



Guidance Notes: Completing the Feasibility Study Application Form

This guidance document has been produced to help applicants complete the Feasibility Study Application Form. Applications not completed in accordance with this guidance will be returned as invalid.

Key Information:

Feasibility studies using CPRD data are not subject to a full scientific protocol review by the ISAC, provided they meet the definition and scope of a feasibility study, and subject to the restrictions detailed below. Approval for feasibility studies may be requested by submitting the 'Feasibility Study Application Form' and any other required documentation to the ISAC Secretariat (isac@cprd.com).

- A feasibility study is a study where the intended purpose is to assess the feasibility of conducting a future study. This could include assessing the feasibility of a future observational study using CPRD data, or a prospective observational study involving enhanced data collection (questionnaires or bio-samples), or an interventional study (for e.g. pragmatic trial). Applicants may also use CPRD data to assess the feasibility of a future study that does not involve using CPRD data or services;
- Unlike a simple feasibility count, a feasibility study could include percentages (rather than just counts) to assess the distribution/prevalence of key events, exposures, and outcomes in CPRD data. However, a feasibility study approved under this route should not include any hypothesis testing or tests of significance;
- By submitting a feasibility study application, applicants are:
 - declaring that they have read and understood the guidance on completing a Feasibility Study Application Form;
 - confirming that the submitted feasibility study application, and any supporting documents, are accurate;
 - agreeing to abide by all contractual obligations in relation to access to CPRD data and any other linked data where applicable;
 - agreeing to publication of summary information, should the application be approved by the ISAC, in accordance with CPRD's Transparency Policy;
- The application form should be completed in Arial 10pt font only. Superscripts, subscripts, and footnotes should be avoided. The use of special characters and symbols should be avoided unless absolutely necessary. The use of graphs, charts, graphics, and images is not permitted;
- Each section of the application form should be completed in full. Applications with incomplete sections will be returned as invalid;
- Direct communication between applicants and reviewers is not permitted. All communication regarding applications should take place via the ISAC Secretariat, and only individuals named in the application may make enquiries.

Restrictions

- Sample sizes for feasibility studies are limited to 50,000 patients or less. Where more than 50,000 patients meet the cohort definition criteria, a random sample of 50,000 will be provided to applicants;
- Applicants will be able to request data based on up to 3 of the following eligibility criteria:
 - Cohort definition based on a single code list representing a diagnosis/prescription (code list to be provided by the applicant as an exported text file);
 - age-group (specified as an age range or threshold e.g. 40 years or younger at date of diagnosis/prescription or start of the study period etc.) and;
 - sex.
- Feasibility studies are permitted using the following data sources:
 - CPRD primary care data (CPRD GOLD and CPRD Aurum);
 - ONS Death Registration Data;
 - CPRD Mother Baby Link;
 - HES Admitted Patient Care, Accident and Emergency, Outpatient, and Diagnostic Imaging Dataset;



- Mental Health Services Dataset (MHDS);
- Pregnancy Register;
- Practice Level Index of Multiple Deprivation (Standard), and;
- Patient Level Index of Multiple Deprivation.
- For clients without a multiuse licence for a specific dataset, data will be released under a Standard Dataset Agreement, with non-negotiable Terms and Conditions for Feasibility Studies.
- Findings from approved feasibility studies can be shared with third parties and published in internal reports, peer-reviewed academic journals or included in conference presentations without the need for a full ISAC protocol submission. However, findings should only be presented in the context of a feasibility study – for example, it would not be appropriate to present the findings in a publication as an incidence or prevalence study.

CPRD Transparency Policy

CPRD publish summary information of each feasibility study approved by the ISAC. For further information on CPRD's Transparency Policy, please go to <https://cprd.com/protocol-list>.

Completing the Feasibility Study Application Form

SECTION A: GENERAL INFORMATION ABOUT THE PROPOSED FEASIBILITY STUDY

Question 1: Study Title

The study title should provide a concise overview of the aim/s of the feasibility study. For clarity, applicants must include "feasibility study" in their study title.

The study title must be no longer than 255 characters, including spaces. Studies with titles in excess of 255 characters will be returned as invalid.

Question 2: Chief Investigator

The Chief Investigator will take responsibility for ensuring that the research is undertaken with full adherence to ISAC and CPRD guidelines. The ISAC will use the CV of the Chief Investigator to determine their suitability for the study.

The full name, job title, organisation name & e-mail address for correspondence of the Chief investigator **must** be included in the form.

Question 3: The Corresponding Applicant

The name of a Corresponding Applicant, who will be the direct point of contact for the ISAC Secretariat, **must** also be provided for each application. It is acceptable for the Chief Investigator to be the corresponding applicant.

Question 4: Other investigators/collaborators

Anyone who will have access to CPRD data, or who will contribute meaningfully to the feasibility study **must** be named in the study application.

The name and institution/organisation email address of **all** study investigators/collaborators must be stated on the application form. Each investigator/collaborator **must** also be **copied in** (cc, not bcc) when a new study is submitted to the ISAC.



Copy and paste a new table for each additional investigator/collaborator.

Curriculum Vitae (CV) requirements

All investigators/collaborators named on the study application form **must** submit a short curriculum vitae (CV) alongside submission of the study application if they have not already done so previously. CVs must be completed using the CV proforma provided on the ISAC website.

CPRD hold copies of all CVs submitted to the ISAC. Investigators/collaborators who have submitted a CV will be provided with a CV number by the ISAC Secretariat. This CV number should be used in any future applications. Investigators/collaborators should only submit another CV form if they wish to update the CV held on record by CPRD.

SECTION B: ACCESS TO THE DATA

Question 5: Data Access Arrangements

State the method that will be used to access the data for this study – a CPRD study-specific dataset agreement or a multi-study licence agreement. If an existing license is to be used please indicate the licence institution name and address.

Question 6: Site location of data

Provide the address of the site location/s where the data is being processed, stored and analysed.

SECTION C: INFORMATION ON REQUESTED DATA

Primary care data collected by CPRD can be linked to a number of other patient level datasets, (including Hospital Episode Statistics, ONS Death Registration Data, and the Mental Health Services Data Set...) and is only available for English practices that have consented to participate in the linkage scheme. These linkages cover approximately 75% of the contributing CPRD English practices, or roughly 58% of contributing CPRD UK practices.

Question 7: Primary Care data

Vision and EMIS are different clinical software systems used by general practices in the United Kingdom primary care setting. CPRD has historically collected data from Vision primary care practices, which is referred to as the GOLD primary care data. More recently, CPRD has been able to release data collected via the EMIS software system under the Aurum primary care data.

Question 8: Requests to access linked data

The following linkages are permitted for feasibility studies:

- HES Admitted Patient Care, Accident and Emergency, Outpatient, and Diagnostic Imaging Dataset;
- Mental Health Services Dataset (MHDS);
- Pregnancy Register;
- Practice Level Index of Multiple Deprivation (Standard), and;
- Patient Level Index of Multiple Deprivation.



Question 9: Requesting CPRD to extract the primary care data

If answering 'yes', applicants will need to complete the Data Specification Form, which can be found at [Appendix 2](#).

Question 10: Patient identifiers

Investigators must state whether any person named in the study has access to the data in a patient identifiable form, or any associated identifiable patient index.

If the answer to this question is 'Yes', applicants **must** provide a re-identification and risk management plan as an appendix and refer to it here.

SECTION D: FEASIBILITY STUDY INFORMATION

A. Lay Summary (Max. 250 words)

Please provide a succinct overview of your proposed research in non-technical language.

The lay summary is published on the CPRD website for the benefit of patients and the public, to inform them of how CPRD data are being used and to what benefit.

Applicants proposing to use CPRD data for a feasibility study should clearly state the aim of the proposed study for which purpose the feasibility study is being undertaken (e.g. 'the aim of this study is to assess the feasibility of a cohort study to be undertaken in CPRD data investigating the association between drug X and outcome Y'; or 'the aim of this study is to assess the feasibility of a randomised controlled trial assessing comparative effectiveness of different dosing schedules of treatment X within the UK primary care setting').

The lay summary should not include any technical details, such as study design or statistical methods, should avoid jargon, and must be capable of being understood by a member of the public without a scientific or medical background. Abbreviations should be avoided.

The lay summary should provide an overview of the research without the need to refer to the technical summary.

Studies with lay summaries over 250 words will be returned as invalid.

B. Technical Summary (Max. 300 words)

The technical summary is primarily written for other researchers and clinicians. There should be enough technical detail to allow another researcher to obtain a clear idea of your study aim and methods.

The technical summary should provide a succinct overview of the overarching study aim and objectives, primary exposure(s), and outcome(s), if relevant, study design, and methods including the main analyses to be conducted.

The technical summary should also specify how linked datasets will be used, for example "Hospital Episode Statistics (HES) data will be used to determine hospitalisations."

Studies with technical summaries in excess of 300 words will be returned as invalid.



C. Outcomes to be Measured

This section should clearly list the key outcome variables, separated by semicolons. For example: "Ischaemic stroke; Composite of all bleeding; Major bleeding; Gastrointestinal bleeding; Clinically significant non-major bleeding; Myocardial infarction; All-cause mortality; Intracranial haemorrhage."

This section should not include statements relating to the study aims and objectives.

D. Information on the Study Population

It is important to ensure that the application clearly defines the study population. The following areas listed below should be addressed as relevant:

- a) Describe the source/target population:
 - cohort definition (age, sex, key condition/exposure of interest)
 - whether only permanently registered acceptable patients will be included
 - whether only up-to-standard follow-up will be considered;
 - state the recruitment period and state the definition of the start and end of follow-up for patients, including whether the CPRD death date should be used in defining the end of follow-up.
- b) Describe the study population in terms of inclusions, exclusions, and the data used for each (clinical, referral, test, therapy, immunisation). Reference should be made to provisional code lists for inclusion & exclusions specified;
- c) Provide any minimum requirements for previous follow-up time;
- d) Information on the exposure window(s) of interest, where appropriate, defining clearly time which will be considered "exposed" or "non-exposed";
- e) For studies requiring linked data, please make clear the restrictions imposed by patients eligibility for linkage and the coverage period for each linked dataset requested. Further information on patient's linkage eligibility and the coverage periods of linked data sources may be requested from the CPRD (enquiries@cprd.com).
- f) For studies requiring linked data, please make clear whether the study population should be defined among all eligible patients in CPRD or only among patients eligible for linkage to your linked data source of interest.



Appendix 1: Examples of feasibility studies that can be approved under this route

EXAMPLE 1

Future Study: To investigate the association between LABA/LAMA prescribing and rate of decline of lung function in patients with moderate to very severe COPD (GOLD stages II to IV).

Feasibility study: To explore definitions of chronic obstructive lung disease (COPD) severity based on diagnosis, treatment and/or spirometry data

Identify the target population

- Number of patients with a diagnosis of COPD during the study period
- Number of patients with spirometry data recorded
- Number with valid spirometry data recorded
- Proportion of patients with FEV1/FVC < 70
- Patients treated with COPD therapy
- Patients with a diagnosis of asthma

Implement algorithm for classifying COPD severity (GOLD stages II to IV) based on treatment and spirometry data.

- Distinguish pre and post-bronchodilator spirometry data
- Implement GOLD categories using data using spirometry and other data recorded in primary care.

EXAMPLE 2

Future Study: Prediction of exacerbation onset in Chronic Obstructive Pulmonary Disease (COPD) patients

Feasibility Study: To examine the recording of COPD exacerbations in primary care and understand the extent to which sub-group analyses may be possible.

Identify the target population

- Number of patients with a diagnosis of COPD during the study period
- Numbers eligible for linkage, number with at least 12 months of prior UTS follow-up
- Numbers with current/ex-smoker status,
- Proportion of patients with FEV1/FVC < 70 at diagnosis and 6-month post diagnosis.
- Numbers with a record of asthma and COPD

Develop algorithm for identifying COPD exacerbations

Proportion of patients treated with combined therapy (dual, triple therapy) for at least 3 months/6 months

- Proportion of patients receiving add-on therapy and cumulative dose
- Proportion of patients switching therapy, type of therapy, dosage and duration
- Proportion of patients with at least 2 exacerbations during dual therapy
- Proportion of patients with at least 2 exacerbations during triple therapy

Frequency of exacerbations among patients with COPD

Proportion of patients treated with combined therapy (dual, triple therapy) for at least 3 months/ 6 months who have a record of an exacerbation

Identify COPD exacerbations in the hospital setting.



EXAMPLE 3

Future Study: To investigate the association between COPD medication adherence and resource utilisation

Feasibility Study: To assess the completeness of recording of COPD prescribing data and explore methods for estimating treatment adherence in light of the data that are available.

Identify the target population

- Number of patients with a diagnosis of COPD during the study period
- Numbers eligible for linkage to Hospital Episode statistic
- Numbers with at least 12 months of Up-to-standard (UTS) follow-up prior to COPD diagnosis
- Numbers with at least 24 months of follow-up following COPD diagnosis
- Numbers initiating maintenance medication during the first 365 days of the 24-month post-index period (have at least one prescription for COPD maintenance - long-acting muscarinic antagonists [LAMA] and inhaled corticosteroid-long-acting beta agonist [LABA] fixed-dose combinations)
- Evaluate dose of maintenance therapy by treatment type

Explore approaches for measuring COPD treatment adherence

- Proportion of days covered (PDC)
- Medication Possession Ratio (MPR)

Examine the characteristics of adherent/non-adherent

- Proportion adherent/non-adherent
- Mean Proportion of days covered/ MPR
- Baseline characteristics of adherent and non-adherent groups (Mean, median, and interquartile range)



Appendix 2: Data-set specification for a CPRD Feasibility Study

Data-set specification for a CPRD Feasibility Study
[internal use only: insert Feasibility Study Number YY_NNN]

FOR COMPLETION BY APPLICANT

Source Population

The extraction population will comprise of all acceptable patients in CPRD (from the most recent snapshot available; [Jan 2017])

Data to be supplied:

Primary Care Data:

CPRD GOLD		CPRD Aurum	
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Linked Data:

ONS Death Registration Data		CPRD Mother Baby Link	
HES Admitted Patient Care		HES Outpatient	
HES Accident and Emergency		HES Diagnostic Imaging Dataset	
Mental Health Services Data Set (MHDS)		Pregnancy Register	
Practice Level Index of Multiple Deprivation (Standard)		Patient Level Index of Multiple Deprivation	

Case definition

Inclusion Criteria

[Insert the overview of the methodology to be applied to identify the cohort of interest.]

From the source population in CPRD GOLD/CPRD Aurum:

- **Inclusions** [Edit as appropriate]
 - Choose **one** of:
 - Acceptable patients who have <condition of interest>, defined as at least one event identified via **Medical** codes (as detailed in Annex X) in the {Clinical/Immunisation/Referral/Test – *delete as necessary*} files
 - Acceptable patients who have <condition of interest>, defined as at least one event identified via **Product** codes (as detailed in Annex X) in the Therapy file
 - Choose **one** of:
 - At least one event occurs between the study start and study end
 - At least one event occurs before the end of the study period
 - The first ever event occurs in the study period
 - Events must {*delete as required*}: (Optional choices)
 - Occur between DD/MM/YYYY and DD/MM/YYYY (- if deleted the whole database period will be used)
 - Occur within up-to-standard registration period
 - Patients must {*delete as required*}: (Optional choices)
 - Be {male/female/indeterminate} gender
 - Be aged {between XX and XX/less than XX/greater than XX} at the {index date/study start}
 - Have at least XX {years/months/days} prior up-to-standard registration at {index date/study start}
 - Have at least XX {years/months/days} follow-up at {index date/study start}
- **Exclusions** [Edit as appropriate]
 - None



- Patients with <condition of interest> {ever/before study start/before index date/after study end}, defined as at least one event identified via **Medical** codes (as detailed in Annex X) in the {Clinical/Immunisation/Referral/Test– select as necessary} files
- Patients with <condition of interest> {ever/before study start/before index date/after study end}, defined as at least one event identified via **Product** codes (as detailed in Annex X) in the Therapy file