

National Radiology Quality Improvement Programme

3rd National Data Report
1 JAN - 31 DEC 2021



EXECUTIVE SUMMARY

The National Radiology QI programme are delighted to present the 3rd annual data report, covering data from the 1st January to the 31st December 2021.

In 2021, 2.7 million cases were recorded in the 48 public and voluntary hospitals participating in the NRQI programme, representing a 6% increase from 2020 figures.

The COVID-19 pandemic continued to impact service delivery throughout 2021, in addition the ransomware cyber-attack on the HSE in May 2021 also had a significant negative impact on all services, particularly on specialties heavily dependent on technology, such as radiology. Despite difficulties in processing radiology cases the number of radiology reports completed returned to normal levels in the third and fourth quarters of 2021.

A survey conducted by the NRQI programme and the Faculty of Radiologists revealed that a high percentage of radiologists do not benefit from protected time for QI activity. The majority of respondents were of the opinion that having protected QI time would increase the level of QI activity in their departments.

The report turnaround time data highlight the challenges facing radiology departments in 2021, revealing that percentage of radiology reports authorised within the defined timeframes in 2021 was lower in comparison to previous two years. Many affected sites had to record information on paper, relying on administration staff to input data retrospectively, contributing to difficulties encountered with NQAIS uploads. The data analysis from 2019-2021 reveals difficulties in achieving 90% of X-Ray reports authorised within the defined timeframes across all patient classes (see page 34).

Peer review is an important part of the radiologist's routine activity contributing to QI activity within radiology departments. The data reveal a decrease in the number of peer reviews recorded in 2022. A number of factors may have contributed to the relatively low percentage of cases recorded as peer reviewed overall. These are consistent issues such as high workload, and a lack of time and resources needed to complete the current data submission process, staff turnover and outsourcing of reporting could also have an impact on this.

The total number of radiology alerts activated in 2022 was 28,925, which was 6% lower than in 2021. The most significant change was noted for GP referrals with an increase of 3,000 radiology alerts raised, while number of alerts raised for IP referrals was 1,000 less than in 2021. The volume of critical and urgent alerts remained low, while unexpected clinically significant alerts account for the majority of radiology alerts raised. These results, and particularly differences in records between 2020 and 2021, should be reviewed in the broader context of the annual workload, as well as the consequences of the cyber-attack. There is no apparent correlation between the number of alerts activated within NQAIS sites and the percentage of alerts acknowledged from year to year, further highlighting that acknowledgement of an alert is an external event, outside the control of the radiologist.

The impact of the COVID-19 pandemic, the cyber-attack on the HSE IT systems and increased complexity of cases is visible in the findings in this report. It is recognised that access to external applications such as NQAIS as well as, in many cases, limited functionality of systems on site, had a significant impact on sites ability to record QI data in the second part of 2021. Radiology departments across Ireland were recovering from this event at a varied pace.

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

3rd NATIONAL DATA REPORT

KEY FINDINGS AND OBSERVATIONS

CHAPTER 2: DATA QUALITY

1. It is clear that the rate of recording QI activity is low in multiple sites in Irish hospitals, albeit that the verbal feedback from departments is that QI activity is happening locally. Therefore, the data in the report do not accurately reflect national QI activity occurring, but are what is available to work with currently. Working group members are concerned about this and are eager to increase this activity and documentation of same. Low participation in radiology QI, if real, carries a potential risk for patient safety.
2. Improvement of the remote reporting functionality on NIMIS and other PACS platforms will enable off-site delivery of radiology services and QI activities and can provide a greater level of safety for radiologist staff during a pandemic situation.

CHAPTER 3: WORKLOAD AND RESOURCE

3. This report presents 2.7 million radiology cases recorded in 2021, from the 48 public hospitals participating in the NRQI programme. This represents a 6% workload increase (151,479 cases) in comparison to 2020 records.

CHAPTER 4: PROTECTED TIME IN RADIOLOGY DEPARTMENTS

4. 41% of survey respondents stated that they perform QI activities less frequently than 2-4 hours per week.

CHAPTER 5: REPORT TURNAROUND TIME

5. Despite difficulties in processing radiology cases, caused by both the COVID-19 pandemic and cyber-attack, the number of radiology reports completed returned to normal levels in the third and fourth quarters of 2021.
6. In 2021, 18 out of 41 NQAIS sites met or exceeded the recommended TAT target of 90%, this was a decrease of five sites from 2020 and similar to 2019 findings.

CHAPTER 6: PEER REVIEW

7. The percentage of completed cases subject to the retrospective review remained low in 2021, with a decrease in many hospitals when compared to 2020. Most sites recorded less than 1% cases as retrospectively peer reviewed.

CHAPTER 7: RADIOLOGY ALERTS

8. A decrease in the overall number of alerts for emergency department, external, inpatient and outpatient referrals can be seen for 2021. Referrals sent from GPs saw an increase of 3,000 radiology alerts raised. These results and particularly differences in records between 2020 and 2021, should be reviewed in the broader context of the annual workload, the impact of the COVID-19 pandemic and the cyber-attack in May 2021. Due to the consequences of the cyber-attack, local systems were offline for a considerable time and it is likely that radiologists have reverted to other methods of communication, such as phone calls.

CHAPTER 8: RADIOLOGY QUALITY IMPROVEMENT MEETINGS

9. In 2021 attendance at RQI meetings was recorded by seven sites, while in 2020 records were submitted by ten sites. It is recognised by the working group, that access to external applications such as NQAIS and ability to record summary data was disrupted by the cyber-attack in May 2021 and radiology departments across Ireland were recovering from this event at a varied pace. This could have an impact on the completion level of summary data submitted in 2021.

KEY RECOMMENDATIONS

DATA QUALITY

- 1** The NRQI working group recommends that sites manually upload summary data in conjunction with the preparation of the quarterly report. Sites are reminded on a quarterly basis to access reports in NQAIS-Radiology for the purposes of sharing with colleagues and senior hospital management.
See Chapter 2
- 2** The NRQI working group recommend that further technical improvements are implemented to enhance automated uploading functionality; this would facilitate the recording of radiology QI activities which may be happening in practice but which are not being captured.
See Chapter 2

WORKLOAD

- 3** Radiology departments must be resourced adequately and in line with European best standards to continue to provide the optimum level of service to patients and to ensure a reduced burden on existing staff to decrease the risk of burnout. This is strongly supported by international research.
See Chapter 3
- 4** There is a backlog of patients requiring radiological examination. The NRQI working group recommend that additional resources are put in place to ensure patients receive diagnoses in an appropriate timeframe.
See Chapter 3

PROTECTED TIME IN RADIOLOGY DEPARTMENTS

- 5** The NRQI working group recommend that hospital management should provide greater support for radiology QI activities by complying with previously agreed recommendations to ensure protected time for Lead QI Radiologists (4 hours per week), and all other consultant radiologists (2 hours per week).
Embedding these protected hours in revised work plans for all existing and new consultant radiologists is essential.
See Chapter 4

TURNAROUND TIME

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The NRQI working group encourage sites to audit local processes to assess any potential improvements that could be implemented in order to achieve 90% radiology reports authorised within the specified turnaround time.

See Chapter 5

PEER REVIEW

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The NRQI working group strongly recommend that all radiologists complete their assigned peer review cases each week.

See Chapter 6

RQI MEETINGS

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The NRQI working group recommend that radiology quality improvement (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 8