# NHS Digital

# National Diabetes Audit Implementation Guidance

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**Information and technology
for better health and care**

# Contents

# 1. Background

The National Diabetes Audit (NDA) is part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP) which is commissioned by the Healthcare Quality Improvement Partnership (HQIP) and funded by NHS England. The NDA is delivered by NHS Digital (formerly known as the Health and Social Care Information Centre (HSCIC)) in collaboration with Diabetes UK and supported by the National Cardiovascular Intelligence Network.

The NDA was implemented in 2004. The first collection was for the audit period 2003-04, since then it has collected data annually and published a report of its findings, the latest report was published on 31 January 2017 covering the audit period 2015-16. The latest report can be downloaded here.

In 2014 the NDA announced that it would be accelerating the analysis and reporting of data. This was in response to feedback from users to provide more timely information to primary and secondary care participants in the audit. The accelerated collection collected data from the 2013-14 and 2014-15 audit years during the summer of 2015. Following the acceleration activities the audit findings are now published approximately 6 months after the audit data collection window closing. This gives more timely data for users to guide quality improvement initiatives.

In 2015, the NDA moved to an 'opt in' model following advice from the Confidentiality Advisory Group (CAG). In previous years, an 'opt out' model was used to extract data for the NDA. The model allowed GP practices to notify NHS Digital, if they did not want to take part in the NDA. However the move to 'opt in' means that from the 2013-14 audit onwards practices now have to actively choose to participate in the audit, rather than their practice data being extracted automatically.

## 1.1 Purpose of the collection

The NDA measures the effectiveness of diabetes healthcare against NICE Clinical Guidelines and NICE Quality Standards, in England and Wales. The NDA collects and analyses data for use by a range of stakeholders to drive changes and improvements in the quality of services and health outcomes for people with diabetes (the NICE Clinical Guidelines and NICE Quality Standards the audit measures against can be found by following these links https://www.nice.org.uk/guidance/conditions-and-diseases/diabetes-and-other-endocrinal--nutritional-and-metabolic-conditions/diabetes, http://www.nice.org.uk/guidance/ng17, http://guidance.nice.org.uk/QS6).

The NDA answers four key questions:

- Is everyone with diabetes diagnosed and recorded on a practice diabetes register?

- What percentage of people registered with diabetes received the nine NICE key processes of diabetes care?

- What percentage of people registered with diabetes achieved NICE defined treatment targets for glucose control, blood pressure and blood cholesterol?

- For people with registered diabetes what are the rates of acute and long term complications (disease outcomes)?

## 1.2 Scope of the Information Collection

The scope of the Information Collection covers all NHS funded GP practices and specialist outpatient services in NHS Hospitals/Trusts in England and Wales. It applies to all clinical outpatient settings that are accessed by diabetes patients for their routine diabetes care.

If you are an NHS Funded GP practice providing care for diabetes patients, or a diabetes specialist outpatient hospital/trust clinic providing diabetes care you are eligible to participate. By diabetes care we mean responsibility for overseeing the general care of your diabetes patients, e.g. overseeing that they have had their annual care checks for blood glucose levels, BMI, blood pressure, care planning and setting treatment targets, and review of education needs.

## 1. 3 Information Governance

Previously, the Secretary of State, on the recommendation of the Confidentiality Advisory Group has granted NHS Digital permission to collect patient identifiable data under Regulation 5 of the Health Service (Control of Patient Information) Regulations 2002 (known as Section 251 support).

From April 2017 NHS England will direct NHS Digital to collect patient identifiable data for the NDA from providers in England. The new legal basis for data to be collected by the NDA (Direction under section 254 of the Health and Social Care Act 2012) will mean the submission of data for the NDA audit will be mandated for GP practices and specialist services in England. Therefore, GP practices and specialist services in England will need to work with NHS Digital to supply the data for their practice or diabetes clinic.

The NHS England direction only covers providers in England. For Wales the legal basis for the collection of data will remain as Section 251. There will be no change for how practices participate in the audit for Wales.

# 2. About this document

The purpose of this document is to provide guidance and references to all GP practices and specialist services to support implementation and use of this Information Collection (including Extraction).

# 3. Primary Care Extraction

The NDA 2016-17 collection is planned for May 2017 – July 2017, it will remain open for 6 weeks for GP practices and specialist services to submit their data for the NDA collection. Exact dates for collection will be communicated with GP practices at least 6 weeks prior to the start of the collection period.

The primary care specification, which specifies what data should be collected from GP practices during the audit, is updated to reflect updates to read codes (or SNOMED once implemented) and/or changes in requirements for that audit period. Any changes in requirements need to be in line with the purpose of the audit and are subject to approval by the NDA Executive Board and NHS England Diabetes Programme Board. The primary care

specification is updated for the latest read codes and requirements, undergoing independent review and assurance, including clinical input.

The finalised primary care specification is shared with IT system suppliers (TPP, EMIS Web, INPS, Microtest) through a GPSoC Change Control Note and managed by NHS Digital in line with GPSoC guidelines.

Subject to agreement between NHS Digital and each IT system supplier that they can provide a process for their practices to participate, within the proposed time frame and cost effectively to meet the needs of the audit, a GPSoC contract is approved and work begins with the IT system suppliers. The IT system suppliers build their participation process which usually comprises queries that can be run on the GP practice system to extract the required data resulting in csv files. The system supplier tests the queries on their own IT systems to ensure they meet the specification.

Before the queries are released nationally assurance testing with a volunteer GP practice is undertaken. This occurs with each IT system (TPP, EMIS Web, INPS, Microtest). This involves the IT system supplier releasing the query to an agreed test GP practice, the GP practice extracts the data from their IT system and sends it securely to the NDA team. The NDA team then validates the extract to ensure it meets the specification format.

When the NDA team are satisfied with the data returned from the GP practices the IT system suppliers release the queries nationally to all their clinical systems for use in the audit collection.

To support practices in submitting data to the audit the NDA team along with IT system suppliers produce guidance for how to extract the data and submit to NHS Digital. Some of the guidance may differ in presentation because of the joint working between NHS Digital and each IT system supplier in producing the guidance documents.

Once complete guidance is shared with colleagues within CCGs and volunteer GP practices for quality assurance. The audit has welcomed feedback on the guidance documents and has updated or amended the guidance accordingly. Once the guidance is finalised it is made available on the NDA website.

The NDA team use a secure online portal for data submissions, known as Data Landing. Data Landing is part of the NHS Digital Clinical Audit Platform and is accessed through a NHS Digital Single Sign On account. All GP practice data for England, except TPP, is received in this way. Data Landing is built to accept data files securely. Once the data files are uploaded they are held securely on the NHS Digital servers.

# 3.1 England GP Practices using IT system TPP (SystmOne)

GP practices using TPP as their IT system can opt in to the audit by ticking a box within their TPP IT system. Once the box is ticked audit data containing patient information as specified in the specification will be automatically and securely extracted by TPP and shared with the NDA. Link to guidance on how to opt in to the NDA collection 2016-17 for TPP practices can be found under **Supporting Documentation**.

TPP extract the data from their practices that have opted in to the audit. The date of the extraction is published prior to the start of the collection, those TPP practices wanting to participate in the audit must have ticked the opt in box before the extraction date for their data to be included in the extract. The data is then extracted by TPP. If TPP practices miss the extraction date they can submit to the audit using MiQuest queries, guidance on how to submit to the audit using MiQuest queries can be found under **Supporting Documentation**.

## 3.2 England GP Practices using IT system EMIS Web

GP practices using EMIS Web as their IT system can opt in to the audit by running a report within their IT system. The report once completed will produce a CSV file containing the diabetes audit data as per the specification; the file can then be saved to the computer being used.

To submit the CSV file securely to the audit an account for Data Landing must be created. Link to guidance on how to run the report, register for Data Landing and submit to Data Landing for EMIS Web practices can be found under **Supporting Documentation**.

## 3.3 England GP Practices using IT system INPS (Vision)

GP Practices who use INPS as their IT system can opt in to the audit by running a report within their IT system. The report once completed will produce a CSV file containing the diabetes audit data as per the specification; the file can then be saved to the computer being used.

To submit the CSV file securely to the audit an account for Data Landing must be created. Link to guidance on how to run the report, register for Data Landing and submit to Data Landing for INPS practices can be found under **Supporting Documentation**.

## 3.4 England GP Practices using IT system Microtest

Microtest extracts the NDA data for GP practices that use Microtest as their IT system using the developed MIQUEST queries. Once the diabetes audit data is extracted it is saved as CSV files and stored in a secure folder within the GP practice IT system. If the practice chooses to opt in to participate in the audit they can collect the CSV files and submit them to the audit.

To submit the CSV file securely to the audit an account for the Data Landing must be created. Link to guidance on how to run the report, register for Data Landing and submit to Data Landing for Microtest practices can be found under **Supporting Documentation**.

## 3.5 All other England GP Practices

Any GP practice can submit to the audit using MiQuest queries. There are some practices who do not use TPP, EMIS Web, INPS or Microtest as their IT system suppliers these practices can use MiQuest queries to submit their practice data to the audit.

MiQuest queries can also be used for those TPP practices that missed the extraction date or if a practice is having issues running the reports developed by their IT system supplier.

MiQuest queries can be downloaded from the NDA Miquest website and ran in the GP practice IT system. Once the queries are ran they can be saved to the practice IT system. To submit the MiQuest queries securely to the audit an account for Data Landing must be created. Link to guidance on how to run the queries, register for Data Landing and submit to Data Landing can be found under **Supporting Documentation**

# 3.6 Primary care data flow diagram
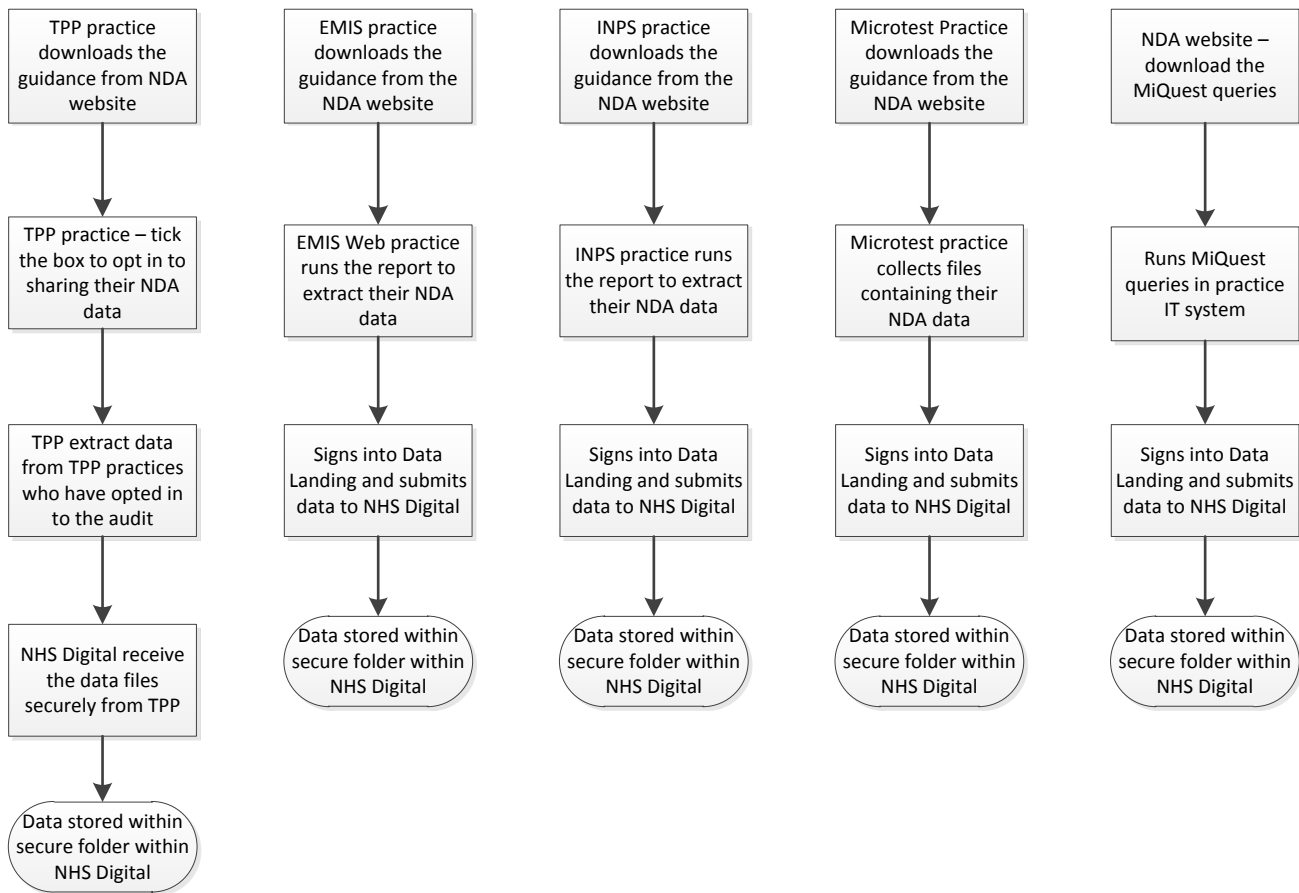
| TPP practice downloads the guidance from NDA website | EMIS practice downloads the guidance from the NDA website | INPS practice downloads the guidance from the NDA website | Microtest Practice downloads the guidance from the NDA website | NDA website – download the MiQuest queries |
|---|---|---|---|---|
| TPP practice – tick the box to opt in to sharing their NDA data | EMIS Web practice runs the report to extract their NDA data | INPS practice runs the report to extract their NDA data | Microtest practice collects files containing their NDA data | Runs MiQuest queries in practice IT system |
| TPP extract data from TPP practices who have opted in to the audit | Signs into Data Landing and submits data to NHS Digital | Signs into Data Landing and submits data to NHS Digital | Signs into Data Landing and submits data to NHS Digital | Signs into Data Landing and submits data to NHS Digital |
| NHS Digital receive the data files securely from TPP | Data stored within secure folder within NHS Digital | Data stored within secure folder within NHS Digital | Data stored within secure folder within NHS Digital | Data stored within secure folder within NHS Digital |
| Data stored within secure folder within NHS Digital | | | | |

# 3.7 GP Practices in Wales

For practices in Wales, the NHS Wales Informatics Service (NWIS) will contact all GP practices to understand if they would like to participate in the NDA. NWIS will then extract the data for all the GP practices in Wales that have opted in to the audit and will transfer the data by a Secure Electronic File Transfer method called SEFT.

# 3.8 Data Quality for Primary Care

Data landing has built in validations to try and address any data quality issues prior to submission, these checks include submission for the correct type of file e.g. csv, EMIS extract, data is for the correct audit period e.g. 2016-17 not 2015-16.

During the collection period participation reports will be sent to CCGs and Clinical Networks so that they are able to see which of their practices have submitted to Data Landing. These reports will also contain a first look of the data analysis so that any immediate issues with the quality of the data can be addressed and practices can re-submit if required.

Following completion of the collection window a final participation report will be sent to CCGs and Clinical Networks detailing final participation for their area and also preliminary findings for their practices. Please note the preliminary findings are not for local publishing but to aid any data quality issues ahead of the final reports being published. The final published results may differ to the preliminary findings due to cleaning.

As part of the participation reports we will compare the number of people registered on the GP practice with the latest figures published for the Quality Outcomes Framework, please check that the number of registered people with diabetes for your practice is correct.

# 4. Specialist Services and Insulin Pump Clinics

Specialist services and insulin pump clinics within hospitals are eligible to participate in the audit. A secondary care specification document and excel template are developed to help specialist services and insulin pump clinics to collate their NDA data.

The NDA reports that are generated for specialist services are published at the level that they are submitted, e.g. if you submit as a Trust your report will be at Trust level, if you submit as a Hospital your report will be at Hospital level. Please be aware of this when you are planning your submission.

Data items contained within the specification undergo independent assurance from clinicians to ensure the data items are relevant and appropriate and are in line with NICE guidelines and the purpose of the audit. Any changes in requirement are agreed by the NDA Executive Board and NHS England Diabetes Programme Board.

All the data items contained within the specification should be easily accessible from patient records, however not all hospitals have access to electronic patient records; because of this the NDA team try to ease the burden by offering a number of different methods for specialist services to participate in the audit. Below we have listed briefly the different methods. For further detailed information please see the secondary care specification, template and guidance document for secondary care submissions under **Supporting Documentation.**

- Data extraction from a Diabetes Management System

  Data required for the audit can be extracted from Diamond and Diabeta3 diabetes management systems. The systems have been developed to extract the data according to the NDA secondary care specification document.

- Data extraction from a hospital EPR System

  The Secondary Care CSV Specification can be used to build an extract requirement for the NDA data from a hospital EPR system. This is available on the NDA website http://content.digital.nhs.uk/nda. Your Clinical Audit or IT department should be able to assist with building the extract.

- Specialist services who work in a service that still uses paper records, can still participate in the NDA in one of two ways:-

1. Manually complete the Secondary Care CSV template

Complete all the mandatory fields within the csv template and where available all the information for the voluntary fields. If you participate in this way you must be able to complete at a minimum all the mandatory fields within the csv specification.

2. Complete only the NHS number field within the Secondary care CSV template

Complete just the NHS numbers for the diabetes patients that are under the specialist services care. This can be extracted from your Patient Administration System. The NHS numbers will then be used to link to primary care data, and your hospital report will be created from this. Please note if there is no record received from primary care your report will not reflect a true picture of the care that you give.

- Insulin pump clinics

Where a hospital has an insulin pump clinic they can also submit this information for their patients. For insulin pump clinic submissions participants should complete the insulin pump data fields within the secondary care template. Please note certain insulin pump fields are mandatory.
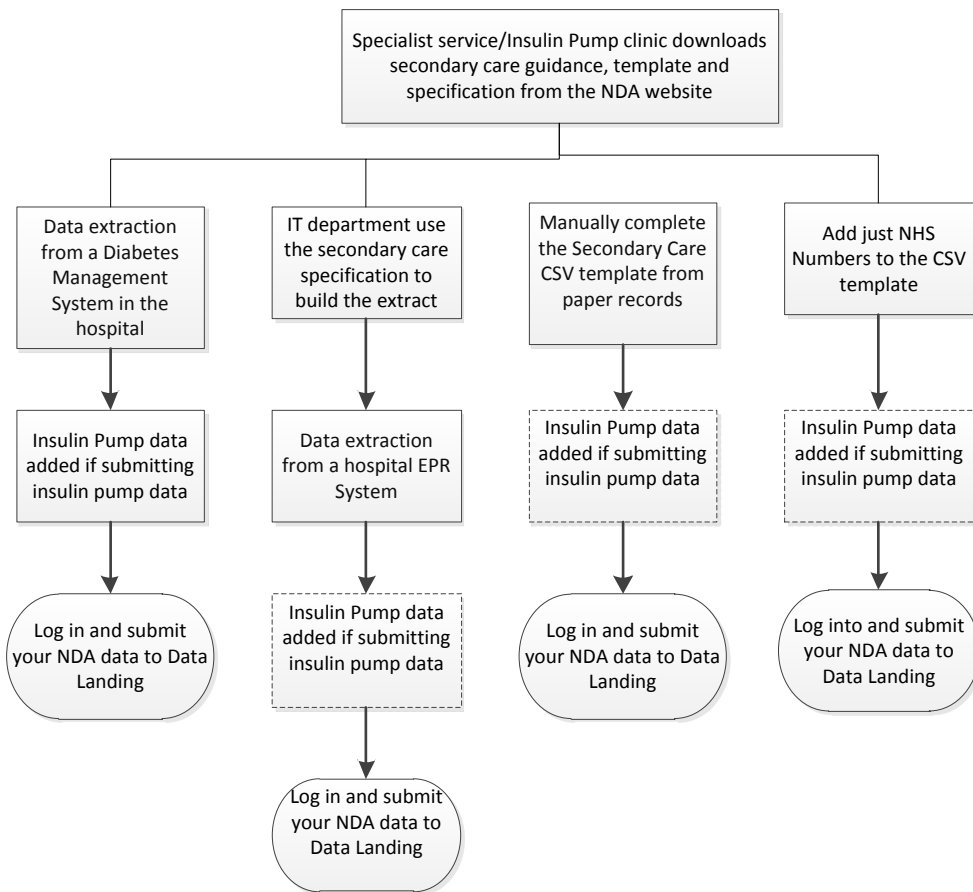
**Insulin pump records only will not be accepted.** An insulin pump clinic submission will not be accepted without at the minimum the NHS number fields for the complete diabetes patient group for your hospital or Trust. This is so that we can compare outcomes for your insulin pump patients in relation to your other diabetes patients. Please work as a hospital/Trust to complete the secondary care specification for your diabetes patient group.

Once completed the secondary care specification template can be submitted to NHS Digital by uploading to Data Landing. Further information can be found in the guidance document for secondary care submissions under **Supporting Documentation.**

## 4.1 Data Quality for Specialist Services

The CSV template has built in validations, please check the data quality worksheet and correct any errors prior to submitting your data. Once uploaded to Data Landing the NDA team will check your data and report back any issues. Any errors identified will need to be corrected within the collection window for your submission to be included, therefore please aim to submit your data before the submission deadline so that you have time to correct any errors.

## 4.2 Specialist Services and Insulin Pump Clinics data flow diagram

```
              ┌──────────────────────────────────────┐
              │  Specialist service/Insulin Pump     │
              │  clinic downloads secondary care      │
              │  guidance, template and               │
              │  specification from the NDA website   │
              └──────────────────────────────────────┘
```

**Specialist service/Insulin Pump clinic downloads secondary care guidance, template and specification from the NDA website**

Branch 1:
- Data extraction from a Diabetes Management System in the hospital
- Insulin Pump data added if submitting insulin pump data
- Log in and submit your NDA data to Data Landing

Branch 2:
- IT department use the secondary care specification to build the extract
- Data extraction from a hospital EPR System
- Insulin Pump data added if submitting insulin pump data
- Log in and submit your NDA data to Data Landing

Branch 3:
- Manually complete the Secondary Care CSV template from paper records
- Insulin Pump data added if submitting insulin pump data
- Log in and submit your NDA data to Data Landing

Branch 4:
- Add just NHS Numbers to the CSV template
- Insulin Pump data added if submitting insulin pump data
- Log into and submit your NDA data to Data Landing

# 5. The National Diabetes Audit under direction data flow diagram

<u>Data Flows</u>
CAG S251
Direction 254

| National Diabetes Audit | | | | | | |
|---|---|---|---|---|---|---|
| **Datasets** | **GP practice/Hospital** | **NWIS** | **MRIS/ONS** | **Data Linkage (carried out by NHS Digital)** | **NHS Digital** | **Outputs** |
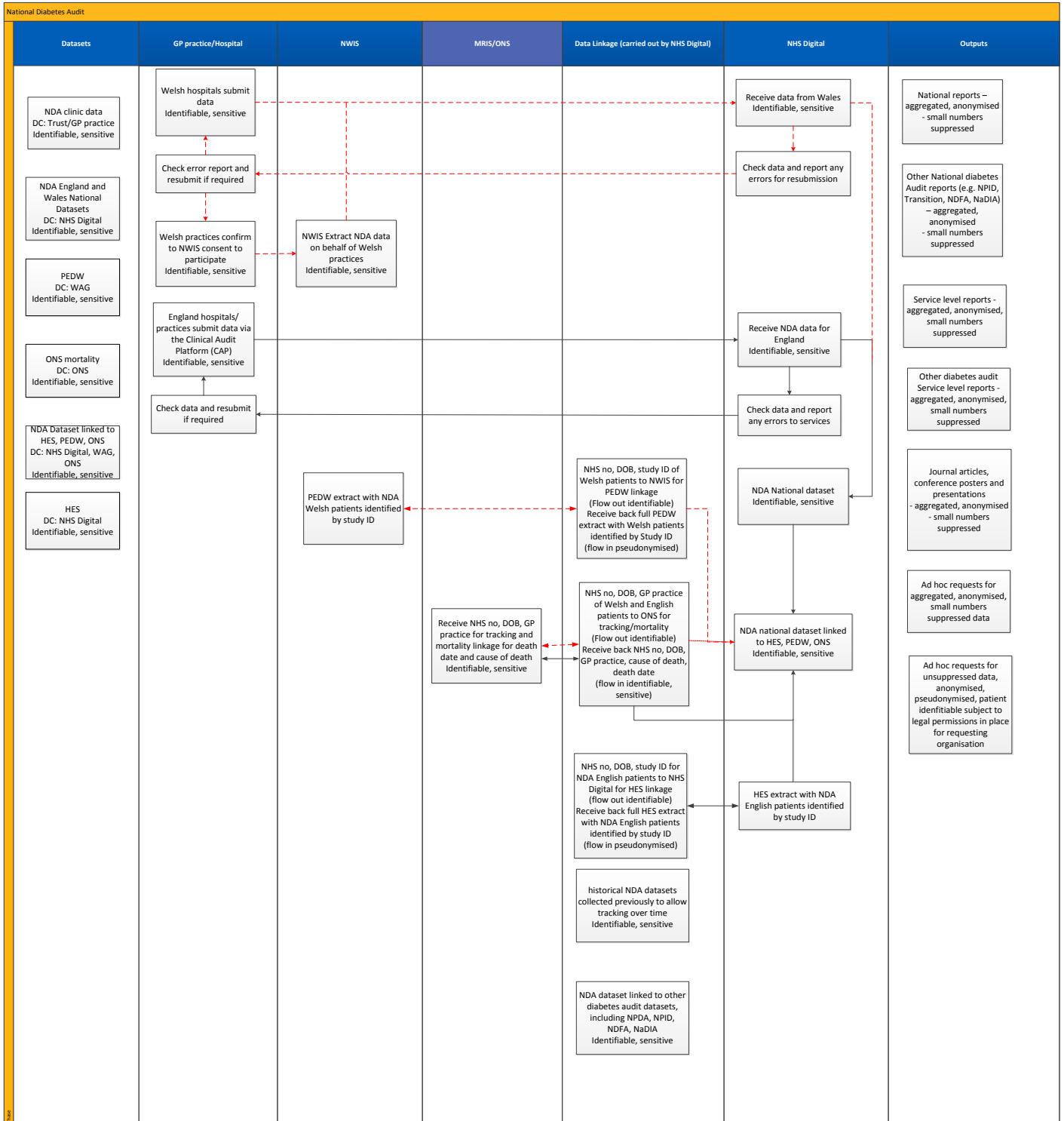
# 5. 'Fair Processing' - Informing Patients

The NDA has approval under section 254 of the Health and Social Care Act 2012 to collect patient identifiable data. Participation in the audit is endorsed by professionals (RCGP) and people with diabetes (Diabetes UK).

The NDA team with Diabetes UK produce patient information materials for the audit, the patient material has had input from patients during development. A patient leaflet and a poster for GP practices and specialist services to display within their practice or clinic are available to download from the NDA website http://content.digital.nhs.uk/nda. We ask that clinics and practices do their best to make patients aware of the NDA and understand that patients can object to sharing of their data if they wish. If a patient objects to participating in the audit, please do not send their data. There are read codes that can be applied to GP practice records which mean that their data will not be submitted. For specialist service submissions please make sure that their records are removed before submitting to Data Landing.

**Some suggestions for raising patient awareness of the audit are:**

- Display posters about the NDA in waiting areas and relevant clinic areas

- Include information about NDA participation on your website

- Make NDA patient information leaflets easily available

- Make patients aware of NDA reports –patient friendly versions of the National Reports and both GP and specialist clinic level data are available

- Do not send data for any patients that object to the sharing of their audit data. There are specific read codes for practice systems for recording patient dissent from NDA participation.

You can read more about how NHS Digital keeps patient information safe at the following link http://content.digital.nhs.uk/patientconf

# 6. Analysis Methodology

The NDA analysis involves the creation for each person of a golden record. This record uses the primary care record combined with the specialist service record to create the best record for each person known as the "Golden Record".

Diagnostic information is taken from whichever record includes the latest recorded date, regardless of whether the record is from primary or specialist service. For example:

Record 1 (Primary Care): blood pressure date= 23/06/2013; cholesterol date=16/07/2013

Record 2 (Specialist service): blood pressure date= 01/03/2013; cholesterol date=14/12/2013

Blood pressure date and values will be taken from Record 1 and cholesterol date and value will be taken from Record 2. For more information about the creation of the Golden Record please see the Methodology Report that accompanied the 2015-16 National Report.

# 7. Change Management

Changes to the specifications for primary and secondary care are reviewed by the NDA Core advisory group before being included in the specifications. The advisory group consists of clinicians, patient representatives and stakeholders in the audit. If you are interested in further information about the Advisory Group please contact us at diabetes@nhs.net

The audit team ensure that the audit specifications and data set is updated in line with NICE guidelines and in line with the purpose of the audit.

Any changes to the direction are proposed by the NDA Core Advisory Group to the NDA Executive Board. On support of the NDA Executive Board the proposals are presented to the NHS England Diabetes Programme Board for Approval. Any changes are subject to approval by the SCCI assurance process and after completion of a burden assessment. Once accepted changes are announced to submitters or to clinical system suppliers so they can update specifications/internal processes. For more information please see the requirement specification document under supporting information.

# 9. SNOMED CT

The NDA is preparing to move to SNOMED CT, we are working with teams within NHS Digital to understand this further. The anticipated plan is that the 17-18 primary care extract will be in Read and SNOMED CT and that the 18-19 extract will be SNOMED CT only.

We are also looking at the timescales and implications of the move to SNOMED CT for specialist services. We will keep submitters updated on future plans.

# 8. Supporting Documentation

All documentation will be available on the NHS Digital NDA web page at:

http://content.digital.nhs.uk/nda

| Description | Documents |
|---|---|
| Direction Information | Direction |
| | Requirement Specification |
| | Technical Specification |
| Patient Material | Patient leaflet |
| | Poster for GP Practices |
| | Poster for Clinics |
| | Fair Processing information |

| Information for GP practices | Primary care specification |
| --- | --- |
| | Guidance for TPP users |
| | Guidance for EMIS users |
| | Guidance for INPS users |
| | Guidance for Microtest users |
| | Guidance for MiQuest users |
| Secondary Care information | Secondary care specification |
| | Secondary care template |
| | Secondary care guidance |

# Glossary

**Clinical Audit Platform** - The Clinical Audit Platform provides a single standard technical platform for clinical audits, that is easily accessible by all NHS staff providing data. The platform is a secure area that NHS Staff can upload data for a wide range of different audits. Data Landing is part of the Clinical Audit Platform and offers a method of secure electronic file transfer between NHS Organisations and NHS Digital.

**Direction** - A Direction is a legal instruction from NHS England or the Secretary of State to NHS Digital to establish and operate a system for the collection and analysis of specific information.

**Fair Processing** – this is the activity that The Data Protection Act 1998 (DPA) requires data controllers to carry out to be able to process personal data fairly and lawfully. Processing personal data must above all else be fair, as well as satisfying the relevant conditions for processing. Fairness generally requires you to be clear and open with individuals about how their information will be used.

**GPSoC –** GP Systems of Choice is a contractual framework to supply IT systems and services to GP practices and associated organisations in England. It makes sure GPs and practice staff have access to the best technology to support patient care.

**NDA Executive Board –** This is the Board that makes the executive decisions involving the delivery of the National Diabetes Audit programme of work. The board is made up of representatives from NHS Digital, HQIP and the GP lead and Clinical Lead for the NDA.

**NDA Advisory Group** – This is the group that is responsible for advising the audit including the design, processes, outputs, communications and promotion of the audit. The group is made up of representatives from the following; clinicians, healthcare professionals, people with diabetes, project team

**Read codes** – these are the standard clinical terminology system used in General Practice in the United Kingdom. It supports detailed clinical encoding of multiple patient phenomena including: occupation; social circumstances; ethnicity and religion; clinical signs, symptoms and observations; laboratory tests and results; diagnoses; diagnostic, therapeutic or surgical procedures performed; and a variety of administrative items.

**SNOMED CT** - is the most comprehensive and precise clinical health terminology product in the world, owned and distributed around the world by SNOMED International. It provides a standardized way to represent clinical phrases captured by the clinician and enables automatic interpretation of these.