

National Radiology Quality Improvement Programme

4th National Data Report

1 JAN - 31 DEC 2022

SUMMARY REPORT



FACULTY of
RADIOLOGISTS
and RADIATION
ONCOLOGISTS



4th NATIONAL DATA REPORT

EXECUTIVE SUMMARY

This is the National Radiology QI (NRQI) Programmes 4th annual national data report, presenting findings from 48 public and voluntary hospitals from the 1st of January to the 31st of December 2022.

In this period, over 3 million cases were recorded in participating hospitals, representing an 8.8% increase in workload in comparison to 2021 records. An overview of workload changes is presented over a 5-year period, 2018-2022. Data show that the volume of cases recorded in participating hospitals increased by 13.5% between 2018 and 2022. The 5-year increase is artificially reduced due to the impact of COVID-19 and the cyber-attack.

The imaging for more complex modalities such as MR, CT or US, where many images are recorded for each case, requiring careful review and therefore a significant time investment, increased by 44.8%, 36% and 35% respectively. The highest increase in referrals was recorded for cases referred by GP, at 19.1%, which translates into 66,963 more cases in 2022 than in 2021. This is the highest increase in GP referrals recorded over the last five years.

Growing workload is contributing to an increased pressure on radiology services nationally and highlights the need for adequate resourcing in radiology departments across the country, including staffing and equipment.

In 2022, 19 NQAIS sites out of 41 met or exceeded the recommended TAT target of 90%.

Turnaround time for outpatient referrals for CT, MR and US have remained above the recommended target of 90%. For GP referrals between 2018 and 2022 a national aggregate of reports authorised within the recommended time was above 90% for CT, MR, US and X-ray. In 2021 there was a drop for X-ray cases to 89% and a further drop to 85% in 2022. In 2022, the aggregate data reveal that CT, MR and US reached the recommended target of 90%. Inpatient turnaround time exceeded targets at 96% for CT, 92% for MR and 90% for ultrasound.

The turnaround time for X-ray reports was below target and was below that for the previous 4 years.

These findings should be viewed in parallel to the workload data indicating an overall 8.8% increase in workload recorded for 2022.

The NRQI programme is committed to review turnaround time targets by extending this metric to include the time from an image is acquired. A pilot project is underway to build a clearer picture of the patient's journey through a radiology department with the aim of using these data to reduce the time this takes.

There has been a decrease in the overall percentage of retrospective reviews being recorded. The majority of prospective reviews were recorded for MR at 58.3% out of all prospective reviews recorded in 2022. The data reveal that 66% of all retrospective peer reviews were in concurrence with the original report 9% less than in 2021. The percentage of cases referred to an RQI meeting on peer review completion increased by 9% in 2022. The findings reveal that the overall number of alerts recorded in 2022 was higher across all referrals, when compared with 2021, with an increase in the percentage of radiology alerts acknowledged within the set timeframe in 2022.

This report contains six recommendations, 5 of the 6 recommendations are aimed directly at local radiology departments and hospital management. These are a request for support for local QI activity, accurate and complete data capture and focus on the impact of the increasing volume and complexity of cases. Additional resources are required to deliver improved radiology services.

This year Acute Operations has taken ownership of a recommendation detailing the need for protected time for those carrying out QI programme related activities to ensure QI remains integral to local workplans.

Quality improvement should be an integral part of everyday activity in a radiology department. Local clinical leadership and the ongoing support of senior hospital management for the NRQI programme are key to improve patient care through timely, accurate and complete radiology reports.

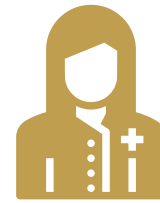
The NRQI programme and the Faculty of Radiologists and Radiation Oncologists will continue their tireless efforts to promote a culture of QI and patient safety in Irish radiology services.

NRQI PROGRAMME HIGHLIGHTS



4th National Data Report

48
Public & Voluntary Hospitals
Contributing Data



68
Clinicians
involved locally
(Consultant Radiologists and Diagnostic Radiographers)

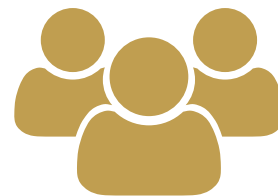
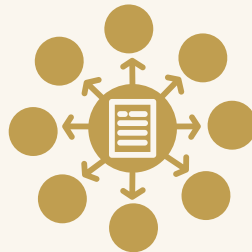


2022
NRQI Annual Conference
“QUALITY AND SAFETY IN RADIOLOGY”

114
PARTICIPANTS

Data Sharing

NRQI data requested by the Irish Cancer Society for work on detailed research on the impact of the COVID-19 pandemic on Irish cancer services.



3
New Working Group Members

Dr Margot Brannigan
WG Chair

Dr Brian Gibney

Dr James Ryan



TAT Project

The Total Turnaround Time pilot project is in progress, with cross function project team from one of the participating radiology departments on board.

NEW NRQI PROGRAMME
WEBPAGE LAUNCHED
IN 2022

previous reports and other
resources available for download

CLICK HERE



NQAIS-Radiology online training
can be requested by contacting
the Programme Manager.

4th NATIONAL DATA REPORT

KEY RECOMMENDATIONS

The following recommendation relating to protected time has seen the assignment of an owner.
Please see Appendix A for full recommendations

1

The NRQI Programme recommend that a protected time allocation of one hour per week for all local clinical leads, 1.5 hours per week for NRQI working group members and 2 hours per week for the working group chair are implemented to carry out the activities associated with these roles. In relation to public hospitals, this has been agreed in principle with HSE Acute Operations, who have emphasised the need to ensure QI is integral to workplans.

The additional recommendations remain local and are placed with individual radiology departments/ hospital management.

DATA QUALITY

2

The NRQI working group recommend that sites access reports in NQAIS-Radiology on a quarterly basis for the purposes of sharing with colleagues and senior hospital management. It is recommended that summary data be uploaded in conjunction with the preparation of the quarterly report, as outlined in the upload schedule.

See Chapter 2

WORKLOAD

3

Radiology departments require adequate resources to deal with the increasing demand for more complex imaging. There has been a year-on-year increase in the number of examinations performed requiring additional staffing. The NRQI working group recommend that additional resources including staffing and equipment, are put in place in an attempt to deliver an improved service in a timely manner.

See Chapter 3

TAT

4

The working group recommend that radiology departments review local processes and use suitable QI methodologies to explore the root cause of TAT delays and employ suitable QI methodologies to find solutions. To achieve improvements to patient care, departments must be supported by hospital management, with the appropriate time and resources made available.

See Chapter 4

PEER REVIEW

5

The NRQI working group recommend that all radiologists ensure they record the completion of a retrospective, assigned and prospective peer reviews in the local system. This is essential to ensure the data are captured and an accurate picture of QI activity can be both recorded and used to improve patient care.

See Chapter 5

RQI MEETINGS

6

The working group recommend that RQI meetings are used to encourage a culture of mutual respectful learning with emphasis on positive learning and feedback with “good pick up” cases forming a central role.

See Chapter 7

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KEY FINDINGS AND OBSERVATIONS

CHAPTER 3: WORKLOAD

1. In 2022, over 3 million cases were recorded in 48 public and voluntary hospitals participating in the NRQI programme, which represents an 8.8% increase in comparison to 2021 records.
2. The biggest increase in the number of referred cases was recorded for GP referrals, 66,936 more in 2022 when compared with 2021, which translates into a 19.1% increase. This is the highest increase in GP referrals recorded over the last five years.
3. Over the previous 5-year period, calculated using the number of cases requiring reporting in participating hospitals, increased by 13.5%. More complex exams such as CT and MR saw a significant increase of 36.0% and 44.8% respectively. US cases increased by 35% over that period.

CHAPTER 4: REPORT TURNAROUND TIME

4. In 2022, 19 NQAIS sites out of 41 met or exceeded the recommended TAT target of 90%, this is one more site than in 2021 and three less than in 2020.
5. Findings for OP referrals for CT, MR and US have remained above the recommended target of 90%, while XR report authorisations remain well below the target, with 7% less reports authorised within the specified timeframe in 2022 than in 2021.
6. For GP referrals, findings reveal that between 2018 and 2022 sites have maintained a national aggregate of reports authorised within the recommended time of above 90% for CT, MR, US and for XR until 2021 where a drop just below 90% was seen to 89% and a further drop of 4% in 2022.
7. In 2022, the aggregate data reveal that CT, MR and US reached the recommended target of 90% cases authorised within the specified timeframe of 24 hours from IP referrals, at 96%, 92% and 90% respectively. The percentage of XR cases authorised from an IP referral did not reach the recommended target of 90% of reports authorised within 72 hours, dropping 3% from 2021 to 76% in 2022.

CHAPTER 5: PEER REVIEWS

8. The highest percentage of prospective peer reviews in 2022 was recorded for MR cases at 0.5% which was a 0.9% decrease from 2021. The remaining three modalities, CT, US and XR recorded a combined 0.1% of cases reviewed as part of the prospective review process. The majority of prospective reviews were recorded for MR, at 58.3% out of all prospective reviews recorded in 2022, which is 15.9% less than in 2021.
9. Data show a decrease in the percentage of cases where retrospective review was recorded, with the biggest change for CT, with 0.2% cases recorded in 2022 as retrospectively reviewed, down from 0.3% in 2021.
10. The 2022 data show that 66% of all retrospective peer reviews were in concurrence with the original report, this is 9% less than in 2021. The percentage of cases referred to an RQI meeting on peer review completion increased by 9% in 2022 to 25%, and minor discrepancy records remained similar to 2021 findings, at 9% of recorded retrospective peer reviews.

CHAPTER 6: RADIOLOGY ALERTS

11. The findings reveal that the overall number of alerts recorded in 2022 was higher across all referrals, when compared with 2021, with the most significant increase recorded for OP referrals, 10,459 in 2022, which translates to 6.5% more alerts recorded for this referral group in the previous year.
12. Data demonstrates an increase in the percentage of radiology alerts acknowledged within the set timeframe in 2022 when compared to 2021. The highest increase can be observed for OP referrals, 6.5% more than in the previous year.

CHAPTER 7: RADIOLOGY QUALITY IMPROVEMENT MEETINGS

13. In 2022 the biggest increase in the number of cases referred to RQI meeting was recorded for cases categorised as observation, at 33.7%, 10.5% more than in 2021. Information or educational feedback was recorded for 24.3%, a decrease of 9.6% from 2021. The category of technical was assigned to 17.4% of cases referred to RQI meetings, which is 6.5% less than in 2021. Cases categorised as compliment were recorded almost twice as frequently in 2022 as in 2021, increasing to 8.5% from 4.5% noted last year.

APPENDIX A: DETAILED RECOMMENDATION

CHAPTER 3: WORKLOAD

The NRQI Programme recommend that a protected time allocation of one hour per week for all local clinical leads, 1.5 hours per week for NRQI working group members and 2 hours per week for the working group chair are implemented to carry out the activities associated with these roles. In relation to public hospitals, this has been agreed in principle with HSE Acute Operations, who have emphasised the need to ensure QI is integral to workplans.

WHO BENEFITS FROM THE RECOMMENDATION?	<ul style="list-style-type: none"> • Patients/ members of public availing of radiology services in Ireland. • The radiology workforce of Ireland <ul style="list-style-type: none"> - Medical staff under the scope of radiology - Other healthcare professionals working under scope of radiology • Hospital-based services availing of radiology diagnostic services in Ireland. • Community based services availing of pathology diagnostic services in Ireland. • Radiologists/ other healthcare professionals involved in research and development in the field of radiology • Trainee radiologists / diagnostic radiographers/ other healthcare professionals working within the scope of radiology • Those participating in the NRQI programme • Working group members of the NRQI programme
WHO OWNS THE ACTION?	<ul style="list-style-type: none"> • Acute Operations, HSE
WHAT ACTION SHOULD BE TAKEN?	<ul style="list-style-type: none"> • Protected time to be assigned to local quality improvement clinical leads, NRQI working group members and the NRQI working group chair, as recommended by the NRQI working group as 1 hr/week, 1.5 hrs/week and 2 hrs/week respectively.
RATIONALE FOR THIS RECOMMENDATION	<ul style="list-style-type: none"> • The NRQI programme relies on consultant radiologists taking on the roles of QI clinical leads locally in a volunteer capacity. In addition, the working group members and chair dedicate significant time to the running of the programme at a national level also on a volunteer basis. • The benefits of the programme in maintaining appropriate standards in the Irish radiology services is well documented but cannot be realised without the time devoted by the radiology workforce. • Current data show that the volumes of cases have been steadily rising throughout the years since the introduction of the NRQI Programme. • Protected time is required to ensure data are collected and submitted to the national dataset, providing findings both locally and nationally and to ultimately allow vital clinical audit and quality improvement initiatives to take place, with the ultimate aim of ensuring the highest clinical standards are achieved and maintained. • Dedicated protected time that is well defined is required to enable this to happen. Clinicians require allocated time within their working hours to assist with this. • The role of the QI clinical lead, the NRQI working group members and chair involve an undertaking of a significant number of responsibilities and duties on a regular basis and in order for this to be carried out efficiently and effectively dedicated time is required.

**RATIONALE FOR THIS
RECOMMENDATION
(CONTINUED)**

Role of the QI Lead Radiologist locally:

Such duties involve:

- Overseeing the management of the programme locally (along with the QI Tech Lead).
- Ensuring compliance is adhered to and investigating if not.
- Uploading local summary data on selected KQIs to NQAIS-Radiology
- Maintain the integrity and validity of the QI data locally, ensuring that required data are recorded routinely and accurately.
- Analysing uploaded data and generating NQAIS reports and using them effectively to assess areas in need of improvement/ areas meeting defined targets.
- Reporting to hospital management on a quarterly basis around KQIs achieved locally and using NQAIS data and their enrolment in the programme to highlight areas requiring attention.

Role of the NRQI Working Group Members:

Such duties involve:

- Attend monthly NRQI working group meeting.
- Responding in a timely fashion to WG meeting invite to ensure meetings can take place with appropriate quorum.
- Actively participate in meetings through attendance, discussion and review, completing corresponding tasks as and when required.
- Review of monthly decisions and actions from NRQI working group meeting.
- Responding to any queries raised by participants of the programmes in a timely manner.
- Review of correspondence from programme management and respond if required.
- Involvement in a considered review to any data requests submitted to the programme for NRQI data and respond in a timely manner to these.
- Assisting programme management in any issues that arise around compliance within the programme.
- Actively contributing to any updates for the programme, such as programme Guidelines, amendments to upload schedule, expressions of interest for new members.
- Actively contributing to the annual National Data Report and overseeing its final version for publication. This involves numerous reviews over a number of months providing expert advice on findings and recommendations.
- Attendance at the annual QI conference and contribution to any material that may be presented at it if required.
- Advocating for the programme by bringing information on the NRQI Programme, including the latest version of the QI Guidelines to hospital management.
- Supporting open discussion and debate and encourage fellow Working Group members to voice their insights.
- Research and generate specialist programme documentation as required.

Role of the NRQI Working Group Chair:

Additional duties to the above involve:

- Provide leadership within the working group and act as a strong advocate of the QI Programme.
- Encourage participation from working group members.
- Continually review the progress of the programme with the programme manager.
- Delegate tasks appropriately within the working group.
- Chair regular working group meetings and determine final agenda for such meetings.
- Format any correspondence required on behalf of the programme/working group to outside parties.
- Present at conferences as the NRQI Programme representative.
- Drive decision making on key programme activities within the working group.
- Resolve conflict that may arise in the course of working group meetings.
- Identify and seek resolution on working group issues which require input or steer from outside of the group.
- Represent the working group at the Steering Committee and other relevant forums.
- Identify an alternate to represent the working group at forums when not available.

Compliance Data Upload Schedule

- Review of compliance over the years has shown difficulties maintaining the programme quarterly uploads for summary data. The programme has requested that quarterly uploads occur, yet there are frequently less data than expected in this category. The programme aims to have the full year summary data uploads from participating radiology departments by the end of February/ start of March for inclusion in the NDR. In 2023, only five hospitals had submitted their summary data for 2022.

Survey on Protected Time 2022

- A survey was sent to 300 consultant radiologists in 2021, a response rate of 33% was achieved.
- Findings revealed that 84% respondents carry out QI as part of their role.
- On average respondents spent 1.5 hours performing QI activities per week.
- 84% of respondents said that time for QI activity is not included in their work schedule.
- 71% confirmed that their departments hold radiology QI (RQI) meetings but 67% responded saying that the time required for RQI meetings is not covered by protected time.
- 41% reported that they are unable to perform QI activity on a weekly basis.

Growing Workload

- Figures from this year's report show 2,906,333 radiology cases recorded in 2022, which represents a 7% increase from 2021.
- Over the five-year period of 2018-2022, the overall number of cases increased by 8%, from 2,700,434 in 2018 to 2,906,333 in 2022 while the number of complex exams, such as CT & MR, increased by 28% and 30% respectively.
- With workload growing and complexities increasing the need for clinical audit and quality improvement work is growing also.



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<https://www.rcpi.ie/Healthcare-Leadership/National-Specialty-Quality-Improvement-Programmes/National-Radiology-Quality-Improvement-Programme>

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