is performed by the NBO at NHS Digital. |
| **Action** | **Create new pointer against the new NHS number:**<br>A new pointer must be created against the new NHS number otherwise an NRL Consumer will not be able to find the pointer for this patient.<br>**Update original pointer:**<br>As the original pointer is now erroneous i.e. it refers to an invalid NHS number, the status of the pointer shall be updated to 'entered-in-error'. This ensures the NRL does not contain redundant pointers. |
| **Supporting technical guidance** | https://developer.nhs.uk/apis/nrl/overview_interactions.html<br>See section *Pointer creation*<br>https://developer.nhs.uk/apis/nrl/pointer_errors.html<br>https://developer.nhs.uk/apis/nrl/api_interaction_update.html |

*Table 11: I-flag*

# Pointer becomes invalid

| | |
|---|---|
| **Description** | Scenarios may occur where a pointer becomes no longer valid e.g. it would no longer be possible to retrieve the referenced record, or the contact details no longer reference a functioning team.<br><br>These are seen as exceptional circumstances outside of the normal pointer management lifecycle. Example scenarios could include the transfer of clinical service provider or change in system supplier.<br><br>Where possible it would be expected that a new pointer is created e.g. by the new clinical service provider or in the new IT system where the NRL is supported. |
| **Action** | **Delete pointer:**<br><br>The affected pointer should be deleted otherwise there is potential for it to be misinterpreted or cause confusion to NRL Consumers.<br><br>**Create new pointer (where possible):**<br><br>Depending on the scenario leading to the pointer becoming invalid it may be appropriate that a new pointer is created where this is technically possible e.g. by a new clinical service provider or new IT system |
| **Supporting technical guidance** | https://developer.nhs.uk/apis/nrl/overview_interactions.html<br><br>See sections *Pointer removal* and *Pointer creation*<br><br>https://developer.nhs.uk/apis/nrl/api_interaction_create.html<br><br>https://developer.nhs.uk/apis/nrl/api_interaction_delete.html |

*Table 12: pointer becomes invalid*

# S-flag

| | |
|---|---|
| **Description** | A ‘sensitive’ flag is applied on request to restrict access to location information on a PDS record. It's removed when the restriction is no longer required. This is performed by the NBO at NHS Digital. |
| **Action** | **No action required**<br><br>As an S-flag could be applied after you have created a pointer the responsibility for handling it falls on the NRL Consumer. If they retrieve a pointer for a patient who has an S-flag they are required to ensure that no location data relating to the pointer is displayed to a user and the record cannot be viewed.<br><br>However, at the point of pointer creation, if a patient has an S-flag, consideration should be given as to whether it is appropriate to continue with creating the pointer. |

*Table 13: S-flag*

# Audit

## Pointer management

An audit log will be held by your supplier system that keeps a record of the activity your organisation has performed on the NRL. This information will allow an authorised user to investigate, explain and justify the information that you have made available for your patients through the NRL. This will enable you to respond to subject access requests and to investigate adverse incidents or any system misuse.

Table 14 details the information that will be recorded in the audit log for each action performed on the NRL by your organisation. This will help you to understand what activities have been performed, by who and for which patient. This relates to the management of pointers only. A separate log will record where records have been shared with NRL Consumers (see the next section for detail).

| Report heading | Explanation |
|---|---|
| **User ID** | The unique identifier of the user who performed the action |
| **ASID** | The system used to perform the action |
| **ODS Code** | The unique identifier of the organisation from which the action took place |
| **Datetime** | The date and time that the action took place |
| **NHS number** | The NHS number of the patient who the action was performed against |
| **Request URL** | The URL of the NRL service that your system interacted with to perform the request. As well as the address of the NRL service it may also contain additional information that your system provided as part of the request. |
| **Request http verb** | Identifies the action that was performed:<br>GET means a search was performed<br>DELETE means that a pointer was deleted<br>PATCH means that a pointer was updated<br>POST means that a pointer was created. |
| **Request body** | Only relevant for a GET request. In this case the body will contain the NRL Pointer that your system requested NRL hold. |

*Table 14: Pointer audit log details*

Table 15 details the information that will be recorded for the response from the NRL to each action performed by your organisation. This helps you to understand whether the request was successful or not.

| Report heading | Explanation |
|---|---|
| **Outcome** | The HTTP status code that identifies if the request was successful or not. This is a three digit code. If it begins with a 2 |

| | |
|---|---|
| | the request was successful. If it begins with a 4 or 5 the request was unsuccessful. |
| **Message** | If there has been an error with the request, diagnostic information will be provided that will tell you if the error occurred with your system or with the NRL.<br>If a DELETE or POST request has been successful a message will confirm this. If a GET request has been successful, the results returned will be stored on the log. |
| **Datetime** | The date and time that the response was made by the NRL. |

*Table 15: Audit response details*

# Record retrieval

In addition to the audit log that stores all pointer activity performed on the NRL, a separate log will record the details of any records that have been shared with an NRL Consumer following the retrieval of one of your record pointers. Table 16 details the information that will be recorded in the audit log for each record shared with an NRL Consumer.

| Report heading | Explanation |
|---|---|
| **User ID** | The unique identifier of the user who performed the action |
| **ASID** | The system used to perform the action |
| **ODS Code** | The unique identifier of the organisation from which the action took place |
| **Datetime** | The date and time that the action took place |
| **Trace ID** | A unique ID for the record retrieval request made by the NRL Consumer |
| **Record version ID** | Reference to the version ID (or equivalent) from which the version of the record that was shared can be identified |
| **Record URL** | The web address used for the record retrieval request. Through this the patient that the request relates to can be determined. |

*Table 16: Record sharing audit log details*

Table 17 details the information that will be recorded for the response to each retrieval request received by your organisation. This helps you to understand whether you shared the record in response to a request.

| Report heading | Explanation |
|---|---|
| **Outcome** | The HTTP status code that identifies if the request was successful or not. This is a three digit code. If it begins with a 2 the request was successful. If it begins with a 4 or 5 the request was unsuccessful. |
| **Datetime** | The date and time that the response was made. |

*Table 17: Record sharing audit response details*

# Pointer retrieval

When an NRL Consumer retrieves one of your pointers this will not be recorded on your audit log as your system is not involved in this process. You will only be aware that one of your pointers has been retrieved if the NRL Consumer goes on to retrieve the record. If you did need to know all instances where one of your pointers had been retrieved, you can do so by submitting a request to NHS Digital.

## Process

A request shall be made to the National Service Desk via the existing channels within an NRL Consumer. This will most likely be via a local service desk. The request must come via a secure email address and have the approval of a Privacy Officer. This approval can either be in the form of the request coming directly from the Privacy Officer or as an attached email with confirmation of their approval. The request must contain the following information:

- ODS code of the requesting NRL Provider
- NHS number of the patient the request refers to
- Date period over which the data is required
- Specific record types that are applicable to the request (optional)

The request will be processed within four weeks. The information that will be returned about each pointer retrieval is detailed in table 18.

| Heading | Explanation |
|---|---|
| **Organisation** | The organisation the pointer retrieval request came from, displayed as an ODS code |
| **Pointer ID** | The unique ID of the pointer that was retrieved |
| **DateTime** | The date and time that the pointer was retrieved |

*Table 18: Information returned for pointer retrieval audit request*

The detailed process is illustrated in figure 4.

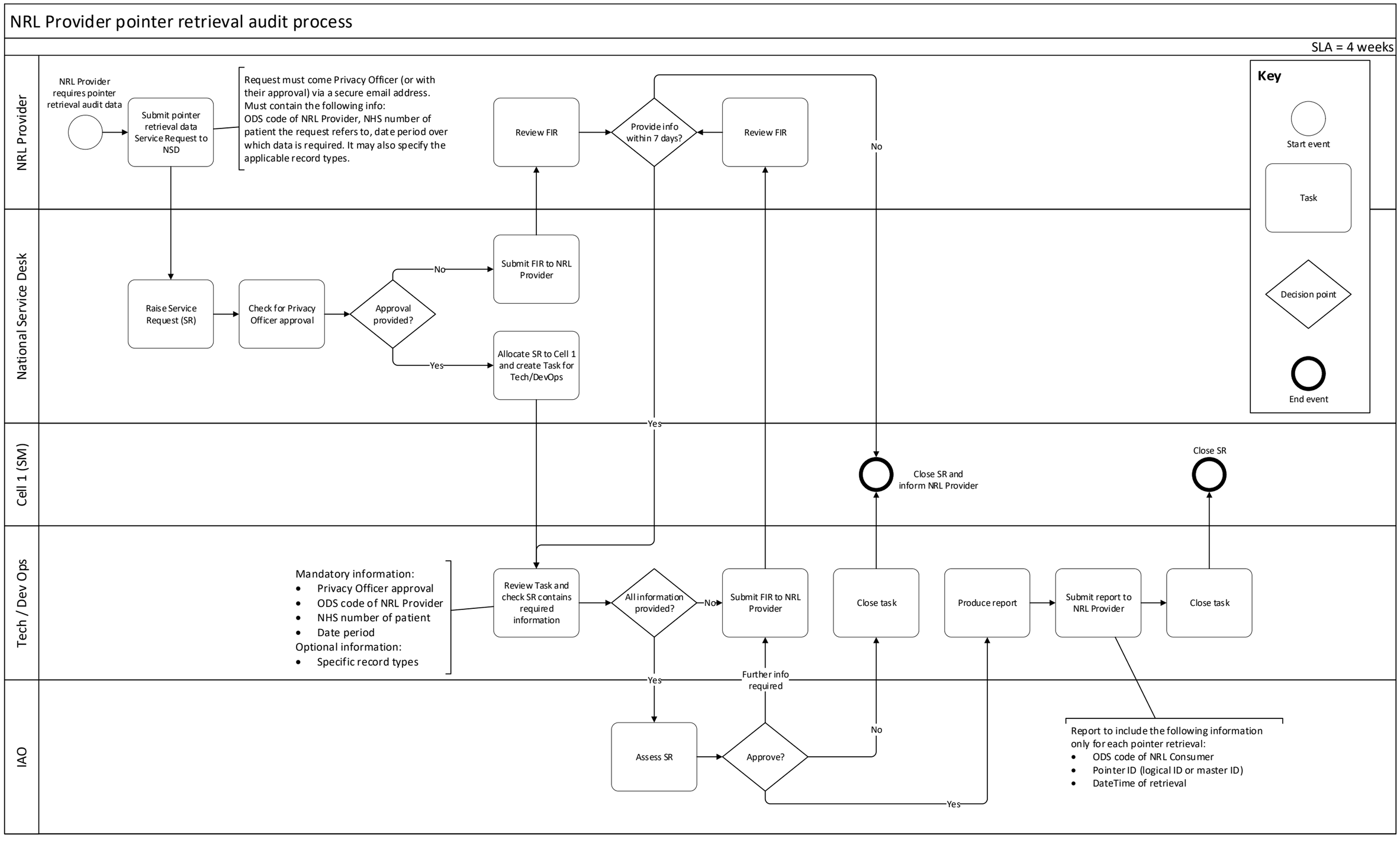


*Figure 4: NRL Provider pointer retrieval audit process*

# Historic use of pointers

As explained in the pointer lifecycle section there may be scenarios where the most appropriate course of action is to delete a pointer, meaning that the pointer will no longer be available to NRL Consumers. This could potentially lead to scenarios where an NRL Consumer has retrieved a record in the past, needs to view that record again but is no longer able to do so. For example, if there was an investigation into an adverse incident in which they had used a record from the NRL which is now no longer available.

In such scenarios an NRL Provider should be able to provide the NRL Consumer with the version of the record that was previously retrieved. The steps that can be taken to facilitate this are detailed beneath and in figure 5.

1. NRL Consumer views their audit log for the record retrieval that took place and notes the following information:
    a. NHS Number
    b. DateTime
    c. Trace ID
2. NRL Consumer passes these audit details onto NRL Provider from whom they retrieved the record.
3. NRL Provider uses the details provided by the NRL Consumer to locate the retrieval on their audit log.
4. From their audit log the NRL provider should be able to ascertain the record that was shared from the Record URL value. They should be able to work out what version of that record was shared from the Record Version ID value.
5. Once the NRL Provider knows what record was shared and what version of the record it was, they should be able to retrieve the historic version of the record and share with the NRL Consumer.

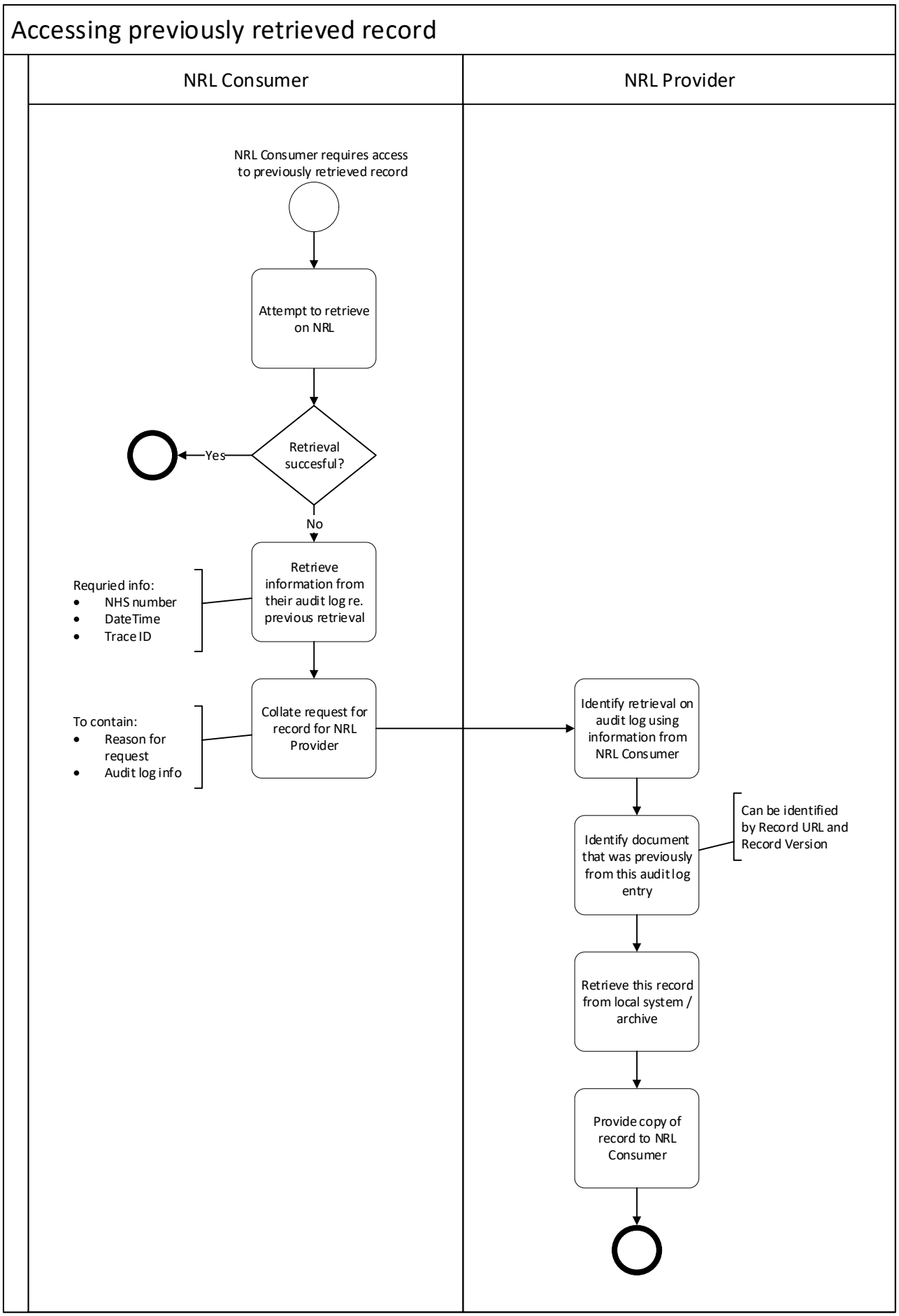


*Figure 5: Process for accessing a previously retrieved record*

# Appendix

## Data processing

The following section describes the data processing that takes place when a record is retrieved via the NRL.

1. An NRL Provider can create, update, supersede and delete a pointer to a patient record on the NRL. The pointer is stored centrally on the NRL (i.e. by NHS Digital). The data held on a pointer is described in the NRL technical specification. This guidance document explains when NRL Providers should perform the create, update, supersede and delete actions. An audit log is maintained on the NRL and by the NRL Provider when any of these actions takes place.
2. An NRL Consumer searches the NRL using a patient's NHS number. They are returned a list of all available pointers for that patient, unless they filter their search based on record type or record owner. No filtering of the pointers based on access permission takes place by the NRL - these are applied by the NRL Consumer system. For each pointer, the NRL Consumer is provided with the data as per the pointer data model on the NRL technical specification. It is up to the NRL Consumer which of this data they choose to display to their users. An audit log is maintained on the NRL and by the NRL Consumer when a pointer retrieval takes place.
3. A pointer may contain a URL to contact details, to the record itself or both:
    - If the URL references contact details - this will be a link to a publicly accessible webpage that provides details of an individual / team who can provide the NRL Consumer with further details about the record
    - If the URL refers to the record itself - this will be a link to the location of the record on the NRL Provider's system.
4. Having viewed the list of pointers, the NRL Consumer can then decide if they wish to retrieve the contact details and/or the record for any of the pointers. The metadata within the pointer data model will help them decide which of the pointers are relevant / useful to them e.g. based on Record Type or Clinical Setting.
5. If the NRL Consumer chooses to view the contact details they will be taken to a publicly accessible webpage or PDF that displays the relevant contact details. The content of this webpage/PDF is entirely the responsibility of the NRL Provider. Accessing the webpage or PDF is handled by the NRL Consumer system; it does not take place via the NRL or SSP.
6. If the NRL Consumer chooses to retrieve the record, they make a request to the NRL Provider via the Record URL, which the NRL Consumer prefixes with the SSP base URL. This request is brokered by the Spine Secure Proxy (SSP) which provides a mutual authentication process. The record is then returned to the NRL Consumer via the SSP. The content of the record is the responsibility of the NRL Provider. The record is not stored on the SSP, it only brokers the transaction. An audit log will be kept of the transaction that took place on the SSP (this does not include any clinical data). The NRL Consumer and NRL Provider will also maintain an audit log of the retrieval.

# Deleting pointers

When a Pointer is deleted from the NRL it is marked as "inactive" as opposed to being removed completely. This is commonly known as a "soft delete". Once a Pointer is deleted the Pointer can no longer be viewed or edited by any Consumer or Provider.