Guide to using NQAIS Clinical for Research

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This document details the process to be followed to request access to and use of the National Quality Assurance & Improvement System (NQAIS) for research purposes. It introduces the system, the expected process which researchers should follow to use NQAIS Clinical for research purposes, and the requirements that researchers must adhere to when using NQAIS Clinical.

Introduction to NQAIS Clinical

NQAIS Clinical was developed by the Health Intelligence Unit, in the HSE in collaboration with the National Clinical Programmes.

NQAIS Clinical is available to clinicians and managers in all HSE funded hospitals, who agree to adhere to the data confidentiality requirements of the Health Service Executive (HSE) and the Healthcare Pricing Office (HPO) information policies and have the authorisation of the hospital(s) senior management or Clinical Director to use that hospital's Hospital Inpatient Enquiry (HIPE) data.

Special purpose access to NQAIS Clinical can be made available to researchers who have been duly approved to conduct a body of research using national, hospital group or individual hospital data dependent on the scope of the research.

Ethical approval processes must be adhered to as per hospital and university policies.

Background

NQAIS Clinical was launched in October 2017 and is an online reporting tool that analyses Hospital In-patient Enquiry (HIPE) data for patient discharges following their episode of care. It is possible to view patients from a diagnosis perspective with their principal reason for admission to hospital, and the most substantive health intervention they received i.e. the principal procedure they had performed, and the specialty of the clinician(s) who managed their care. This enables analysis of patients under the care of specific medical specialties, their reason for admission to hospital and/or what health intervention they received.

NQAIS Clinical adopted a pan clinical programme approach to design and deliver a cohesive data informed support resource which leverages HIPE discharge records for use in delivery of quality improvement initiatives in the delivery of patient care in surgery, adult medicine, care of older persons, care of children, maternity, and neonates.

The system was designed collaboratively by the National Clinical Programmes, the Health Intelligence Unit HSE, nominated hospital group representatives, HSE, developed and supported by OpenApp, and is deployed under the governance framework of the national clinical programmes and supported by the National Clinical Advisor and Group Lead Acute Hospitals Operations Division, HSE. The data hosted on the HSE's Health Atlas website is administered by the Health Intelligence Unit, HSE.

The system can aggregate and present metrics for inpatient length of stay (AvLOS), day case rates (%DC), inpatient day of surgery admission rates (%DOSA) and readmission rates. These metrics are dynamically available at hospital, clinical team, surgical specialty and procedure level, medical specialty and diagnosis level with supporting metrics and graphical representations of the metrics and their trending over time.

Users are presented with different dynamic views of HIPE data, relative comparative performance metrics and predictive indicators of what would happen to bed resource utilisation if they were in the top quartile of performance. They are able to interactively control the content of their reports using filters for any combination of the discharging hospital, month, diagnoses, procedures, specialty and age band and can review the content from a principal diagnosis, principal procedure, HIPE specialty or consultant team breakdown perspective.

Data sources:

The HIPE system is a health information system designed to collect medical and administrative data regarding inpatient and day case discharges from, and deaths in, acute public hospitals. Each HIPE discharge record represents one episode of care following admission to hospital for an individual patient, recording demographic, administrative, diagnoses, procedures and other related data.

The coding system used is ICD-10-AM /ACHI / ACS Edition 10 - the International Classification of Diseases, Tenth Revision, Australian Modification Edition 10. The ICD-10-AM Ed 10 disease component is based on the World Health Organisation (WHO) ICD-10 Ed 10 and is used in conjunction with the Australian Classification of Health Interventions (ACHI), and the Australian Coding Standards (ACS) to reflect an accurate health episode of care. The 4th edition of this classification was introduced for all discharges from 1st January 2005 and was selected as the best integrated coding scheme for diagnoses and procedures available internationally. Ireland updated to the 10th Edition of ICD-10-AM/ACHI/ACS Edition 10 for all discharges from 1st January 2020. HIPE is managed by the Healthcare Pricing Office (HPO) and further information on HIPE can be found at www.hpo.ie

The NCPS assessed all individual principal procedures performed more than 20 times annually and mapped them to either one of 19 surgical specialties and 18 clinical groupings. Low volume procedures are not mapped and are reported separately as are cases where no recordable health intervention occurred. Similarly the Health Intelligence Unit and the NCP NAMP assessed all principal diagnoses and mapped these into one of 297 Clinical Classification System for Diagnosis codes (CCS), each of which aggregates diagnoses into 19 groups of diagnoses.

The NCPS derived targets for AvLOS and day case rates for each procedure by evaluating the annual rates for each consultant at the individual procedure level to determine weighted averages for AvLOS and day case rates of the top half of consultant (on and near target) and the 50th percentile rates for consultants (off target) performance for each individual procedure. Similarly the NAMP derived targets by Clinical Classification System for diagnosis. The procedure and diagnosis targets are set within each admission stream and for each age bands identified in the system.

Process for requesting access to and using NQAIS Clinical for research.

Access to National NQAIS Clinical data for research purposes.

It is recommended that both a national level user agreement form (appendix 2) and the research proposal document (appendix 1) are submitted together so that both can be considered and processed at the same time to the relevant National Clinical Programme Lead/Co-Lead (see below) and to the National Clinical Advisor & Group Lead (NCAGL) for Acute Hospital Operations Division, HSE, (ncagl.acutehospitals@hse.ie).

For surgery related national research projects submit to:
Prof. Deborah McNamara, National Clinical Programme in Surgery, Co-Lead
email: deborahmcnamara@rcsi.com
Mr. Ken Mealy, National Clinical Programme in Surgery, Co-Lead
Email: kmealy@rcsi.com
For medicine related national research projects submit to:
Prof. Garry Courtney, National Acute Medicine Programme, Co-Lead
Email: garry.courtney@hse.ie
Dr. Yvonne Smyth, National Acute Medicine Progamme, Co-Lead
Email: yvonne.smyth@hse.ie

The National Clinical Lead(s)accepts responsibility for oversight of the research and where appropriate they may delegate this to an appropriate supervising clinican but will review the final output.

The approved research proposal is forwarded to Ms. Eilish Croke (eilishcroke@rcsi.com) Programme Manager for Implementation and Deployment of the NQAIS Clinical system who maintains a database of national research.

Both the relevant National Clinical Lead and the National Clinical Advisor and Group Lead (NCAGL) for the Acute Hospitals Operation Division, HSE, (ncagl.acutehospitals@hse.ie), along with the line manager of the researcher should sign the NQAIS Clinical user agreement form authorising the researcher to access national data. The form will be returned to the researcher by the NCAGL office and cc'd to Eilish Croke (eilishcroke@rcsi.com), who will set the researcher up on the system.

Access to NQAIS Clinical for research purposes will not be granted indefinitely. The proposed end date for the piece of research must be documented otherwise access will only be allowed for 6 months.

Access to Hospital Group NQAIS Clinical data for research purposes.

The research proposal must be forwarded to the Group Clinical Director or Group CEO for approval.

Group Level access: A user agreement form (see appendix 3) must be signed by the Group Clinical Director or Group CEO allowing the researcher access to group level data to conduct the research. The form must be forwarded to the NQAIS Clinical Controller for the hospital group who will set the researcher up on the system.

The clinical director and/or senior management team within the researhers organisation accepts responsibility for oversight of the research within their hospital group.

Access will not be granted indefinitely. The proposed end date for the piece of research must be documented otherwise access will be allowed for 6 months.

Access to Individual Hospital data for research purposes:

The research proposal must be forwarded to the Hospital Clinical Director and/or General Manager for approval.

Individual Hospital access: A User agreement form (see appendix 3) must be signed by the individual hospital Clinical Director or Senior Manager allowing the researcher access to individual hospital data to conduct research. The form will be forwarded to the NQAIS Clinical Controller for the hospital group or individual hospital as appropriate.

The clinical director and/or senior management team within the researhers organisation accepts responsibility for oversight of the research within their individual hospital.

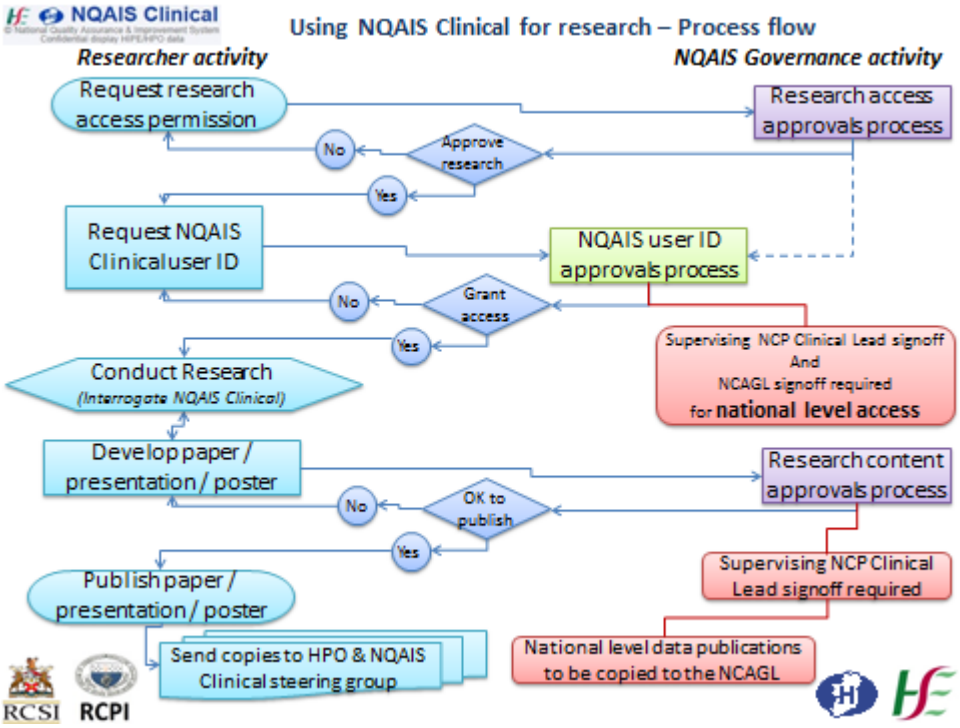
Access for research purposes will not be granted indefinitely. The proposed end date for the piece of research must be documented otherwise access will be allowed for 6 months.

Clinical Research Governance

- Governance around using NQAIS Clinical for research lies with the relevant individual hospital Clinical Director and senior management teams, Hospital Group Clinical Director and senior management teams or the relevant National Clinical Programme Clinical Lead(s)
- The acute hospital directorate, hospital group or individual hospital may attach conditions to the use of the data and levels of anonymisation required either through the general HPO policies and / or during the NQAIS Clinical research authorisation.
- The end date for access to the NQAIS Clinical system must be clearly stated and monitored by the controller for the level of access required to the system. Access should be terminated at the end date identified (or after 6 months where not stated) except where an extension is requested.
- On completion of the research project the report, publication, presentation and / or poster must send copies to the chair of the relevant supervising National Clinical Lead/Co-Lead, the NQAIS Clinical Steering Group and the HPO. In some instances where it is deemed more appropriate by the NQAIS Clinical steering

group, researchers may be provided with a pre-aggregated anonymised table of data for their research instead of full access to NQAIS Clinical.

- A standard agenda item will be organised for the NQAIS Clinical Steering group meetings where the group will be briefed on active NQAIS Clinical research by the clinical leads.



Requirements when using NQAIS Clinical

Infra-structural requirement to use NQAIS Clinical

NQAIS Clinical is hosted on the Health Atlas Ireland website and is available to users over the HSE intranet and the public internet. User must use a web browser equivalent to or newer than Internet Explorer 9.

Each time a user wants to access the NQAIS Clinical interactive analytical report screen they must launch a web browser, connect to the Health Atlas Ireland URL (www.healthatlasireland.ie) and enter a valid user id and password.

If the user is not connected to a HSE hospital network, they will also need a special 'certificate' installed on their computer before they can access the secure portion of the Health Atlas portal.

Data Confidentiality: The NQAIS Clinical online reporting tool, generated reports and associated data are confidential and adhere to the conditions of supply and usage of HIPE data. The information in, and output from, NQAIS Clinical must always be treated and stored in a secure manner, and only accessed within the European Union. HIPE data must not to be used to identify, contact or make reference to individual patient(s) for any purpose. Publication of NQAIS Clinical reports or HIPE data which could directly or indirectly identify an individual doctor is strictly forbidden unless prior written permission has been provided by the relevant individual. Publication of NQAIS Clinical reports or HIPE data for a named hospital is not permitted unless prior written permission has been provided by the senior management of that hospital / hospital group. It is not permitted to publish data cells containing less than six cases (diagnoses or procedures), as such data cells alone or in combination with other data could compromise either patient, doctor or hospital confidentiality.

Accessing data other than for stated research purposes
A researcher must not access data for purposes other than the stated research purpose as this will be considered a breach of HSE and HPO information policies and should not be carried out by the researcher.

Data Storage:
Data and output from NQAIS Clinical should always be treated and stored in a secure manner.
Data must only be stored on devices with appropriate levels of security and which have securely encrypted hard drives. Data must be encrypted prior to storage on disposable or portable media. All data must be securely and entirely removed from any device when it is no longer required. Interim reports, old presentations, other print outs and hand written notes should be disposed of in a secure fashion. It is the responsibility of all users to ensure that these data and their derivatives are protected in all forms on all media.

Required Acknowledgments:
The Healthcare Pricing Office must be acknowledged as the source of HIPE data in all reports, presentations and other communique using NQAIS Clinical outputs.
Hospitals or hospital groups providing permission for their data to be published must be acknowledged in all reports, presentations and other communique using NQAIS Clinical outputs.

Appendix 1: Proposal to use NQAIS Clinical for research

Researchers who wish to use NQAIS Clinical as a source of information for their research must complete the proposal below and submit it for approval to the appropriate NQAIS Clinical Governance.

Research title:

Introduction and Summary of research topic

Research question:

Key aims and objective of the research

1.

2.

3.

Research methodologies to be used

Proposed usage of NQAIS Clinical data

Other data collection and its proposed interaction with NQAIS Clinical data

Target audience, event and / or publications

Members of the research team and their roles

Proposed end date of research

Appendix 2

National Quality Assurance & Improvement System (NQAIS) Clinical Information Governance – User Agreement

NATIONAL ACCESS FOR RESEARCH PURPOSES

Health Atlas Ireland supports the quest for better health for patients, their families and the population by exploiting the quality assurance, health mapping and research potential of available data.

Terms of Agreement:

1. Data are exclusively used for the above purpose.
2. The confidentiality and privacy of data are respected in accordance with the provisions of data protection and other relevant legislation, HSE policy (ref http://www.hse.ie/eng/services/Publications/pp/ict/) and HIPE policy (ref www.hpo.ie/policy/).
3. Usernames and passwords are not shared with others.
4. The user is fully responsible for the analysis and interpretation of results – with special care being taken in light of the quality of the data (such as its completeness, accuracy or timeliness).
5. Internal reports, presentations or publications do not contain data that could directly or indirectly identify individual patients (e.g. cells with six or fewer cases as such data alone or combined with other data could compromise individual confidentiality) are not shown.
6. Data are not used for record linkage purposes, or to identify/contact patients, or shared with third parties unless appropriate information governance/data protection/ethical processes have been followed.
7. In any output: the source(s) of the data source/s are appropriately acknowledged together with the wording “Accessed using Health Atlas Ireland”; map/report reference and licence number(s) and the Health Atlas Ireland logo and system accreditations remain on any reports. Health Atlas Ireland and National Programme Manager are informed should data quality or analysis issues be identified.
8. Reports and/or data generated from NQAIS Clinical should not be used in external reports or publications without the authorisation of the supervising clinical lead. Publications, external reports and other external transmission of information containing NQAIS Clinical data must be submitted to the hospital / hospital group management or NCAGL.
9. The user informs the relevant NQAIS Clinical Controller when their details or role requires updating or inactivation.
10. The NQAIS Clinical Programme Manager – Implementation and Deployment, is responsible for enabling and maintaining appropriate policies.
11. It is the responsibility of all users to adhere to local and HSE national policies governing information security and freedom of information.
12. I can verify that I have read and understand the *National Quality Assurance Intelligence System (NQAIS) Clinical) Information Governance Policy* and agree to abide by recommendations and controls detailed in same.

NQAIS Clinical access to National Data for Research purposes

I understand and agree to abide by the above conditions

1. Access to NQAIS Clinical National level data ☐

2. Tick Role ☐ Viewer Access

3. User details

First name (print):…….. **Surname (print):……..**

Job title:…… **Email:……..**

Work address:……

Mobile no:…… **Other phone no:……**

Signed:…… **Date:……..**

It should be noted that in addition to agreeing with the governance policy users of NQAIS Clinical are also bound to comply with their contracts of employment and relevant data protection laws, which will remain applicable even after cessation of involvement in NQAIS Clinical.
Research students must comply with college ethics approvals and must submit their work to the supervising clinician for approval prior to presentation / submission to any other party.

4. REASON FOR REQUEST FOR ACCESS TO NQAIS CLINICAL NATIONAL DATA

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5. End date for Access to National Data: \ \ (This date must be identified or access will only be granted for 6 months)

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6. Authorisation by Line Manager

First name (print):…… **Surname (print):……**

Job title:…… ***Signed:……***

Work phone no:…… **Date:……**

Organisation:…… **email:……**

7. Authorisation by National Clinical Lead for relevant area

First name (print):…….. **Surname (print):……**

Signed:…… **Date:……**

8. Authorisation by National Clinical Advisor and Group Lead - Acute Hospitals Operation Division, HSE

First name (print):…….. **Surname (print):……**

Signed:…… **Date:……**

Appendix 3

NQAIS Clinical & Health Atlas Ireland user agreement form

Hospital / Hospital Group access for Research purposes

Health Atlas Ireland supports the quest for better health for patients, their families and the population by exploiting the quality assurance, health mapping and research potential of available data.

Terms of agreement

1. Data are exclusively used for the above purpose.
2. The confidentiality and privacy of data are respected in accordance with the provisions of data protection and other relevant legislation, HSE policy (ref http://www.hse.ie/eng/services/Publications/pp/ict/) and HIPE policy (ref www.hpo.ie/policy/).
3. Usernames and passwords are not shared with others.
4. The user is fully responsible for the analysis and interpretation of results – with special care being taken in light of the quality of the data (such as its completeness, accuracy or timeliness).
5. Internal reports, presentations or publications do not contain data that could directly or indirectly identify individual patients (e.g. cells with six or fewer cases as such data alone or combined with other data could compromise individual confidentiality) are not shown.
6. Data are not used for record linkage purposes, or to identify/contact patients, or shared with third parties unless appropriate information governance/data protection/ethical processes have been followed.
7. In any output: the source(s) of the data source(s) are appropriately acknowledged together with the wording 'Accessed using Health Atlas Ireland'; map/report reference and licence number(s) and the Health Atlas Ireland logo and system accreditations remain on any reports. Health Atlas Ireland and the NQAIS Clinical Programme Manager - Implementation and Deployment, are informed should data quality or analysis issues be identified.
8. Reports and/or data generated from NQAIS Clinical should not be used in external reports or publications without the authorisation of the supervising clinical lead. Publications, external reports and other external transmissions of information containing NQAIS Clinical data must be submitted to the hospital/hospital group management or NCAGL.
9. The user informs the relevant NQAIS Clinical Controller when their details or role requires updating or inactivation.
10. The NQAIS Clinical Programme Manager - Implementation and Deployment, is responsible for enabling and maintaining appropriate policies.
11. It is the responsibility of all users to adhere to local and HSE national policies governing information security and freedom of information.
12. I can verify that I have read and understood the *National Quality Assurance and Improvement System (NQAIS) Clinical) Information Governance Policy* and agree to abide by recommendations and controls detailed in same.

I understand and agree to abide by the above conditions

Role requested (please tick): ☐ **Viewer**

Access to Hospital/Hospital Group - List name(s)……..

First name (print): …… **Surname(print): ……**

Job title: ……. **Email: ……..**

Work address :……

Mobile no: :…….. **Other phone nos. …….**

Signed:…… **Date ……**

It should be noted that in addition to agreeing with the governance policy the users of NQAIS Clinical are also bound to comply with their contracts of employment and relevant data protection laws, which will remain applicable even after cessation of involvement in NQAIS Clinical.

Research students must comply with college ethics approvals and must submit their work to the supervising clinician for approval prior to presentation / submission to any other party.

End date for Access to Hospital / Hospital Group Data: \ \ (This date must be identified or access will only be granted for 6 months)

Title (please tick): ☐ **Group CEO** ☐ **Hospital Manager** ☐ **Clinical Director**

First name (print):……Surname(print)……Phone:……..

Job title: …… Email: ……

Signed: …… Date ……