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**NHS 111 online Requirements Schedule**

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**Glossary of Terms**

|  |  |
| --- | --- |
| **Term / Abbreviation** | **What it stands for** |
|  |  |
|  |  |

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# Document purpose

This document (the “**Requirements Schedule**”) is part of, and should be read with, the End User Agreement entered into between the End User (a CCG) and NHS Digital, governing use of 111 online in the End User’s commissioning area.

Capitalised terms used in this Requirements Schedule shall have the meaning given to them in the End User Agreement, unless expressly defined here.

The scope of this document covers **111 online,** a digital service built by NHS Digital which connects patients to the urgent care they need. The purpose of this document is to detail:

* how to implement the 111 online service into a 111 provider and integrated urgent care service; and
* various other operational requirements applicable to End Users and their associated service providers, being GP practices, Out-of-hours (OOH) GPs, 111 telephone service providers, walk in centres, A&Es, dental practices and other health care providers (each a “**Service Provider**”).

The online location for this document can be found at:

https://nhschoices.github.io/nhs111-implementation-site/

NHS Digital will send out notifications of any changes to this document, or to 111 online to all End Users with which it has an End User Agreement in place relating to 111 online.

# Overview of service and how it works

111 online is a new digital service provided by [NHS Digital](https://digital.nhs.uk/). It's based upon NHS Pathways clinical algorithms and complements the existing national 111 telephone service. The service is live almost everywhere in England, though some areas offer more links into local urgent care settings than others. You can check where the service is live at [https://111.nhs.uk/](https://111.service.nhs.uk/?utm_campaign=NHS111Testing&utm_source=impguide).

111 online uses the suite of NHS Pathways algorithms to allow users to go through an online triage and be referred on to the most appropriate NHS care service or to receive self-care advice. The clinical content on the service follows all the same rigorous clinical governance and clinical assurance as the 111 telephone service. The content has been reworded to be suitable for online users, allowing them to self-serve.

The user journey is as follows:

* User arrives at the service, signposted from an in-queue message on the 111 telephone service, or other care provider or a poster in a primary care service for example, A&E, GP or dental practice.
* User sees a landing page which explains what the service does and whether it is available in their area.
* User confirms their issue is not a 999 emergency (Module Zero).
* User gives their sex and age.
* User enters their symptoms into the search box or selects from a categorised list of symptoms and then selects an appropriate pathway.
* User answers questions relating to their symptom as per the algorithmic structure of NHS Pathways. (The NHS Pathways content has been reworded, where appropriate, to make it suitable for online users who are not being guided through the triage by a 111 call handler.)
* User is presented with a clinical outcome (disposition).
* User has option to look up a service and is given directions or contact details. The Directory of Service (DoS) is queried for suitable services. The services shown are determined by local End Users and Service Providers.
* User has option to provide their details and a phone number and be called back by that service. This transfer of care occurs using ITK messaging.

Where care is transferred, the receiving Service Provider will receive an Interoperability Tool Kit (ITK) message with the patient's details and the results of their self-triage using 111 online, just as they would with any other ITK message. The service interoperates with most patient management systems: Adastra, SystmOne, and Cleo. Cleric are currently upgrading to enable integration.

**Implementation overview**

The 111 online service is implemented locally in 3 phases; with each phase increasing the offer to the patient. The End User Agreement and this Requirements Schedule applies to all three phases.

At the first phase the DoS is profiled to ensure that patients can go through a triage and receive DoS results that inform them of places they can visit or call. In the second phase callbacks are enabled by creating a connection to the local 111 callback service. In the third phase further connections are made to other local urgent care Service Providers as required locally.

**Phase 1:**

The Directory of Service is appropriately profiled to enable signposting.

**Phase 2:**

A connection is made to the IUC CAS or clinical callback service to enable ITK referrals,

**Phase 3:**

Connections are made to other venues of care including OOH, emergency dental etc

Service safe for switch on at this point.

Enhanced patient offer.

## Walkthrough video

Visit the implementation pages to see a video walkthrough of the online service. <https://nhschoices.github.io/nhs111-implementation-site/>

## NHS Pathways

The NHS Pathways clinical content has been adapted for online use by NHS Pathways authors and digital content experts. Many of the pathways have been discounted as unsuitable for the online service and this was part of a clinical discussion and process led by our Clinical Reference Group (see appendix B for more on dispositions). The full list of pathways used can be found in the appendices.

## Dispositions

111 online uses dispositions in a similar manner to the telephone service, although not all the dispositions are replicated online.

The advice users are given at the end of a triage falls under one of the following broad categories of calls to action:

|  |  |  |
| --- | --- | --- |
|  | Example Dispositions | Advice to user |
| **Look after yourself at home** | Homecare: Dx38, Dx39 | Self-care dispositions provide the user with the message they can look after themselves at home. Care advice is provided where available for the symptom group. |
| **Go somewhere** | Urgent treatment centre: Dx02, Dx03  Pharmacist: Dx28 | Users reaching “signposting” dispositions like urgent treatment centre; pharmacist; GUM clinic enter their postcode, which powers a DoS search. The services that are returned are shown on a map for the user to navigate to. |
| **Contact someone** | GUM clinic: Dx31  Optician: Dx60  Category 2 Ambulance: Dx011 | “Contact” disposition endpoints are instructed to contact a healthcare service. A DoS search is fired and services return that provide a phone number for users to call.  Users reaching 999 dispositions are instructed to ring 999, Wording changes dependent on the Dx code. More information on 999 dispositions are below. |
| **Provide your details and someone will call back** | Clinician callback: Dx32,Dx34  Primary: OOH, Dx11,Dx12 | Any services that are set up to receive ITK messages (for example, OOH services or IUC CAS) will give the user the option to “book a call” and provides the opportunity for them to give their details.  **Please note this is only offered for phases 2 and 3 of the implementation.** |

At the end of an assessment, the recommended outcome or disposition is shown to the user. Content for dispositions has been created through continuous research and testing with users. The dispositions follow a pattern and have been written in plain, simple language with user needs in mind. Where appropriate, DoS is searched, and results shown to the user.

### 999 Dispositions

High acuity (999) dispositions are treated differently compared to the NHS 111 phone service. 111 online cannot dispatch an ambulance; users must act themselves and ring 999, when advised. Service areas can also choose to enable validation callbacks for low-acuity ambulance dispositions. When validation is active the texts below will not appear for category-3 and -4 ambulance dispositions (Dxs).

The following Dxs result in an instruction, rather than a recommendation, displayed to the user:

Category 2

* Dx011
* Dx0111
* Dx0112
* Dx01120
* Dx01121
* Dx0113
* Dx0114
* Dx0115
* Dx0117
* Dx0118

Category 3

* Dx012
* Dx0121
* Dx0122
* Dx0126
* Dx0127
* Dx0162

The instruction reads: ‘Phone 999 now for an ambulance’.

The following dispositions instruct the user to ring 999 but doesn’t set the expectation that they will need an ambulance

Category 4

* Dx013
* Dx016

The advice reads: ‘Phone 999 for an ambulance. Your answers mean you don’t need an emergency ambulance straightaway.’

In service areas where the End User and Service Provider(s) have agreed to validate category-3 and category-4 ambulance dispositions, users will be directed to book a callback from a clinician and have their case passed to a service provider. The process is similar to that followed for clinical callback dispositions.

### Clinical Callbacks

The following dispositions have been configured to send ITK messages to the 111 telephone service for clinicians to respond to via ITK messages:

* Dx32
* Dx325
* Dx327
* Dx329
* Dx330
* Dx34
* Dx35

**Dx38** has been changed to self-care for the online service with appropriate care advice instead of being passed to a clinician. Users are also provided with a link to find more help from the NHS.UK website.

### Dental dispositions

The system maps to the following dental dispositions:

* Dx17
* Dx18
* Dx19
* Dx20
* Dx21
* Dx22
* Dx118

In the Leeds area where the system was piloted, when Dental services in Leeds are closed, Dx17 and Dx18 go through to 111 telephone clinicians (via DoS and ITK). End Users will need to decide how they handle dental dispositions through the DoS.

### Mental Health Pathways

To support Mental Health pathways for the online service, changes have been made to when a user gets to the Mental Health Safety Closure pathway (PT8). The user is given a Dx35 disposition (clinician call back within 2 hours) or in more urgent scenarios takes them to a Dx11 or a Dx05 instead. This was a locally agreed solution in Leeds to support users with mental health concerns who may otherwise have no direct contact with anyone. It can be adapted to map these callers to the local CAS instead of the 111 telephone clinician call back queue. End Users will need to decide how they address this.

### Contact Genito-Urinary Clinic

A call back service (such as GP OOH) can be returned for this disposition (Dx31) if the End User has profiled call back services for this disposition, but there is no standard time frame for such callback. Therefore, upon completion of a successful callback request the user will be told that they will be contacted within a default of 24 hours, but the End User can amend this.

**A full list of disposition and Dx codes can be found in Appendix B**

## DoS look-ups and DoS filtering

111 online is designed to complement the 111 telephone service. It assesses patients’ needs using NHS Pathways clinical content which is linked to the Pathways Directory of Services (DoS), which provides information about clinically appropriate services.

Because the DoS was originally designed as a tool for call handlers and not for direct use by patients, we have had to introduce a series of rules to ensure the returns are appropriate:

* A new referral role “digital referral” needs to be added to services that need to return online.
* The patient's own GP details are not collected, which impacts on DoS results e.g. restricted services (such as a district nurse working to a group of GP practices) will never return.
* In hours, routine GP practices are not shown. Users are told to go to their own GP but are offered alternatives where available.
* In hours, routine dental practices are not shown; Users are instead told to go to their own dentist and are offered alternatives if available.
* Between 8am and 6pm, Monday to Friday, GP Out-Of-Hours (OOH) is not shown.
* If the GP disposition end time is in hours, GP OOH is not shown.
* The two rules above will be nullified where online primary care dispositions, like Dx11, 12, have been mapped in the DoS to an ITK service open 24/7, such as an Integrated Urgent Care (IUC) Clinical Assessment Service (CAS). In this case, users can provide their details and refer themselves to that service for a callback during the in-hours period as well.
* During the out-of-hours (OOH) period, if there are no options for GP and dental dispositions, the user gets the message " Sorry we can’t find anything in your area". The A&E ‘Catch all’ results are not shown for these dispositions.
* If the disposition is not a GP or dental one, and the DoS results are not suitable, the default is to show an A&E catch-all.
* The Limiting feature in the Directory of Services should be used when commissioners wish to prevent their services appearing to users in neighbouring areas.

## Referrals (ITK)

Where services can receive ITK referrals (as specified by local End Users and Service Providers), users will provide their personal details to the digital service and, at their request, will dispatch an ITK message containing the 111 online triage information. We have used the toolkit to successfully send ITK messages through to Adastra, SystmOne, and Cleo systems. Work is underway to interoperate with Cleric as well. Referrals appear in the relevant callback queue in the clinical assessment service (or other care setting).  
  
The service does support sending email referrals as well, and this has been implemented for dental services where ITK isn’t an option.

## Exceptions

Currently the service does not have the same functionality as the telephone service. The main differences are:

**Transition to phone service continuity**

When transferring from 111 online to a 111 telephone clinician provider, the triage information captured online is visible in a read-only format as it has not originated in the same patient management system. The clinical advisor continuing the assessment will need to create a new case for the patient.

**GP details, SPINE Trace and DoS**

The service does not collect a user’s GP details before searching the DoS, which can impact the returns shown on screen. This also prevents the online service from sending a post event message (PEM) to the GP.

However, when 111 online sends a case to an outside service, it checks the user’s details with the Personal Demographic Service (PDS), and if it discovers a unique match, the ITK message arrives with the patient’s NHS number and GP details. Currently this SPINE trace succeeds more than sixty percent of the time. When the PDS lookup cannot identify a patient, there is a need, upon transfer of a user to a live clinical service for a call back, for the clinician to complete this administrative process at the point of the call back. If providers consider this an excessive burden on clinicians, then a member of administrative staff may be able to complete a trace based on the details in the ITK message, but the clinician will still have to verify these details at the start of the call back. This requires a review of the SOP for call backs generated from the 111 online service as mentioned in the clinical section below.

**Online booking**

The service doesn't allow online bookings at this time. Instead the user is offered the chance to complete their details which are sent to a care setting and are called back by a Service Provider.

**Repeat caller service**

The service doesn’t use the repeat caller service because it is difficult to disaggregate patients who are using the service for ‘real’ vs experimentation. We track repeat users of the service; however, this is used for analytical rather than operational purposes.

**Pre-assessment dispositions**

The service currently does not have any pre-assessment dispositions such as emergency prescriptions, although we plan to implement this in the future.

# Implementation

The following section details the steps End Users must undertake in order to implement 111 online successfully, and the associated responsibilities of NHS Digital.

## Assign team and map stakeholders

It is important you identify a named contact who can project manage the implementation for the End User and ensuring the engagement and cooperation of Service Providers. They will also need to identify a clinical lead, operational lead and comms lead to form a task and finish group.

Here are some indicative resourcing requirements from previous implementation projects:

|  |  |  |
| --- | --- | --- |
| **Role** | **Band** | **Total Days** |
| Head of Service Development | 8c | 15 |
| Clinical Lead 111 | 8c | 2 |
| Clinical Lead 999 | 9 | 2 |
| Project Support | 5 | 10 |
| ICT Support | 6 | 5 |

This excludes work by DoS teams. The work on the DoS is the most substantial piece of work for implementing online and takes significant testing time. This should be done as early as possible to avoid delays.

**It is also vital that early engagement takes place with all urgent care Service Providers (OOHs etc) that will receive ITK messages as part of Phase 3 implementations.**

**It is a significant challenge to line up multiple venues and individuals to receive test messages from our service. Often configuration changes are needed and retesting is required. We recommend a specific individual is assigned to project manage and coordinate this. All care settings must be comfortable with the workflow and governance arrangements before the implementation can take place.**

## Identify geographic areas for implementation

To use 111 online we will need a list of Clinical Commissioning Groups so that users in an area can access the service and the Directory of Services. NHS Digital will recover a list of postcodes from ONS Postcode Directory.

This data is then imported into the system and the service is “switched on” for those postcodes. When new data is made available from ONS we will update the system.

## Working with the DoS for 111 online

To identify which services on the DoS should appear to the public, the referral role of ‘Digital Referral’ should be added to those DoS services you want to return for 111 online. This is a new role created specifically for 111 online.

The Digital Referral referral role allows the End User to control which services they choose to offer for the online service.

Things to check and be aware of:-

* For any services that need a user to phone, ensure “*You must telephone this service before attending*” has been added to the Public Facing information field and the Public Phone field has a number. This is ignored if we have set up the service to accept ITK messages.
* For services that need the user to attend, ensure “*You can go straight to this service. You do not need to telephone beforehand.*” has been added to the Public Facing information field. This will work with, or without a public phone number. This is ignored if we have set up the service to accept ITK messages.
* If you add both lots of text to the field, it will default to Phone, no matter which order, as long as it has a phone number in the public field. If both text and no phone number, then it will default to the place to visit.
* Any information held in the DoS Public Facing Information and Referral Information fields are not shown online.
* Review **service names** to make sure that they make sense to an online user. For example, if there are NHS abbreviations in the title they will confuse a user (e.g. OOH). Where possible, they should be removed. 111 online will display what is entered in the Public Name field, if populated; otherwise text from the Name field appears on-screen.
* The service **does not** stop users submitting an ITK referral if a service is closed **as long as** the service reopens before the end of the disposition and the disposition timeframe ends before in-hours. If a user selects a service that closes before they complete their personal details section on an ITK referral, they will be advised that it is closed and offered an alternative.
* The service doesn’t return any GP OOH services between 8am and 6pm unless a specified date has been set.
* The service currently only shows the top two results per service type.
* If a service is closed now, but opens before the end of the disposition timeframe, it returns in DoS. However, users can only pass their details to a service by ITK referral if that service is presently open.

We have also implemented some extra rules around the DoS services.

They are:

* When there are fewer than two DoS results for anything, the default is to show A&E as a 'Catch-all'. This is not shown on GP and dental dispositions.
* The service doesn’t show a GP OOH disposition if the disposition end time is in-hours.
* The service doesn’t show routine GP practices in hours. This is to prevent patients visiting GPs at which they are not registered. Instead users are told to contact their own GP and, if available, are offered alternatives like Walk-In-Centres or an open service that accepts ITK referrals.
* DoS searches for 111 online return results from the same square area as is used for the local telephone service. Where the search distance has not been specified, the default is 37 miles.
* DoS Search distance is set by postcode limitors in DoS and uses the same one as telephone

You can test changes in DoS to see how they would work for a user by going to this website:

[**https://providersite.staging.111.service.nhs.uk/**](https://providersite.staging.111.service.nhs.uk/)

Username: 111Providers

Password: D05t34m

This should be used in conjunction with the DoS Direct Linking Tool (an excel file that enables you to quickly reach dispositions and check DoS results). This is available on the implementation site - <https://nhschoices.github.io/nhs111-implementation-site/> .

Service Providers need to agree to these rules just as they would have done for the current working arrangements for the telephone 111 service.

Most existing DoS profiles can be used, with the ‘Digital Referral’ role added.

## Creating new DoS profiles

It is likely that some new profiles will be required for use specifically with the online service. In fact, we would recommend this as it provides flexibility for End Users to profile services in the appropriate way.

For instance, for ‘referral to clinician’ dispositions a new 24-hour DoS entry needs to be created. This should be called ‘111 Online Callback’. It should have the following Symptom Group [SG] /Symptom Discriminator [SD] combinations:

* [SG]NHS Pathways in-house clinical with:
  + [SD]PC General health information
  + [SD]PC healthcare professional callback

An example service of the above is ID ‘1479806497’.

They will also need to add the Digital Referral role, and possibly create multiple services to cover the entire geographic region.

Service areas that do validation callbacks should also create a profiles for the Category 3/4 ambulances and ED validation dispositions (Dx333 and Dx334). This will allow areas to start or stop receiving validation cases without affecting the ‘referral to clinician’ cases above. It should have the relevant SG /SD combinations appropriate for the service being profiled.

* The services should be mapped to the following Dx codes:
  + Dx333
  + Dx334

Provides and commissioners can customise the opening hours for validation callbacks. Separate profiles for each Dx code allow service areas to implement and control 999 and ED validations separately. Again multiple services may be required to cover the entire geographic region.

## ITK Messages

Work may need to be carried out by the 111 telephone Service Providers’ patient management system to receive incoming ITK messages and place these in the correct queue. How this works will be down to local implementation. In the Leeds pilot the local services received messages into their callback queue. The Service Provider will see messages in their call queues sent from “NHS Digital message engine”.

The online service will only send ITK messages to approved services. **NHS Digital will need a list of approved ITK endpoints / Service IDs from the End User.** Only those ITK endpoints will be offered as a call back to users.

Ideally a test or training system should be made available so test calls can be sent through to check any configuration of the receiving system. Where an End User uses more than one system, we recommend that each one is tested and receives an ITK message successfully.

It is also advisable that a call is sent through to each DoS service that you wish to receive ITKs, to ensure any firewall or configuration problems are found before any go-live. Live test calls will also be needed prior to go-live, post go-live and also on occasion on an ad hoc basis when changes are made (with agreement between all parties prior to sending).

Service Providers will need to set up appropriate queues for the inbound ITK referrals for the service. There are several ways that this can be done, for example for the Leeds pilot existing Service Providers of the service have:

* Yorkshire Ambulance Service maps inbound cases to the main clinical queue, but are flagged by Adastra via the ‘Case Tag’, adding a coloured label for a case originating online
* For the OOH GP service Local Care Direct the cases go directly into the SystmOne queue as normal but are mapped by Dx Code.

# Testing

As part of 111 online the service needs to be assured and validated that it works as expected.

The following section details the steps End User’s must undertake in order to test 111 online successfully and the associated responsibilities of NHS Digital.

## Checking DoS results

It is the responsibility of the End User to ensure DoS results are surfacing appropriately in 111 online.

Testing the DoS service is key to a successful implementation, to ensure that the DoS results return correctly, meet the user's needs and the requirements of the End User. We will work closely with the DoS lead and End User to make sure this works. The End User will need to test various postcodes throughout the area to ensure services from border areas are not inappropriate. These postcodes are best supplied by local staff who know the area well. It’s important that boundary areas are tested.

We recommend testing the following to check DoS:

* Testing boundaries: most eastern, western, northern and southern areas of the service. This will help identify boundaries issues and DoS services that shouldn’t appear
  + Test with in-hours and out of hours
  + Test across every Dx code.
* This test needs to be carried out on the DoS environment(s) where the profiling has occurred. Predominantly this has been done on Live DoS.

DoS features such as Limiting, Ranking, and Promotion can be applied to ensure that the most appropriate services return and that neighbouring services are excluded, if desired.

The tester will need to access UAT and live DoS results.

## Checking ITK messages (ITK)

Tests for ITK messages will include:

* Goes into the correct queue with the correct priority
* All user details go into correct fields. Test should encompass 1st and 3rd person ITK messages
* Referrals can be identified as being sent from online

We can supply test scripts and expertise to help support this testing.

**Where issues are found often retesting is required so factor in plenty of time for testing.**

New tests will need to be done post-implementation to add a new service, when a service provider changes, or when new Dx’s are added to a service profile, for example Dx330. Tests are also needed before activating validation callbacks for 999 and ED outcomes (Dx333 and Dx334).

# Post-implementation

The following section details the steps End Users must undertake after implementation of 111 online and the associated responsibilities of NHS Digital.

## Reporting and Analytics

Once implemented you will be provided data from the service. We use different sets of tools for monitoring and will provide standardised data. Any additional reporting and analytic needs will be discussed as part of implementation. We will work with end users to meet their requirements. Data from NHS Digital is meant only for primary use so that end users can monitor activity and trends in their area.

## Metrics

The following metrics will be measured and shared with End Users on a regular basis as set out in section 7.1.1:

* 1. Performance Data supplied from Online Service platform (live)
     1. Indication of levels of patient access and use of 111 online
     2. Indication of appropriate local service provision through NHS 111 telephone service
     3. Indication of accurate information sharing
     4. Indication of acuity of outcomes from online self-assessment
     5. Indication of incident management and 111 online Service review
  2. Data Supplied from Patient Survey

Much of this information is available from the 111 online data portal. End Users can monitor usage and download reports from it. [dataportal.111.service.nhs.uk](https://dataportal.111.service.nhs.uk/Account/Login?ReturnUrl=%2F)

To access the data portal, you will need to register for an account, that will be approved by NHS Digital.

## Service Management and Support

NHS Digital shall use reasonable endeavours to provide 111 online digital service to availability of 99.5%, based on hosting environment dependency external sources such as the Directory of Services (DoS). This will be reviewed from time to time.

111 online has a 24/365 service desk for logging issues and problems with the service from either the public or the End User. This is supported in hours and out of hours by both the technical and clinical teams at NHS Digital via the National Service Desk (0300 303 5035, [ssd.nationalservicedesk@nhs.net](mailto:ssd.nationalservicedesk@nhs.net)).

If a serious issue is found with the service at any time, we have the ability to bring 111 online quickly offline and direct all users to the 111 telephone service. This is a last resort only if a serious clinical concern is found.

In the event of technical failures:

* 111 online website fails totally or partially. NHS Digital will, in this order:
  1. Inform Service Providers and End User
  2. attempt to transition to disaster recovery site (back-up site).
  3. place a holding message on screen at the front end advising users to call 111.
  4. If the outage lasts more than 1 hour, IVR message will be removed from local 111 services.
* If the call handling service fails End User shall.

1. alert the NHS Digital 111 online team but no action required to take service offline unless identified by End Users

* If the CAS or other care setting fails and is unable to take patients the End User or Service Provider will:

1. Follow usual procedures as per local operating procedures
2. Alert the 111 online team of the issue and seek technical advice.

## Monitoring and Incident Management

End Users are under a general obligation to monitor use of 111 online in their area and should, and should procure that Service Providers, make enquiries as to whether presenting patients have accessed 111 online or other services. End Users shall, and shall procure that any Service Providers shall, report any issues with 111 online (technical, operational or clinical safety related) that they become aware of. Accordingly, End Users shall, and shall procure that Service Providers shall:

* Establish Standard Operating Procedures for the:
  + Identification and local recording of issues relating to 111 online within Service Provider’s local incident reporting system (e.g. Datix)
  + Reporting of incidents to NHS Digital compliant with the following requirements:
    - incidents scored as the highest risk based on local stratification (where there is an immediate risk to health or life) and considered to be directly linked to use of 111 online should be immediately reported to NHS Digital by both telephone and written record;
    - any death referred to a Coroner of a person who was assessed and / or referred using 111 online, should be reported to NHS Digital within five working days of the End User or any Service Provider becoming aware of the referral or incident (a “**Coroner Referral**”); and
    - any serious untoward incident where: (i) there is actual threat to life, injury, a near miss or a formal complaint received by the End User or any Service Provider; and ii) there is a perceived issue in the way that 111 online has been utilised; and /or iii) a change to the 111 online content is suggested following internal review should be reported to NHS Digital within five working days of the End User or any Service Provider becoming aware of the incident; and
    - all incidents should be reported to the National Service Desk (0300 303 5035, [ssd.nationalservicedesk@nhs.net](mailto:ssd.nationalservicedesk@nhs.net)) and accompanied by an anonymised report (immediately or as soon as possible thereafter in accordance with the End-User’s timescales for addressing possible serious untoward incidents) and any outcomes known at the time of reporting;
  + Sharing of complaints against 111 online with NHS Digital:
    - Direct complainants who enter feedback on the webpages in the feedback boxes displayed on screen will be picked up directly by NHS Digital;
    - Users who have only had an online journey but subsequently submit a complaint to Service Providers or End Users, including mechanisms to assist in tracing the online interaction (date, time, clinical complaint, outcome, etc..) should have their complaint passed to NHS Digital via the National Service Desk (0300 303 5035, [ssd.nationalservicedesk@nhs.net](mailto:ssd.nationalservicedesk@nhs.net)).
* ensure staff are educated about the established issues management SOP.

Any issues identified by NHS Digital will also be logged with the National Service Desk to maintain the governance audit trail and the clinical safety team will be informed.

NHS Digital shall operate, and the End User shall, and shall procure that Service Providers contribute to the following review process:

* A multidisciplinary NHS Digital 111 online team will investigate issues and incidents that are submitted, agree an investigation plan, if necessary, which will be conveyed back to the reporting End User, and estimate a time frame for resolution based on the information available;
* Any critical incidents will be escalated to the senior clinical team member and reviewed against the agreed STOP criteria in Appendix B, see section 7.1.1. Following an incident locally affected End Users, Service Providers and NHS Digital shall consult and a decision may be taken to stop the service in a specified region or nationally or to continue operations subject to certain conditions or time-defined review;
* Escalation to the Senior Clinical Team within NHS Digital (including NHS Pathways) and the Clinical Reference Group within NHS England will occur for:
  + StEIS reportable incidents
  + Coroner’s referrals
  + SUI investigations
  + Press enquiries
* NHS Digital may, upon review, request further information in relation to any incident or Coroner’s referral, which the End User shall provide;
* A resolution time frame will be agreed and communicated for issues raised dependent on the investigation outcomes and work involved in the resolution in line with the NHS Complaints Policy, July 2016; and
* All identified and reported issues will be reviewed at the regular risk management meetings between Service Providers, End Users and NHS Digital; preferably linked to local governance meetings already in place, see section 7.1.

# Implementation checklist

An implementation checklist and project plan can be found on the documentation microsite at: <https://nhschoices.github.io/nhs111-implementation-site/>

# Governance

## Clinical governance

This is defined by the Department of Health & Social Care publication “A First-Class Service” as:

“A framework through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish”.

The NHS Pathways National Clinical Governance Group (NCGG) currently retains oversight and control of the content of the NHS Pathways Clinical Decision Support Software (CDSS). For 111 online, the clinical content has been adapted from the telephony version (Release 15) of NHS Pathways. A clear assurance process established by the NHS Pathways clinical team ensures that all questions and care advice adapted for 111 online retain the clinical integrity of the NHS Pathways system. This process has been presented to the NCGG and approved by the NHS Pathways team. Approval for release was agreed with the NHS Pathways National Clinical Governance Group (NCGG) as well as the relevant Programme and Assurance Boards within NHS Digital and NHS England.

### 7.1.1 NHS Digital Responsibilities

* Clinical Effectiveness testing
  + Established a cohort of clinicians within NHS Digital to run clinical scenarios through the online tool and feedback their findings to the project team
  + Collation and sharing of metrics (as detailed in section 5.2)
* Operation of incident management process (as detailed in section 5.4)
* Notification of change to the End User (as detailed in section 1)
* Regular risk management meetings (including end-to-end reviews) involving all partners will be established to align with local regular governance meetings for the telephone 111 service
* There will be agreed STOP criteria for specified clinical, operational and technical issues arising during the beta test (see Appendix B)
* The service has achieved Clinical Authority to Release (CATR) from NHS Digital Clinical Safety Team (DCB0129) and produced a Clinical Safety Case Report. This will be updated as new functionality is brought on board.

### 7.1.2 Local End User and Service Provider responsibilities

End User’s shall, and shall procure that Service Providers shall:

* formally approve the clinical governance arrangements for deployment
* Identify clinical leadership within their organisations responsible for;
  + ensuring care of patients transferred via 111 online is embedded in local governance arrangements; and
  + undertaking local testing;
* Coordinate local clinicians across the urgent care system to run “mystery shopper” clinical tests on the content and provide feedback to regular internal risk management meetings
* Report incidents to NHS Digital as described in section 5.4
* Attend regular risk management meetings with NHS Digital to ensure that identified issues can be fed back to the NHS Digital 111 online team
* Educate local staff about the service and establish a Standard Operating Procedure (SOP) for the identification and handling of call-backs generated by 111 online
* Establish a local SOP for the identification and management of 111 online cases:
  + That do not receive a call back within the recommended disposition time-frame
  + That are not contactable on the given number sent through in the ITK message.
  + That require transfer to daytime services at the end of the OOH period
  + That arrive at shoulder times of service operations such that clear responsibilities are established for management to maintain patient safety
  + That arrive with 999 or ED dispositions and are then validated according to local processes.
* Agree to the STOP criteria and processes listed in Appendix B

### 7.1.3 Regulation

111 online is fully compliant with Information Governance, MHRA, CQC and current clinical safety DCB regulations

## Information governance

* Personal Data may be collected by NHS Digital, End Users and Service Providers at various points throughout the use of 111 online by a user, in each case acting as a Controller.
* NHS Digital has a lawful basis to establish and operate the NHS 111 Online Information System under a Direction from NHS England.
* Personal Data will be collected, stored and handled by NHS Digital in compliance with the Data Protection Laws and used for service delivery, service improvement, statistical analysis and audit purposes. Personal Data is stored in a secure, encrypted database by NHS Digital.
* End Users shall, and shall procure that Service Providers, collect, store and handle Personal Data in compliance with the Data Protection Laws.
* Personal Data collected as a user accesses 111 online will be shared as necessary to create and transfer the ITK messages, but otherwise will not be shared beyond NHS Digital. Aggregated, non-identifiable data will be available for End User use to understand patient journeys and the impact on local services.
* Data handling at the receiving site is the responsibility of the local Service Provider. End Users shall ensure that appropriate data sharing agreements are in place between themselves and Service Providers to allow the sharing of the ITK messages.
* NHS Digital shall:
  + be responsible for the privacy notice on the 111 online site, and shall ensure that this requests data subjects to contact NHS Digital in relation to use of the 111 online site;
  + be responsible for responding to communications from, and discharging responsibilities to, data subjects (as defined in the Data Protection Laws) in respect of the use of the 111 online site;
  + ensure relevant documents relating to the management of information through 111 online are available for review by Service Providers including: Privacy notice, Data Protection Impact Assessment, site Terms and Conditions.
* End Users shall, and shall procure that Service Providers shall:
  + ensure the local privacy notices on the End User’s sites and Service Provider’s sites give sufficient details about the 111 online service;
  + be responsible for responding to communications from, and discharging responsibilities to, data subjects (as defined in the Data Protection Laws) in respect of any care or communications subsequent to use of the 111 online site; and
  + Ensure that a summary of the data flows through online service are reviewed and approved by local Caldicott Guardians.

It is expected that the following data shall be collected and, as applicable, shared:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Data Category** | **Data Type** | **Collected By** | **Possible organisations the data and any derivatives from it may be shared with** | **Possible processing and uses of the data** |
| A | Individual ITK messages based on information inputted by users and including name and contact information as volunteered by users requesting a clinical call back (where contact details are packaged together with the triage information, encrypted and transferred as an ITK message to the receiving Service Provider for the purposes of direct patient care.) | NHS Digital | From NHS Digital to individual Service Providers | Provision of healthcare |
| B | Aggregated and anonymised information inputted by users | NHS Digital | From NHS Digital to:   * Department of Health; * NHS Commissioners; * Clinical Commissioning Groups; * Potential End Users; * National Clinical Governance Group; * Digital Urgent and Emergency Care Board; * Service Providers. | Product improvements, statistical analysis |
| C | Data collated and submitted as a result of:   * any investigations associated with 111 online use; * Reporting of issues, clinical incidents and coroner’s referrals in accordance with the requirements of section 5.4; * User feedback and survey results; * Complaints made by users. | End User, Service Provider and NHS Digital | * Between End User, Service Provider and NHS Digital * From End User, Service Provider and/or NHS Digital to anybody involved in related legal proceedings * Possible sharing with National Clinical Governance Group if appropriate to the resolution of a particular on-going issue. | Product improvements, statistical analysis, audit, legal proceedings |
| D | Documentary records and notifications for statutory purposes:   * Freedom of Information requests for information; * Data Protection legislation requirements, eg subject access requests; | End User, Service Provider and NHS Digital | * Between End User, Service Provider and NHS Digital * Otherwise generally not shared, except where required by external regulatory bodies, required by law or as set out elsewhere in this agreement. * Freedom of Information requests will be shared with anyone who has a valid FOI request, subject to the conditions in the FOI Act * Subject access requests will be shared with the data subject | * Compliance with legislation |

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# Appendix A - About the team

## How we work

The whole development of 111 online is underpinned by user research. All new features and fixes are continuously tested with users and fed back into the design process of the service.

The design of the service is based upon an understanding of our users’ needs, what they want to achieve and their own personal circumstances. The team works to agile principles which leads to a high rate of delivery and continuous improvements to the service. We aim for an update at least once every 2 weeks.

The team includes:

* Software developers
* Quality assurance lead
* User researchers
* UX, graphic and content designers
* Infrastructure specialist
* Clinicians
* Support from Pathways clinical and governance teams

We work closely with our End Users to ensure we are identifying and continuously improving the application, to make sure the online offering is meeting the needs of the users and Service Providers.

111 online uses the Microsoft Azure cloud platform. The application is built on highly scalable and fault tolerant architecture. The platform complies to the ISO/IEC 27001 information security management system standard. It also conforms to the SCCI0129 clinical safety standard. The application is also monitored from multiple vectors to provide robust application monitoring.

The service has been developed to meet [Web Content Accessibility Guidelines 2.0](https://www.w3.org/TR/WCAG20/) with a strong focus on accessibility and inclusivity.

You can stay informed about latest developments by attending our fortnightly show-and-tells (email [nhs111online@nhs.net](mailto:nhs111online@nhs.net) for details) and by joining our slack instance: [https://digitalurgentcare.slack.com/](https://digitalurgentcare.slack.com/messages).

# Appendix B

## List of supported Pathways

Link to Pathways used online - with comments on those not used / accessible:

<https://hscic365-my.sharepoint.com/:x:/g/personal/stbe4_hscic_gov_uk/EYegWmdNsUxEiz26gVjtan4BC9H4ruhMUaIZ6d3P8XSItA?e=fDL5oa>

We are currently working on improving the mental health pathways to be suitable for online usage and making best use of local mental health services. We are piloting the approach with the Leeds area first.

## List of supported Disposition codes

The service currently supports the following dispositions

|  |  |
| --- | --- |
| **Disposition Code** | **Description** |
| Dx011 | Emergency Ambulance Response (Category 2) |
| Dx0111 | Emergency Ambulance Response for Acute Abdomen Pregnant (Cat 2) |
| Dx0112 | Emergency Ambulance Response for Acute Coronary Syndrome (Cat 2) |
| Dx0113 | Emergency Ambulance Response for Anaphylaxis (Cat 2) |
| Dx0114 | Emergency Ambulance Response for Aortic Aneurysm Rupture/Dissection (Cat 2) |
| Dx0115 | Emergency Ambulance Response for Labour Complications (Cat 2) |
| Dx0117 | Emergency Ambulance Response for Possible Stroke Time Critical (Cat 2) |
| Dx0118 | Emergency Ambulance Response for Potential Shock (Cat 2) |
| Dx01120 | Emergency Ambulance Response for Respiratory Distress Trauma (Cat 2) |
| Dx01121 | Emergency Ambulance Response for Septicaemia (Cat 2) |
| Dx012 | Emergency Ambulance Response (Category 3) |
| Dx0121 | Emergency Ambulance Response (Cat 3) to transport a patient to an Emergency Department for conditions which need to be attended quickly |
| Dx0122 | Emergency Ambulance Response (Cat 3) to assess a patient face to face |
| Dx0126 | Emergency Ambulance Response for Trauma Emergency (Cat 3) |
| Dx0127 | Emergency Ambulance Response for Pregnancy/Labour problem (Cat 3) |
| Dx013 | Assistance needed at home due to inability to get off the floor (Cat 4) |
| Dx016 | Non-emergency Ambulance Response (Cat 4) |
| Dx0162 | Transport to an Emergency Treatment Centre within 1 hour (Cat 3) |
| Dx02 | Attend Emergency Treatment Centre within 1 hour |
| Dx03 | Attend Emergency Treatment Centre within 4 hours |
| Dx05 | To contact a Primary Care Service within 2 hours |
| Dx06 | To contact a Primary Care Service within 6 hours |
| Dx07 | To contact a Primary Care Service within 12 hours |
| Dx08 | To contact a Primary Care Service within 24 hours |
| Dx09 | For persistent or recurrent symptoms: get in touch with the GP Practice for a Non-Urgent Appointment |
| Dx10 | MUST contact own GP Practice for a Non-Urgent appointment |
| Dx11 | Speak to a Primary Care Service within 1 hour |
| Dx118 | Attend Emergency Dental Treatment Centre within 4 hours |
| Dx12 | Speak to a Primary Care Service within 2 hours |
| Dx13 | Speak to a Primary Care Service within 6 hours |
| Dx14 | Speak to a Primary Care Service within 12 hours |
| Dx15 | Speak to a Primary Care Service within 24 hours |
| Dx16 | For persistent or recurrent symptoms: get in touch with the GP Practice within 3 working days |
| Dx17 | To Contact a Dental practice within 1 hour |
| Dx18 | To Contact a Dental practice within 2 hours |
| Dx19 | To Contact a Dental practice within 6 hours |
| Dx20 | To Contact a Dental practice within 12 hours |
| Dx21 | To Contact a Dental practice within 24 hours |
| Dx22 | To Contact a Dental practice within 5 working days |
| Dx28 | Contact Pharmacist within 12 hours |
| Dx30 | Speak to Midwife within 1 hour |
| Dx31 | Contact Genito-Urinary Clinic or other local service |
| Dx32 | Speak to a Clinician from our service Immediately |
| Dx325 | Speak to a Clinician from our service Immediately - Toxic Ingestion/Inhalation |
| Dx327 | Speak to a Clinician from our service Immediately - Chemical Eye Splash |
| Dx329 | Speak to a Clinician from our service Immediately - Failed Contraception |
| Dx330 | Speak to a Clinician from our service immediately – Burns, Chemical |
| Dx333 | Speak to a Clinician from our service immediately - Ambulance Validation |
| Dx334 | Speak to a Clinician from our service immediately - Emergency Treatment Centre Validation |
| Dx34 | Speak to Clinician from our service within 30 minutes |
| Dx35 | Speak to Clinician from our service within 2 hours |
| Dx38 | Speak to Clinician from our service for home management advice |
| Dx39 | Symptom Management Advice |
| Dx49 | 999 for police |
| Dx50 | Speak to Midwife or Labour Suite immediately |
| Dx60 | Contact Optician next routine appointment within 72 hours (3 days from now) |
| Dx75 | MUST contact own GP Practice within 3 working days |
| Dx89 | Attend Emergency Treatment Centre within 12 hours |
| Dx92 | Attend Emergency Treatment Centre within 1 hour for Mental Health Crisis Intervention |
| Dx94 | Attend Emergency Treatment Centre within 1 hour for Sexual Assault Assessment |

## Open source repositories

<https://github.com/NHSChoices/nhs111-online>

## STOP criteria for public beta

1. Duty executive, clinical and operational leads from relevant stakeholders (NHS Digital and affected End Users and Service Providers) are to be involved in any decision to STOP the public beta service. This is not a unilateral decision
2. If STOP criteria are met, the duration of stoppage is to be agreed and RESTART criteria agreed by responsible leads during the next working day.
3. Should local operational demand become clinically unsafe, as assessed by the End User and Service Provider operational leads, then 111 online can be switched off, either locally or nationally, to help local services deal with other demand, following consultation with the duty team for NHS Digital.
4. Communication of the STOP decision to all sites with 111 online service in place will be through NHS Digital and NHS England
5. The STOP criteria are:

## Clinical

Death or serious harm (permanent injury) identified and verified as being directly related to clinical content of product:

1. Original question algorithm or Pathway – NHS Pathways to investigate (with NCGG oversight)
2. Content translation for online service – NHS Digital to investigate (with NHSE CRG panel, NHS Digital executive input, NHS Pathways)
3. Content display error due to technical failure – NHS Digital to investigate (with NHSE CRG panel, NHS Digital executive input)
4. A decision will be made by the CRG Panel, NHS Digital and NCGG/Pathways team about duration of STOP period if criteria met.

## Operational

Verified increase in demand to local services **from online referrals** causing significant deviation from usual operating parameters.

Rises in demand for advisory endpoints for example, 999 calls, ED attendances will be difficult to directly attribute to 111 online service and will not be included in the STOP criteria. There currently isn’t a mechanism in place for the 111 online service to identify compliance rates for users of the 111 online service.

1. Significant increase in demand to single local service of 25% greater than usual operational model
   1. Demand 25% higher than usual
   2. Operational performance 25% worse than usual against KPI compared to previous data for this period
   3. Consider amending disposition screens for this single service prior to implementing STOP protocol
2. Significant increase in demand to multiple services of 15% greater than usual operational model
   1. Demand 15% higher than usual
   2. Operational performance 15% worse than usual against KPI compared to previous data for this period
3. Needs to be clearly linked to online use:
   1. Direct ITK referral rates verified and numbers matched with numerical increase in service demand
   2. Operational performance decline linked directly to online referral message timings and dispositions
   3. Ensure clinical staffing at established service provision levels to remove local clinical staffing issues impacting on beta

## Technical

Any technical issues that result in delays to reaching a disposition and thus present a potential clinical risk, such as delays in the patient journey, will be dealt with as below. This includes processes for both in and out of hours with relevant on-call support contact numbers

1. These will be identified internally or through the issues management process and will be reviewed by the NHS Digital issues review team.
2. Should these not be simply fixed by the development team then escalation to all stakeholder senior representatives will be made prior to reaching a STOP decision

The service will be able to be switched off within two hours of a STOP decision being reached by relevant parties. An error page will be presented to potential users with information about an error having occurred and the advice to call 111 should they require medical advice.

All further promotional messages informing residents of the beta test area will be suspended until the site has been safely redeployed.

A summary of stop criteria for possible technical issues is given below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Description of failure** | **Authorised by** | **Priority** | **Switch off?** | **rationale/notes** |
| No results from DoS | 111 Clinical Lead | High | No | Patients can still get a triage |
| ITK not sending (CPIS proxy down or other issue) | 111 Clinical Lead/Operational | High | No | Patients can still get a triage |
| ITK being sent to incorrect place/queue | 111 Clinical Lead/ operational | High | Depends | If a system-wide problem, service should be switched off. If one provider, DoS endpoint should be disabled. ITKs can be turned off system-wide whilst the triage function remains in place |
| Incorrect pathways or questions incorrect | 111 Clinical lead/ operational lead | High | Yes | Clinical integrity of the service is questionable |
| Too many ITK calls going through for service to deal with in a clinically safe time frame | 111 Clinical lead and local provider | Medium | No | If a CCG or provider is struggling with demand, it can be controlled via DoS or that service can be disabled. |
| Security breach - access to confidential data detected | 111 clinical / 111 operational lead | High | Yes | Site needs to be turned off whilst made secure |
| Infrastructure failure | 111 operational | High | Depends | If a part of the infrastructure has failed and it impacts the journey, the service (across all hosted sites) should be switched off until the issue is resolved. |

# Appendix C - Implementation Plan.

To download an implementation plan for 111 online, visit: <https://nhschoices.github.io/nhs111-implementation-site/>