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d'Iniúchadh Cliniúil

An Stiúrtóireacht um Ardchaighdeán
agus Sábháilteacht Othar

National Centre
for Clinical Audit

National Quality and Patient
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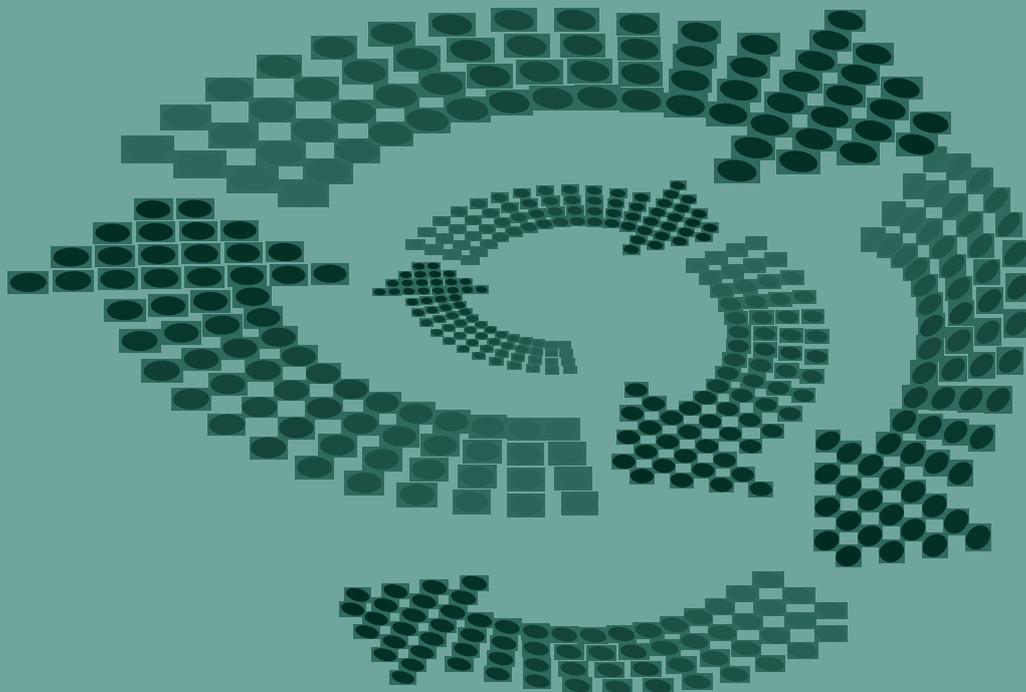
EMERGENCY
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RCSI

National Clinical Audit of Emergency Department Triage Report 2023

HSE National Centre for Clinical Audit in collaboration with
National Emergency Medicine Programme and Royal College of Surgeons Ireland



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Foreword

We are delighted to share the findings of the 2023 National Clinical Audit of Emergency Department Triage. At the request of the HSE Chief Clinical Officer, the National Emergency Medicine Programme (EMP) and the National Centre for Clinical Audit (NCCA) brought forward a plan for a HSE National Clinical Audit of Emergency Department Triage.

The overarching aim of the EMP is to improve the safety and quality of care for patients in Emergency Departments throughout the country. The purpose of the NCCA is to strengthen the development of an end to end process for clinical audit. We have come together for this piece of work to assure ourselves of the quality of the triage process in Emergency Departments (ED). In assessing timeliness, completeness and accuracy of triage category assignation we seek to provide assurance on a fundamental cornerstone of clinical risk management.

I would like to thank Dr Colm Henry, HSE Chief Clinical Officer, Dr Orla Healy Clinical Director National Quality and Patient Safety and Maria Lordan Dunphy, Assistant National Director QPSD and NCCA, for sponsoring and supporting this work.

The project management and preparation of this report was carried out by Patricia Gibbons, Breda Naddy, Karen Reynolds, and Sinead Reilly. I congratulate the project team for the rapid turnaround of this report while still maintaining the highest standards of rigour and thoughtful analysis of the results. I would also like to mention Fiona McDaid, who was unavailable in the early stage, but provided much post-hoc expert comment on the audit findings

This report will be of interest to the entire Emergency Department community and all HSE staff and will inform the Framework to Support Patient Safety in Emergency Departments.

Gerry McCarthy
Clinical Lead, National Emergency Medicine Programme

Acknowledgements

This report uses data provided by the Acute Business Information Unit as well as data collected by the Clinical Skills Facilitators in Emergency Departments and Units around the country. NCCA and EMP would like to thank all participating hospitals for their valuable contribution. Without the support of the Clinical Skills Facilitators and Emergency Department staff, this audit would not have been possible.

We would also like to thank Joan Molloy and Katie Malone in Acute Operations and the ICT Departments in each hospital for their help with data extractions. Prof Kathleen Bennett, Head of Data Science Centre in RCSI provided meticulous and insightful data analysis which we were very grateful for.

We would like to especially acknowledge the Steering Group for their guidance and support throughout the process.

Finally and most importantly we would like to thank the Triage Nurses who work tirelessly every day to carry out the important work of prioritising patient care in our Emergency Departments.



Key Findings



On average 37% of patients attending ED during day time were triaged within 15 minutes



On average 42% of patients attending ED during night time were triaged within 15 minutes



22% of patients triaged in all EDs were deemed triage category 2



25% of patients attending all EDs were categorised as triage category 4 and 5



61% of all under-triaged patients were category 3, which should have been category 2

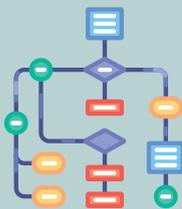


9% of patients were under-triaged





10% of patients were over-triaged



93% of patients had the correct presentational flowchart used



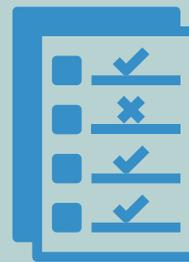
81% of patients had the correct triage category assigned



There are 5 different ICT systems which host the MTS and ICTS in the EDs



The % of ICTS timely triage for category 2-5 is higher in CHI EDs than EDs outside Dublin



73% of patients had specific discriminators correctly selected



64% of patients had a pain score recorded





1. Background and Introduction

1.1 Background

The health system in Ireland is under unprecedented and sustained pressure, evidenced by the large numbers of patients presenting for care at Emergency Departments (EDs) and Injury Units (IUs). As a consequence, patients who have been triaged as Manchester Triage Category 2 (the second most urgent category) are waiting long times to be seen, with associated clinical risk. It has become apparent that there is an increase in the proportion of patients assigned as Category 2 (from 10% to 22% of all ED attendances nationally, over the last number of years). This is probably the cumulative result of updates to recommendations from the Manchester Triage Group (reflecting increasing proof of the benefits of certain time-critical interventions and recognition of shifts in presenting symptom patterns, particularly in the setting of increasing longevity and increased independent living of people with multiple comorbidities) and other factors, including the diversion of the less urgent patients to other clinical settings.

At the request of the HSE Chief Clinical Officer (CCO) and as one of a suite of agreed actions aimed at mitigating the risk, the National Centre for Clinical Audit (NCCA) and the National Emergency Medicine Programme (EMP) have brought forward a plan for a national clinical audit of the appropriateness and timeliness of triage categorisation, based on the standardised template recommended by the Manchester Triage Group.



Triage is the preliminary assessment of patients to determine the urgency of their need for treatment and the nature of treatment required. Currently the two triage systems recommended for use in EDs by the National Emergency Medicine Programme (EMP) are:

- **Manchester Triage System (MTS) \geq 16 years of age**
- **Irish Children's Triage System (ICTS) \leq 16 years of age**

Both of the triage systems are 5-tier systems employing 1) the recognition of the presentation (flowchart) and 2) reductive discriminator identification as the principle of the system. Triage is not used in IUs, as patients either self-triage as suitable for an IU or are referred by their GP.

Triage has become an essential part of care given in EDs worldwide and is the primary method of identifying and prioritising acuity in both adults and children presenting to the ED.

1.2 Introduction

The HSE National Clinical Audit of Emergency Department Triage Steering Group (Appendix I) was established in January 2023 to provide governance and oversight of the HSE National Clinical Audit of Emergency Department Triage.

A multidisciplinary project team (Appendix II), sponsored by the HSE Chief Clinical Officer and led by the Clinical Lead, National Emergency Medicine Programme (EMP), was established to support the Steering Group and provide operational support with all stages of the clinical audit.

2. Aim and Objectives

2.1 Aim

The aim of this clinical audit was to determine the timeliness, accuracy, acuity, trending and completeness of the Emergency Department triage category assigned in hospital Emergency Departments.

2.2 Objectives

The objectives of this clinical audit were to:

1. Establish if the triage category was assigned in a timely manner
2. Identify if the correct triage flowchart was assigned
3. Determine if the correct triage category acuity was assigned
4. Establish if the triage process was complete
5. Identify opportunities for improvement.



3. Standards and Criteria

The standards used for the clinical audit were the **Manchester Triage System, edition 3 version 3.7, 2014** and the **Irish Children's Triage System*, edition 2, January 2021**.

There were three parts to this clinical audit:

- Part I:** To establish if the Triage category was assigned in a timely manner
'95% of patients should be seen within 15 minutes from registration to triage.'
- Part II:** To assess the acuity and trending; the number of patients triaged in each category, by month, by hospital for 2022.
- Part III:** To identify if the correct Triage flowchart was assigned, if the correct Triage category acuity was used and if the Triage process was complete.

For adults, the age ranges included were: 16-64 years, 65-74 years and 75 years and over.

For children, the age ranges included were: <1 years, 1-4 years and 5-15 years.

**The Irish Children's Triage System is a child-specific triage tool developed and launched by the EMP in 2016 (currently on 2nd edition, launched in 2021) that is followed for the prioritisation of children up to 16 years of age presenting to Emergency Departments in Ireland.*



4. Methodology

This clinical audit was retrospective, reviewing triage information from 2022 and included adults and children's triage records from Emergency Departments and associated units.

Part I: Timeliness of Triage (January – December 2022)

Part II: Acuity and Trending (January – December 2022)

Part III*: Completeness and Accuracy (2 weeks of ED Triage 2022, 13th June - 19th June and 12th December - 18th December 2022, including both timeframes: 08:00 hours – 19:59 hours and 20:00 hrs to 07:59 hours).

For Part I and II of the clinical audit, data was sourced from the HSE Acute Business Information Unit (BIU) and for Part III the data collection tool was agreed using the Manchester Triage criteria (Appendix IV).

**5% random sample of ED attendances from each of the sites across the designated weeks.*

In addition, the answers to the following questions were collected from each ED:

These included:

- What ICT system is triage recorded on, which triage system is used?
- What edition of that triage system is used?
- Was there a triage trained nurse allocated to triage?

All Emergency Departments and Units in the HSE (28 EDs, 1 Urgent Care Centre, and 2 Emergency Care Units) were invited to take part in the clinical audit with correspondence issued via the HSE CCO office.

Data collection for Part III of the audit was undertaken by the Clinical Skills Facilitators (CSFs) from HSE Emergency Departments. A briefing session was provided for all CSF data collectors and a pilot was undertaken, week commencing 9th February 2023.

The methods of recording data for triage across EDs lacked standardisation. Therefore, it was agreed that the Clinical Skills Facilitators (CSF) would collect the data from their own sites. The project team provided a list of randomly generated medical record numbers (MRNs) to identify the triage episodes to be audited.

Anonymised data extracts from this randomisation were received from hospitals and given to the nominated ED CSFs who carried out the data collection. Each CSF collected data* ranging from 35 to 185 charts (accessed via their ICT system or the hard copy of the record, if electronic access was not possible).

Acknowledging and taking into account the ongoing challenges across the health service, the closing date for submission of data collection forms was extended to 15th March 2023. All data returned by the extended submission date was included for Part III of the audit. Data analysis was undertaken by the Data Science Centre, School of Population Health, RCSI University of Medicine and Health Sciences. Mainly descriptive analysis is presented as frequencies and percentages and box-and-whisker plots for percentages in each triage category across hospitals. Chi-square tests of association are used for comparison on timely triaged between day and night hours.

The clinical audit report was collated by the NCCA, in consultation with the National Emergency Medicine Programme Project team. The final draft of the report was submitted to the National Clinical Audit of Emergency Department Triage Steering Group for review, approval and agreement of recommendations.



5. Results

The results of this clinical audit are presented in 3 parts:

5.1 Part I: Timeliness of Triage (January – December 2022)

5.2 Part II: Acuity and Trending (January – December 2022)

5.3 Part III*: Completeness and Accuracy

(*5% of overall attendances across 2 weeks of Emergency Departments Triage 2022)

- 13th June - 19th June 2022
- 12th December - 18th December 2022

(Including both timeframes: 08:00 hours – 19:59 hours and 20:00 hours to 07:59 hours).



5.1 Part I: Timeliness of Triage over one year (1st January – 31st December 2022)

“To establish if the Triage category was assigned in a timely manner”

5.1.1 Timeliness of Triage during Day Time hours 2022

Figure 1 provides the overall percentage triaged within 15 minutes for all hospitals, based on the data extracts from BIU and during daytime hours (08:00 – 19:59). It demonstrates a wide variation in timely triage across hospitals during day time hours, with overall timely triage ranging from 21% to 76%. On average 37% of cases were timely triaged during day time hours compared to 42% at night time. The difference is statistically significant ($p < 0.001$).



Note - two hospitals (20 and 22) had values that were not deemed reliable due to recent ICT system changes. Hospital 21 had insufficient data for reliable estimates. Therefore, these 3 sites are excluded from Figures 1 and 2 below.

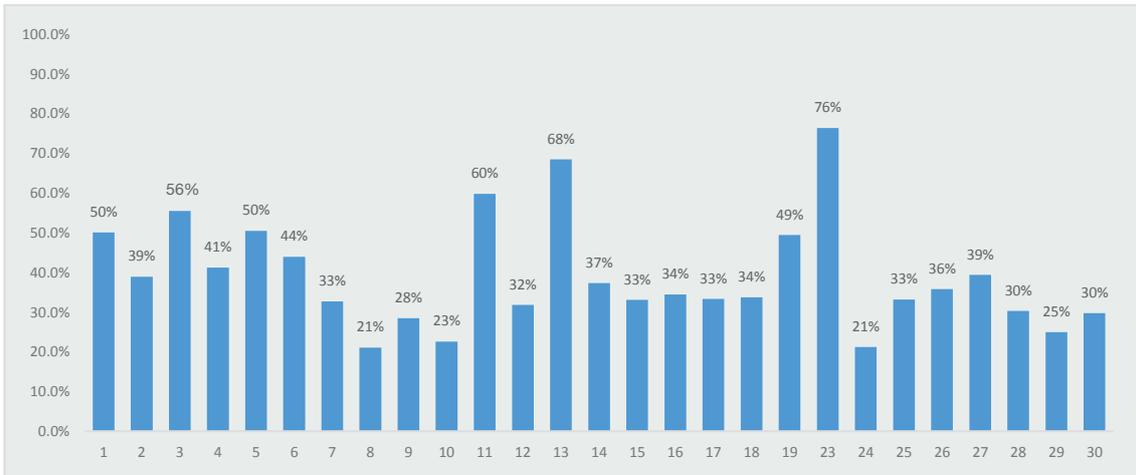


Figure 1: Percentage triaged within 15 minutes for all hospitals during daytime hours (time interval 08.00 – 19.59 hours)

5.1.2 Timeliness of Triage during Night Time hours 2022

Figure 2 provides the percentage of those triaged within 15 minutes for each hospital based on the data extracts from BIU during night time hours (19:59 – 08:00 hours).

It details wide variation in timely triage across hospitals, with timely triage ranging from 11% to 85%.

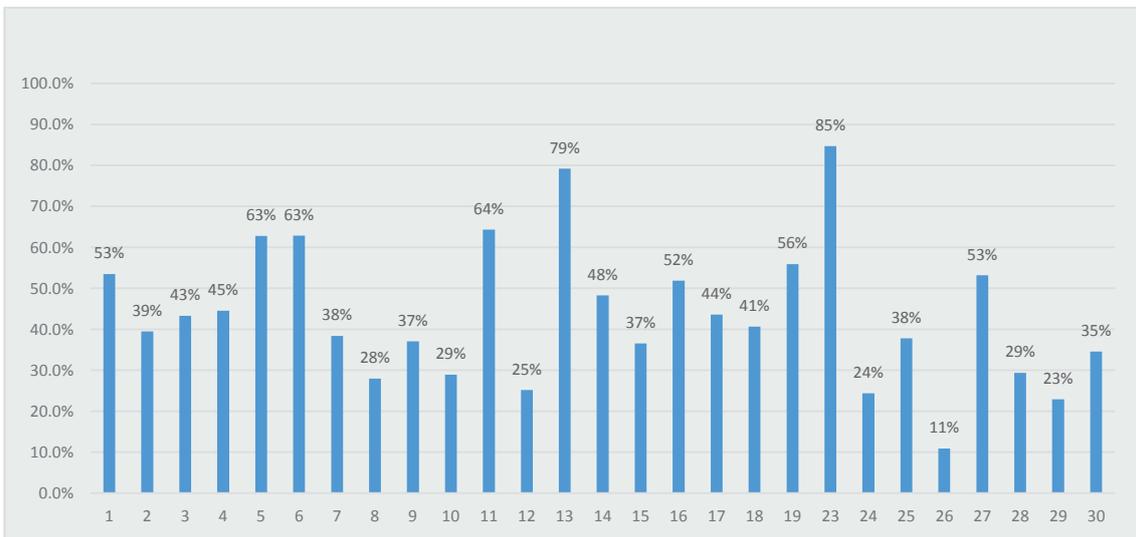


Figure 2: Percentage triaged within 15 minutes for all hospitals during night time hours (time interval 20.00 – 07.59 hours)



5.1.3 Timeliness of Triage by Triage Category and Mode of Arrival – Day Time 2022

Figure 3 provides a summary of the percentage triaged within 15 minutes by triage category and by mode of arrival to hospital, during day time hours (excluding hospitals 20-22).

The highest percentage triaged within 15 minutes were found where mode of arrival was by helicopter (n=112 by helicopter), followed by arrival by ambulance (n=133,351).

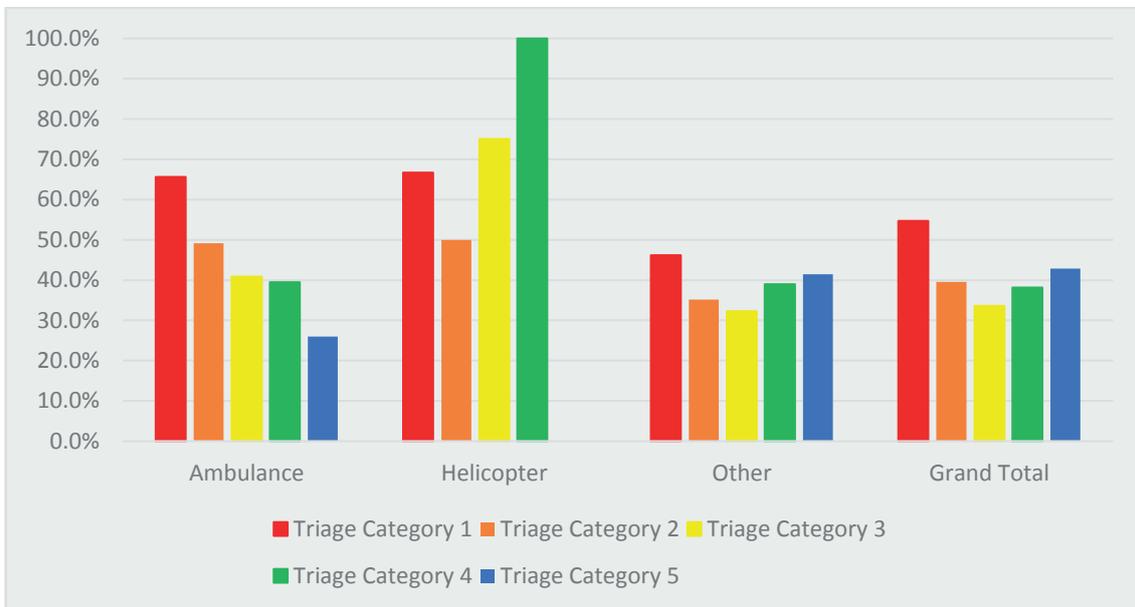


Figure 3: Percentage triaged within 15 minutes by triage category and mode of arrival during day time hours (excluding hospitals 20-22)

5.1.4 Timeliness of Triage by Triage Category and Mode of Arrival – Night Time 2022

Similar results are shown during night time hours as shown in Figure 4 below, with the highest timely triaged in categories 2 and 3 by helicopter (n=27) and ambulance (n=95280).

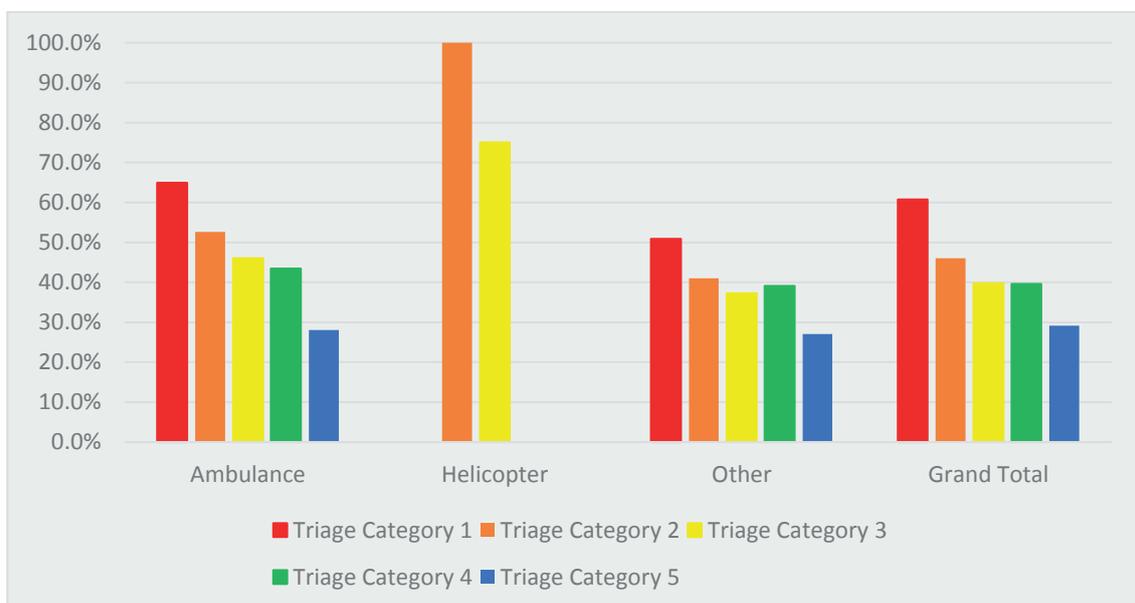


Figure 4: Percentage triaged within 15 minutes by triage category and mode of arrival during night time hours – (excluding hospitals 20-22)



5.1.5 Timeliness of Triage by Triage Category and Age Range – Day Time 2022

The percentage triaged within 15 minutes in day time hours is presented by three age categories (0-15 years, 16-74 years and 75 years and over) in Figure 5 and by night time hours in Figure 6. The overall percentage triaged within 15 minutes (black bar) is highest in those aged 0-15 years and age 75 years and over. Patients in category 75 years and over appear to have a higher percentage of timely triage for triage category 1, but similar for other triage categories across the age groups.

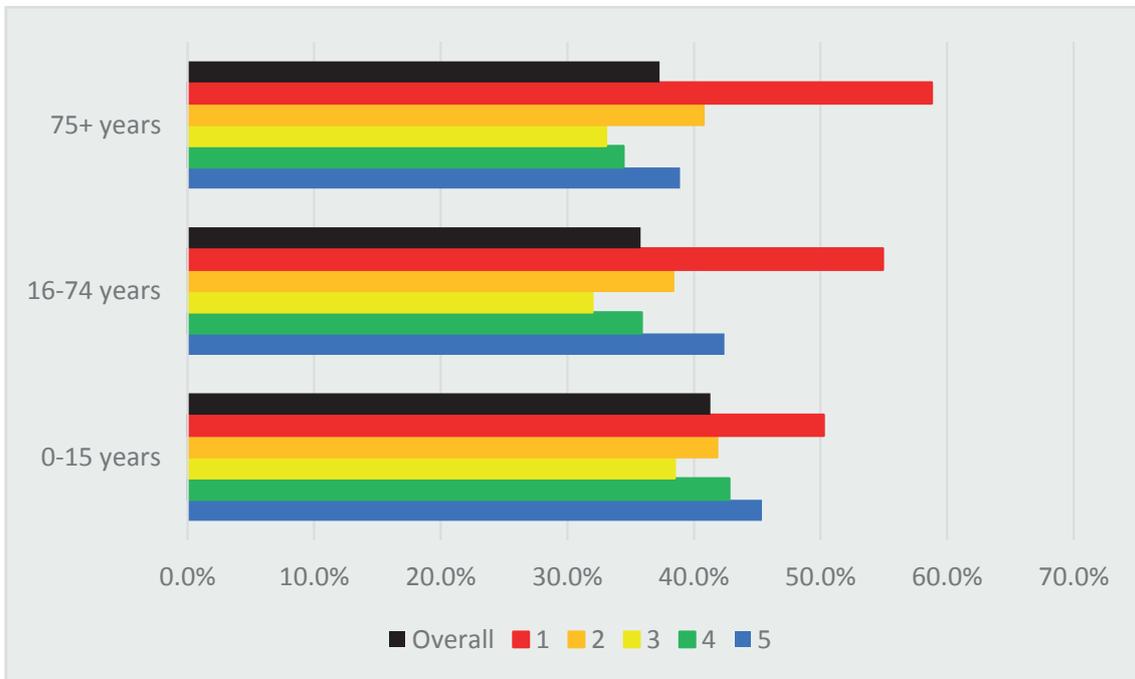


Figure 5: Percentage triage time within 15 minutes overall (black bar) and by triage categories 1-5 and age (day time hours)

5.1.6 Timeliness of Triage by Triage Category and Age Range – Night Time 2022

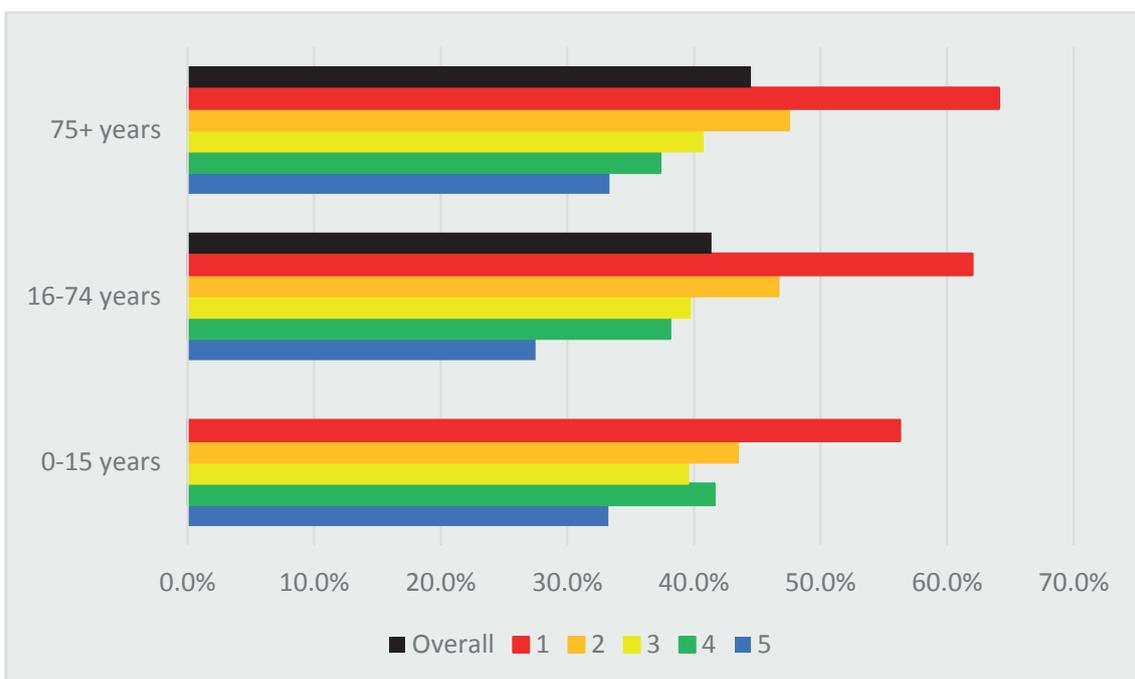


Figure 6: Percentage triage time within 15 minutes overall* (black bar) and by triage category and age (night time hours) *missing overall value (black bar) for 0-15 years



5.2 Part II Acuity and Trending over one year - (1st January – 31st December 2022)

“To determine if the correct triage category acuity was assigned”

Part II details the overall number of patients triaged in each category and by each hospital for 2022.

5.2.1 Acuity and Trending – Triage Categories 2022

Table 1 below details the Triage Categories trending over one year - (1st January – 31st December 2022). The overall percentage assigned to Triage Category 1 was 1%, Triage Category 2 was 22%, Triage Category 3 was 52%, Triage Category 4 was 23% and Triage Category 5 (2%).

Triage Category	Triage Category 1	Triage Category 2	Triage Category 3	Triage Category 4	Triage Category 5
%	1%	22%	52%	23%	2%

Table 1: Overall Triage Categories trending over one year - (1st January – 31st December 2022)

5.2.2 Acuity and Trending - Cumulative % in each Triage Category by Hospital 2022

Figure 7 below details the cumulative percentages in each triage category by individual hospital site.

Note: Data was excluded for four hospitals (13, 14, 18 and 21 due to insufficient information provided).

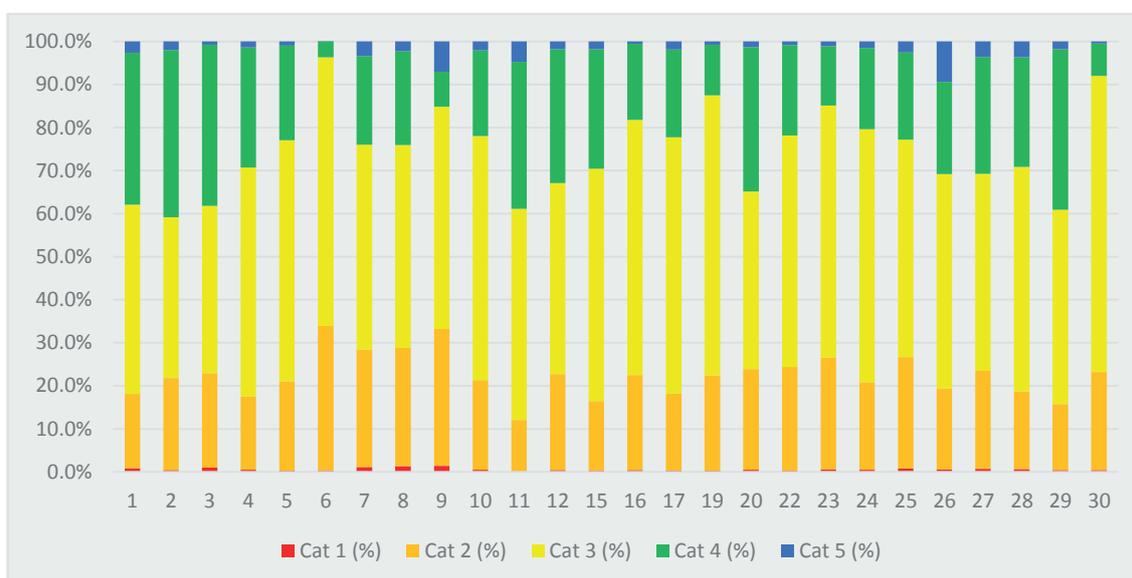


Figure 7: Cumulative % in each triage category by hospital (based on total numbers triaged)

Note: Three hospitals (9, 22 and 24) had between 30-50% of triage category assigned as ‘unspecified.’



5.2.3 Acuity and Trending – Individual % in each Triage Category by Hospital 2022

Figure 8 provides the individual percentage within each hospital for each triage category and the overall percentage for each triage category for all hospitals combined (solid line).

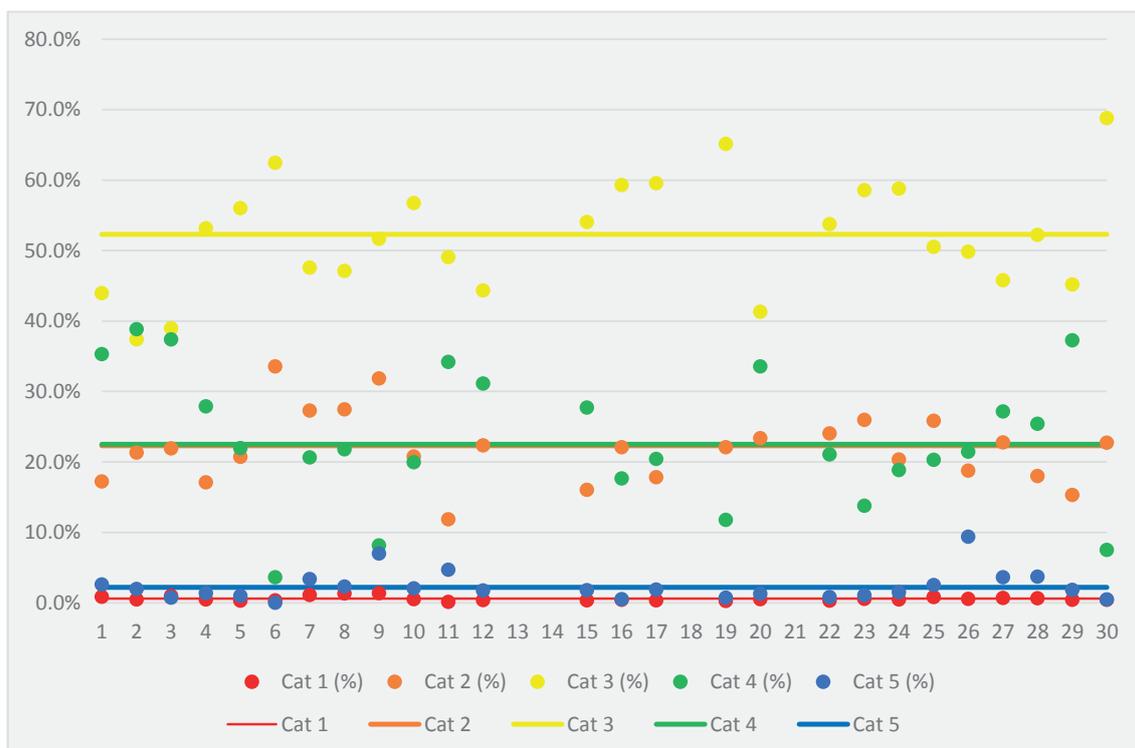


Figure 8: Percentage in each triage category by hospital (based on total numbers triaged in 2022).

Note: Each dot represents the percentage in each hospital. Hospital code is shown on the x axis. Three hospitals (9, 22 and 24) had between 30-50% of triage category assigned as ‘unspecified.’

5.2.4 Acuity and Trending – Distribution of percentage in each Triage Category by Month and by Hospital, 2022

Figure 9 below provides the distribution of percentage in each triage category* over the hospitals and in each month in 2022. The trend in percentage in each category is consistent over time for category 3 and category 5. In repeated measures analysis of variance, there was a significant difference in trend across months for triage categories 1, 2 and 4.

When comparing pairs of months with each other, a statistically significant difference was noted between the proportion of patients assigned a Category 1, with the highest proportion being recorded in January, second highest in November and lowest in July. The small numbers of patients assigned a Category 1 makes this of little practical significance. However, a similar comparison for Category 2 patients shows a small, but steady increase for the consecutive months of September to December 2022, the overall increase reaching 3-4% of patients attending during those months.



*Triage Category: 1 = Red, 2 = Orange, 3 = Yellow, 4 = Green, 5 = Blue

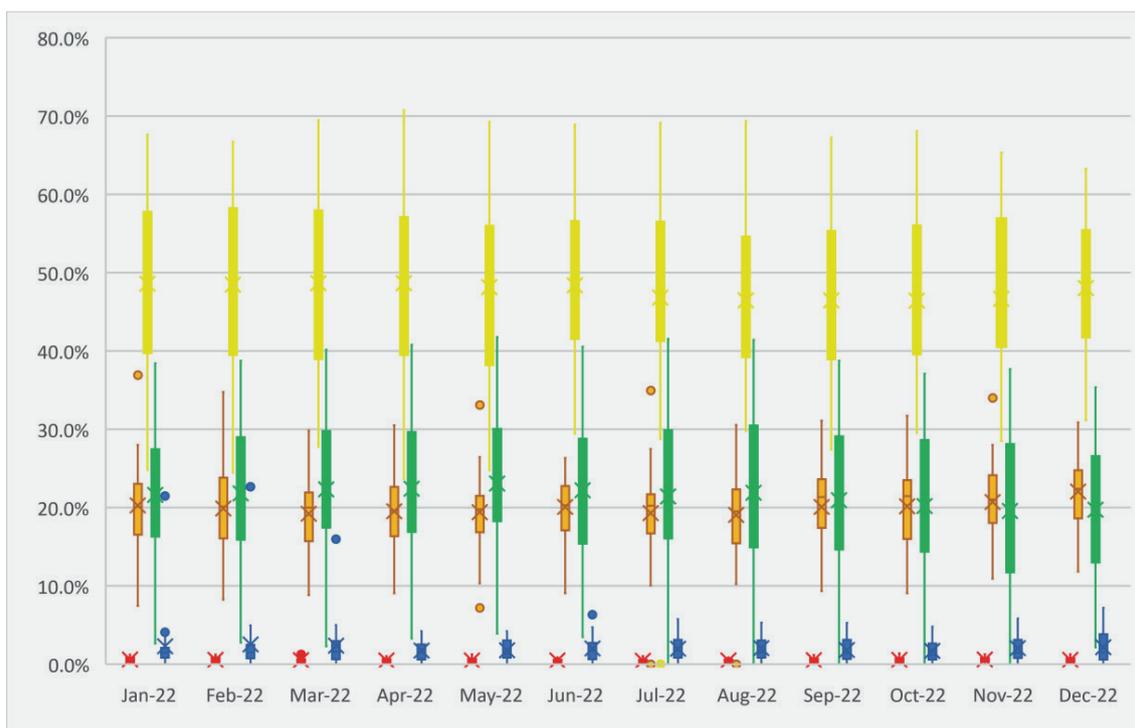


Figure 9: Box and whisker plot (median, inter-quartile range) for distribution of trend in triage category over months in 2022 for hospitals (excluding hospitals 13, 14, 18 and 21)

5.3 Part III: Completeness and Accuracy

“To identify if the correct triage flowchart was assigned and to establish if the triage process was complete”

Data collection for Part III included a total of 2245 cases, as returned from a total of 27 hospitals, using the agreed clinical audit tool to assess completeness and accuracy of the triage process during the following timeframes: 2 weeks of ED Triage 2022, 13th June - 19th June and 12th December - 18th December 2022 (including both timeframes: 08:00 hours – 19:59 hours and 20:00 hours to 07:59 hours).

Note: For the purpose of the audit only, Connolly Hospital was split into CHI Connolly and Connolly Hospital which resulted in 31 hospitals invited, in contrast to 30 hospitals described in Part I and II findings.

Completeness and accuracy are defined as:

”

Completeness: An episode is complete if all the necessary steps to reach a conclusion have been undertaken and recorded. The method requires that the practitioner excludes all the discriminators in any higher priority.

Accuracy: An episode is recorded as accurate if both the presentation and discriminator selected are appropriate.



5.3.1 Criteria for a Safe Triage Process

Table 2 below details the **Criteria for a Safe Triage** system using the four criteria measured against the standard of 95%:

- **Was the correct presentational flow chart used?**
93% of cases had the correct presentational flow chart used.
- **Was the specific discriminator correctly selected?**
73% of cases had specific discriminators correctly selected.
- **Was the correct triage category assigned?**
81% of cases had the correct triage category assigned.
- **Was a Pain score recorded?**
64% of cases had a pain score recorded, in those indicated.

Criteria	Audit Standard	Yes	No	Comments to note
Correct use of Presentational Flow Chart	95%	2090 (93%)	149 (7%)	5 “not recorded” 1 missing
Specific Discriminators Correctly Selected	95%	1649 (73%)	513 (23%)	82 “not recorded” 1 missing
Correct Triage Category Assigned	95%	1809 (81%)	419 (19%)	4 “not recorded” 1 unknown 12 missing data
Pain Score Recorded	95%	1320 (64%)	730 (35%)	181 (8.2%) “not indicated” 14 missing data

Table 2: Criteria for a Safe Triage System



Figure 10 below presents the criteria for safe triage data in graphical form.

Assessing against the agreed criteria for safe triage, none of the criteria met the standard of 95%; with findings showing that 93% of cases had ‘correct use of the presentational flowchart’, 73% had ‘specific discriminators correctly selected’ and 81% had the ‘correct triage category assigned.’

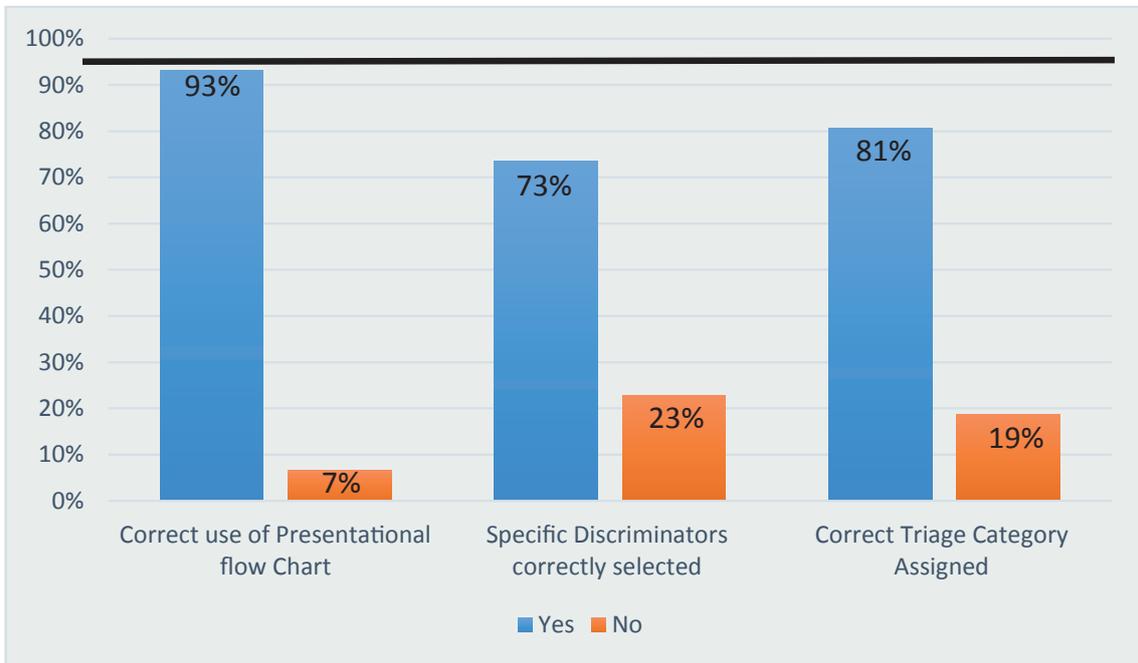


Figure 10 – Criteria for Safe Triage (black line = 95% standard)

In Figure 11 below, Pain Score was recorded in 64% (1320) of cases, not recorded in 35% (730). Assessing against the agreed criteria for safe triage, the findings did not meet the standard of 95%.

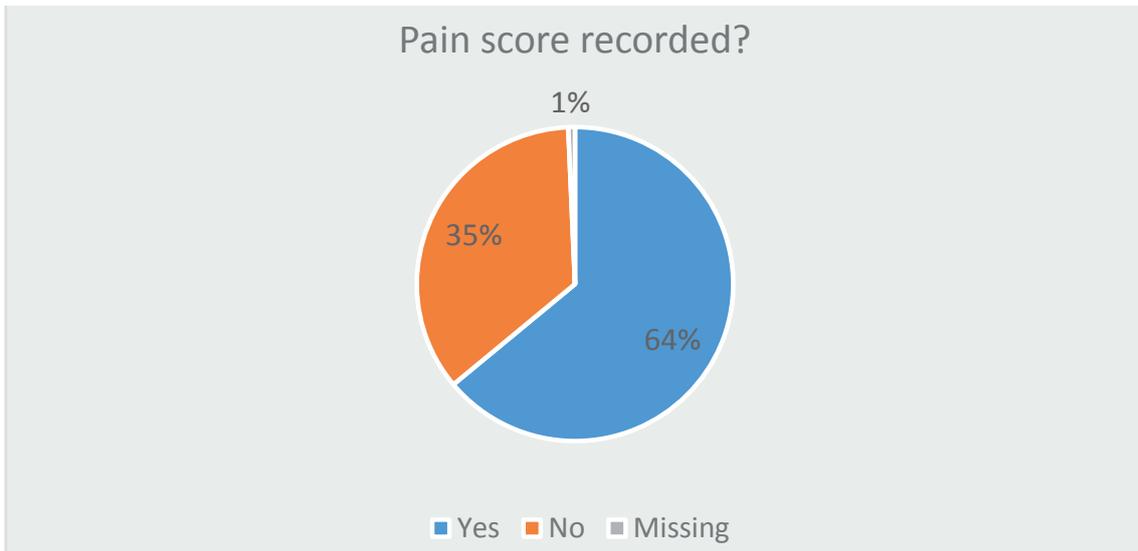


Figure 11: Was Pain Score recorded?

5.3.2 Numbers under-triaged by triage category

In total, 196 (9%) of all the episodes were under-triaged. The main category associated with under-triage is category 3 which should have been category 2 (61% of all under-triaged). The next largest was category 4 which was re-assigned by the ED CSFs as category 3 in 19% of all under-triaged patients (see Figure 12).



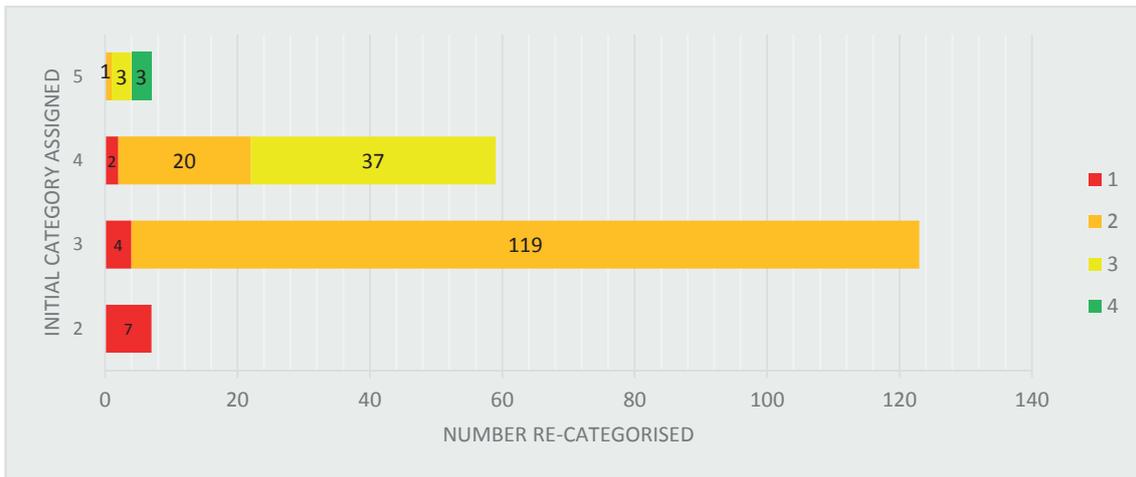


Figure 12: Numbers under-triaged by initial triage category and re-assigned category

5.3.3 Numbers over-triaged by triage category

A total of 217 (10%) of all the audited cases were over-triaged. Most were deemed appropriately assigned to category 4 from category 3 (151, 70% of all over-triaged), followed by category 3 from an initial category 2 (20%). A small number (n=10) were over-triaged by two or more categories (see Figure 13).

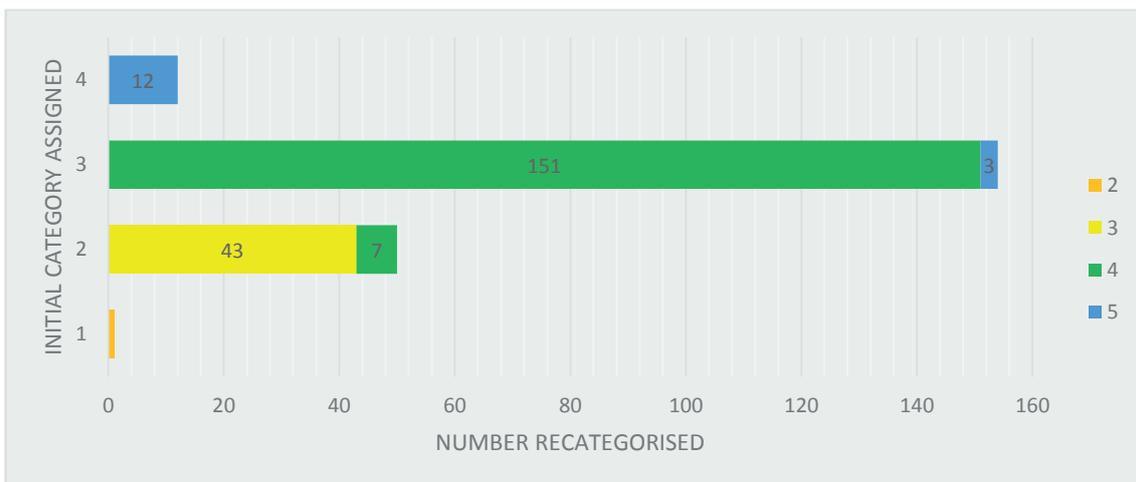


Figure 13: Numbers over-triaged by initial category and re-assigned category

Note: a small number (n=6) were given the same category (initial and re-categorised) and were not included in the figures

Figures 14 and 15 show that the percentage of timely triage is similar for category 1 in CHI and non-CHI hospitals but greater in the CHI hospitals than the non-CHI hospitals using the ICTS for triage category 2 - 5 and overall.



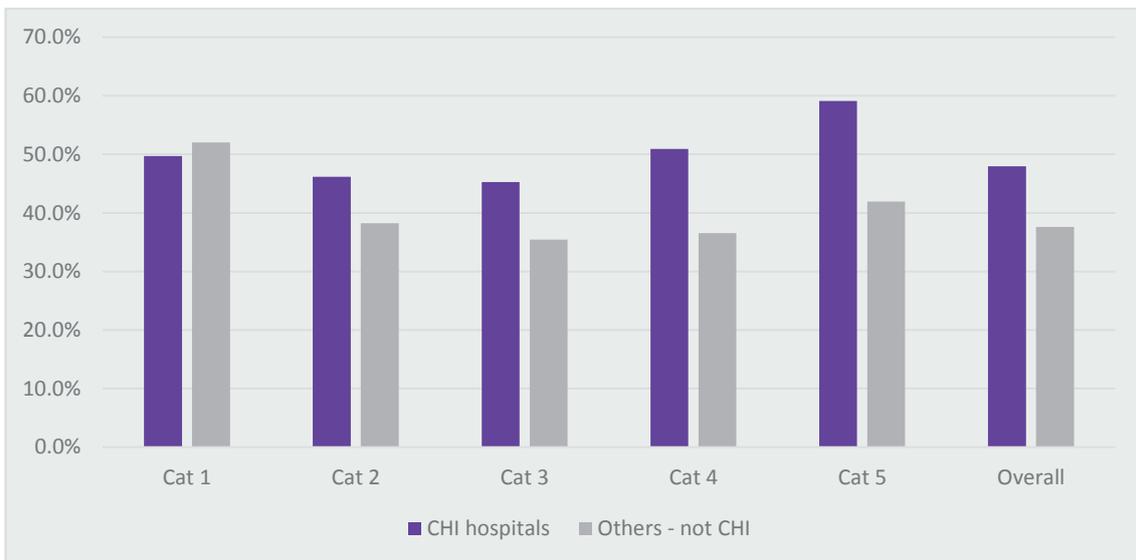


Figure 14: Percentage timely triaged (0-15 years) between CHI and non-CHI hospitals using the ICTS (daytime hours)

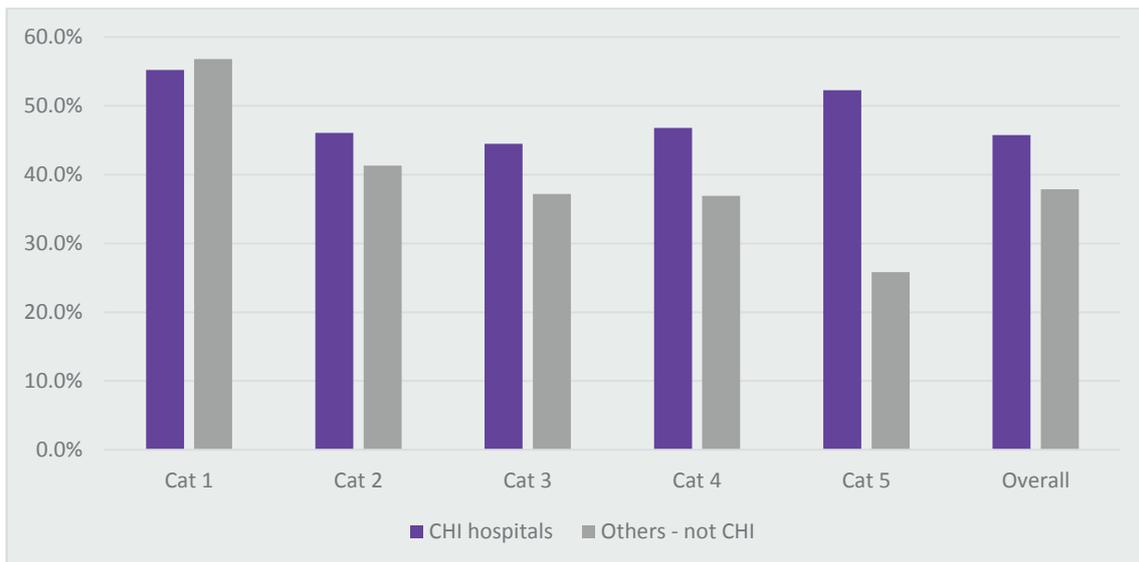


Figure 15: Percentage timely triage (0-15 years) between CHI and non-CHI hospitals using ICTS (night time hours)

5.3.4 What ICT system is triage recorded on, which triage system was used?

There are a number of different ICT platforms which host the Manchester Triage and ICTS interface in use across the hospital EDs; these include iPMS in 15 HSE sites and others (Symphony, Maxims, Cerner and Patient Centre) in 12 sites, including HSE and HSE funded voluntary hospitals.

5.3.5 What edition of triage system was used?

Emergency Departments are using the Manchester Triage System, edition 3 version 3.7, 2014 and the Irish Children's Triage System, edition 2, January 2021.

Note: 3 EDs indicated they use edition 1 for ICTS.

5.3.6 Was there a triage trained nurse allocated?

Yes in all cases (100%).



6. Conclusion

Part I: To establish if the Triage category was assigned in a timely manner

'95% of patients should be seen within 15 minutes from registration to triage.'

In conclusion, the results of the audit found wide variation in timely triage across hospitals during day time hours, with overall triage within 15 minutes ranging from 21% to 76% of cases.

It also found wide variation in timely triage across hospitals during night time hours, with overall triage within 15 minutes ranging from 11% to 85%.

Looking at the percentage triaged within 15 minutes by triage category and by mode of arrival to hospital, the highest percentage of cases arrived by helicopter (50-100%) (day and night combined), followed by arrival by ambulance (25-65%), combined day and night.

The overall percentage triaged within 15 minutes is highest in those aged 0-15 years and age 75 years and over. Patients in category 75 years and over appear to have a higher percentage of timely triage for triage category 1, but similar for other triage categories across the age groups.

Part II: To assess the acuity and trending; the number of patients triaged in each category, by month, by hospital for 2022

In summary, based on the total numbers triaged throughout 2022, the majority of cases were Triage Category 3 at 52%, a total of 23% of patients were categorised as Triage Category 4, Triage Category 5 (2%), Triage Category 2 was 22% and Triage Category 1 was 1%.

Part III: To identify if the correct Triage flowchart was assigned, if the correct Triage category acuity was assigned and if the Triage process is complete.

In summary, looking at the criteria for safe triage, none of the criteria met the standard of 95%;

93% of cases had 'correct use of the presentational flowchart', 73% had 'specific discriminators correctly selected' and 81% had the correct triage category assigned. 64% had a pain score recorded (35% did not have a pain score recorded but out of this category, only 8% were recorded as 'not indicated').

Criteria for Safe Triage	Audit Standard	Yes	No	Comments to note
Correct use of Presentational Flow Chart	95%	93%	7%	5 "not recorded" 1 missing
Specific Discriminators Correctly Selected	95%	73%	23%	82 "not recorded" 1 missing
Correct Triage Category Assigned	95%	81%	19%	4 "not recorded" 1 unknown 12 missing data
Pain Score Recorded	95%	64%	35%	181 (8.2%) "not indicated" 14 missing data

Table 2: Criteria for a Safe Triage System



Looking at the cases under-triaged and over-triaged in total, there were 9% of all cases under-triaged. The main category associated with under-triage is from category 3 which should have been category 2 (61%).

Similarly, there were 10% of all cases that were over-triaged. Most were correctly assigned to category 4 from 3 (69%), followed by category 3 from an initial category 2 (20%). A small number (n=10) were out by 2 or more categories. A small number (n=6) were given the same category (initial and re-categorised).

Figure 14 and Figure 15 show that the percentage timely triage is similar for category 1 in CHI and non-CHI hospitals but greater in the CHI hospitals using the ICTS than the non-CHI hospitals for triage category 2 - 5 and overall.

What ICT system is triage recorded on, which triage system was used?

There are a number of different ICT platforms which host the Manchester Triage interface, in use across the hospital EDs, these include iPMS in 15 HSE sites and others (Symphony, Maxims, Cerner and Patient Centre) in use across 12 sites, including HSE and HSE funded hospitals.

What edition of triage system was used?

All EDs are using the Manchester Triage System, edition 3 version 3.7, 2014 and the Irish Children's Triage System, edition 2, January 2021.

Note: 3 EDs indicated they use edition 1 for ICTS.

Was there a triage trained nurse allocated?

Yes in all cases (100%).



7. Recommendations and Quality Improvement Plan

1. Share the results and findings from this clinical audit with the HSE Escalation Framework Working Group. The work of this group will address the escalation of excess waiting time to triage.
2. All Emergency Departments must provide annual and refresher triage nurse training, to include specific focus on selecting correct discriminators, recording a pain score where relevant and assigning the correct triage category. Staff evaluation of the training programmes should be incorporated.
3. The pain score question should be made mandatory on all ICT Triage Systems, to include “not applicable” as an option.
4. All Emergency Departments must carry out clinical audits of triage on a six monthly basis, collate and review the findings and submit results to align with local governance structures, e.g., Executive Management Team, Clinical Audit Committee or Quality and Patient Safety Committee.
5. New Standard Operating Procedures (SOPs) and strategies should be developed for the management of cases Triaged as Triage Category 4 or 5 in order to improve patient flow and streamline processes. These SOPs and strategies should provide updated communications / information to the public / service users for accessing alternatives to the Emergency Department for treatment of non-life threatening conditions.
6. Patient surveys should be developed to ascertain information regarding patient experience in Emergency Departments. Regular review and action based on feedback can help ensure that the systems are meeting the needs of patients.
7. The design and capacity of EDs and patient waiting areas should be reviewed to ensure compliance with the relevant standards (e.g., the National Standards for Safer Better Healthcare and National Standards for Infection Prevention and Control).
8. Following implementation of agreed recommendations, a re-audit should be undertaken within 12 months.
9. A business case should be developed by the National Emergency Medicine Programme for submission to the HSE National Steering Group for Clinical Audit to support the development of an annual National Clinical Audit of ED Triage.
10. Triage Data Fields needed to assess the completeness and accuracy of the triage process should be routinely sent to the Business Information Unit by all hospitals ICT department.
11. A standard definition of time to triage will be disseminated from the EMP to each ED.



References

Emergency Triage: Manchester Triage Group, 3rd Edition, Version 3.7, 2014

<https://www.triagenet.net>

Irish Children's Triage system:

<https://www.hse.ie/eng/services/publications/clinical-strategy-and-programmes/emp-irish-childrens-triage-system.pdf>

HSE National Centre for Clinical Audit, Clinical Audit – A Practical Guide 2023

https://assets.hse.ie/media/documents/HSE_National_Centre_for_Clinical_Audit_-_A_Practical_Guide.pdf

HSE National Centre for Clinical Audit, Nomenclature – Glossary of Terms for Clinical Audit 2022

<https://www.hse.ie/eng/about/who/nqpsd/ncca/nomenclature-a-glossary-of-terms-for-clinical-clinical-audit.pdf>



Appendix I: National Clinical Audit of Emergency Department Triage Steering Group Membership

Member	Role
Dr Gerry McCarthy	Clinical Lead, National Emergency Medicine Programme (Chair)
Dr Orla Healy	National Clinical Director Quality and Patient Safety Directorate (Co-chair)
Dr Mike O Connor	National Clinical Advisor and Group Lead, Acute Operations
Paul Gallagher	Chief Director of Nursing & Midwifery Ireland East Hospital Group. Chair, Chief Directors of Nursing & Midwifery Group
Eileen Whelan	National Lead: Test, Trace and Vaccination Programme
Breda Naddy	Programme Manager, National Emergency Medicine Programme
Fiona McDaid	Nurse Lead, National Emergency Medicine Programme
Elaine Brown	Portfolio Manager, Office of the National Clinical Advisor and Group Lead, Acute Operations
Derek McCormack	Manager, Business Intelligence Unit
Maria Lordan Dunphy	Assistant National Director for Quality and Patient Safety Directorate Lead for QPS Improvement and NCCA
Karen Reynolds	HSE National Centre for Clinical Audit, Co-Lead
Patricia Gibbons	HSE National Centre for Clinical Audit
Sinead Reilly	Project Support, National Emergency Medicine Programme

Appendix II: National Clinical Audit of Emergency Department Triage Project Team Membership

Member	Role
Dr Colm Henry	HSE Chief Clinical Officer Project Sponsor
Dr Gerry McCarthy	Clinical Lead, National Emergency Medicine Programme (Chair)
Breda Naddy	Programme Manager National Emergency Medicine Programme
Fiona McDaid	Nurse Lead, National Emergency Medicine Programme
Professor Kathleen Bennett	Head of Data Science Centre, School of Population Health RCSI, University of Medicine and Health Sciences
Karen Reynolds	HSE National Centre for Clinical Audit, Co-Lead
Patricia Gibbons	HSE National Centre for Clinical Audit
Sinead Reilly	Project Support, National Emergency Medicine Programme



Appendix III: National Clinical Audit of Emergency Department Triage Proposal Form



An Stiúirthóireacht um Ardchaighdeán
agus Sábháilteacht Othar
Oifig an Phríomhoifigigh Clínicíil

National Quality and
Patient Safety Directorate
Office of the Chief Clinical Officer



Ionad Náisiúnta
d'Iniúchadh Clínicíil
An Stiúirthóireacht um Ardchaighdeán
agus Sábháilteacht Othar

National Centre
for Clinical Audit
National Quality and Patient
Safety Directorate

CLINICAL AUDIT PROPOSAL FORM

For Further Information please see HSE NCCA Nomenclature/Glossary of Terms for Clinical Audit:

<https://www.hse.ie/eng/about/who/nqpsd/ncca/nomenclature-a-glossary-of-terms-for-clinical-audit.pdf>

Clinical Audit Topic – Clinical Audit of Emergency Department Triage

Title of Clinical Audit – HSE National Clinical Audit of Emergency Department Triage

CLINICAL AUDIT & PROJECT LEAD:

Clinical Audit Lead (Name/Job Title): Dr. Gerard McCarthy

Work Location: Clinical Lead, National Emergency Medicine Programme (EMP)

Clinical Audit Project Lead (Name/Job Title): Breda Naddy

Work Location: Programme Manager, National Emergency Medicine Programme

WHY WAS THE TOPIC CHOSEN?

Under whose initiative was the audit instigated? (Tick all boxes that apply)

- Local
- National
- Other Quality/Patient Safety Initiative, please specify: Triage Accuracy in EDs

Project source must be one or more of the following (Tick all boxes that apply)

- High Cost Activity
- High Risk Activity
- High Volume Activity
- Based on evidence based healthcare and clinical effectiveness issues (best practice)
- Local initiative which centres on processes that may have a significant effect on provision of patient care and/or outcome
- Risk Management Issues
- Re-audit of previously accepted project

Each clinical audit project must satisfy all of the following:



CRITERIA AND STANDARDS:

(*A **Standard** is a definable measure against which existing structures, processes or outcomes can be compared. (NCEC/HIQA 2015, p. 9)

Manchester Triage System / Irish Children's Triage System

Part 1 (Timeliness of Triage)

95% of patients should be seen within 15 minutes from registration to triage.

Part 2 (Acuity and Trending)

The number of patients triaged in each category, by month, by hospital for 2022

T1

T2

T3

T4

T5

NT (Not Triaged)

Part 3 (Completeness and Accuracy)**Completed once for each Department**

1. Which ICT system is used to record triage in the ED? iPMS/Symphony/Maxims/Other
2. Which triage systems is in use? MTS Version 3/ICTS Version 2/Other
3. Does the system require a named nurse to be assigned to all triage assessments? (i.e., does not allow generic signatures such as agency, locum etc.)

Completed for each record included in the audit

4. Correct use of presentational flow chart 100% (Y/N)
5. Specific discriminators correctly selected 100% (Y/N)
6. Pain Score recorded 100% (Y/N/NR)
7. Correct triage category assigned? (based on patient presentation and discriminators) 100% (Y/N)

Web link (Please insert web link to Standards source): <https://www.triagenet.net>



METHOD:

Has a literature search been undertaken Yes

Key words used in search and databases used:

Manchester Triage System / Irish Children’s Triage System

INCLUSION/ EXCLUSION CRITERIA:

Inclusion Criteria:

1. **Timeliness of triage** – 1 year (1st January – 31st December 2022)
2. **Acuity and trending** – 1 year (1st January – 31st December 2022)
3. **Completeness and accuracy** – Two timeframes will be used
 - **00:00hrs 13th June - 23:59hrs 19th June 2022,**
 - **00:00hrs 12th December - 23:59hrs 18th December 2022.**

A random sample of 5% of attendances during each of these weeks requires review.

The sample identified for the review must

Cover all triage categories (if there were no attendances in a category this should be noted)

Cover all days of the week and a spread of times throughout the 24hr day.

Exclusion Criteria: These outside of the date ranges above

DATA COLLECTION: Concurrent Retrospective Prospective

How will cases be identified? For Part 1 and Part 2: from BIU for each Hospital Group as detailed above

For Part 3: Chart Review

METHOD OF DATA COLLECTION: Chart Review Patient Questionnaire

Staff Questionnaire Telephone Interview

Observation Other: BIU, iPIMs, etc.



SAMPLE SIZE: (for Part 3 - Total of 2889 charts (31 hospitals))

Anticipated Time-scale Proposed: 8 weeks - Target completion date: 28th Feb 2023

RESOURCES:

Involvement or resources that you wish to request from your Local Clinical Audit Support Team
(where available locally)

Literature Search	<input type="checkbox"/>	Topic Selection	<input type="checkbox"/>
Proforma Design	<input type="checkbox"/>	Questionnaire Design	<input type="checkbox"/>
Data Analysis	<input checked="" type="checkbox"/>	Data Collection	<input checked="" type="checkbox"/>
Dissemination	<input type="checkbox"/>	Report Production	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>		

ACKNOWLEDGMENT:

PATIENTS INCLUDED IN THE AUDIT:

- Are all patients included in this audit under the care of the Audit Lead? Yes No
- If no, please complete the form overleaf (***Request for inclusion of patients in a Clinical Audit***)
- Is there a patient representative on the clinical audit sub group? Yes No
If No, please state the reason for this.

PROJECT ORGINATOR/LEAD:

This proposal and its possible (clinical and managerial) implications have been discussed with the relevant participants previously noted who undertake to support the audit and the implementation of any necessary changes identified as a result of the audit.



Signed _____

Date _____

CLINICAL AUDIT REPORT & RESULTS:

(Following the completion of this clinical audit, it is essential to collate your clinical audit report and agree an Quality Improvement Plan/Action Plan based on the findings)

A Quality Improvement Plan/Action plan must be developed within 6 weeks of the distribution of the final report

Quality Improvement Plan/Action Plan & Review

QI/ACTION PLAN AT 1 MONTH	QI/Plan in action 6 – 9 MONTH REVIEW	QI/Plan in action @ 9 –12 MONTH REVIEW
Signature: _____ Date: _____	Signature: _____ Date: _____	Signature: _____ Date: _____



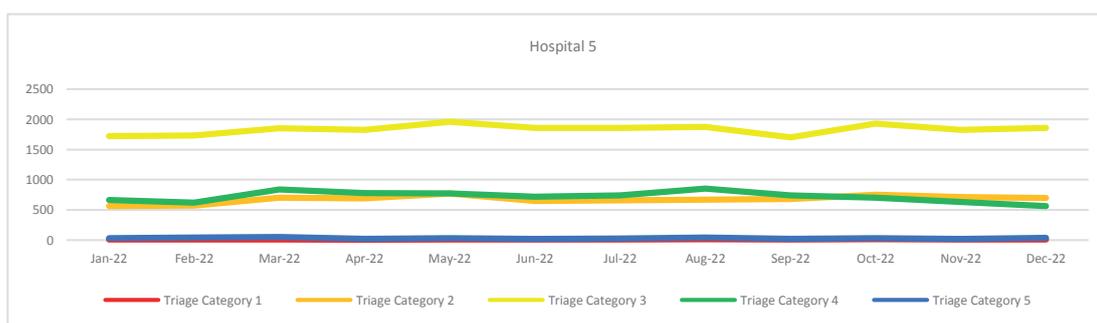
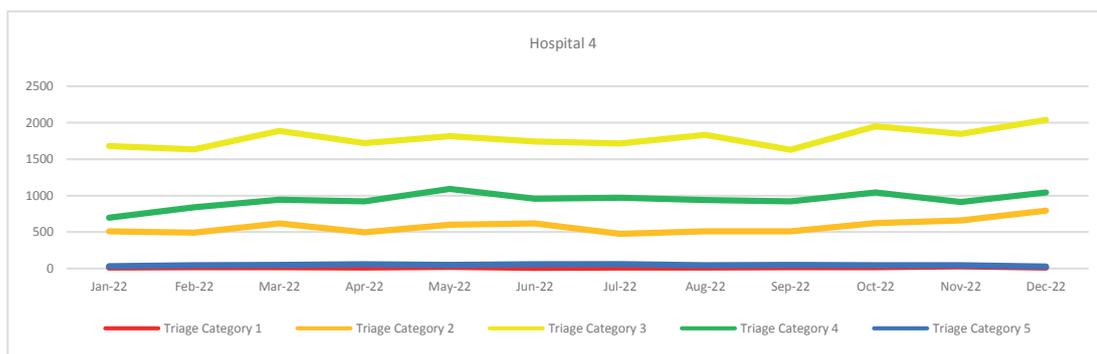
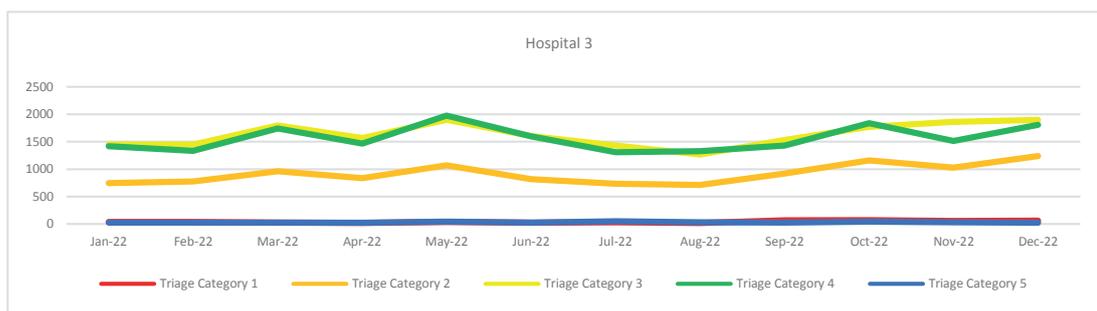
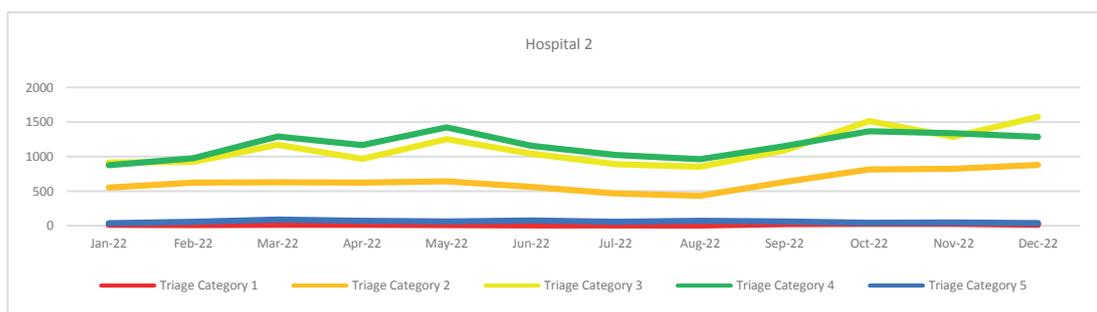
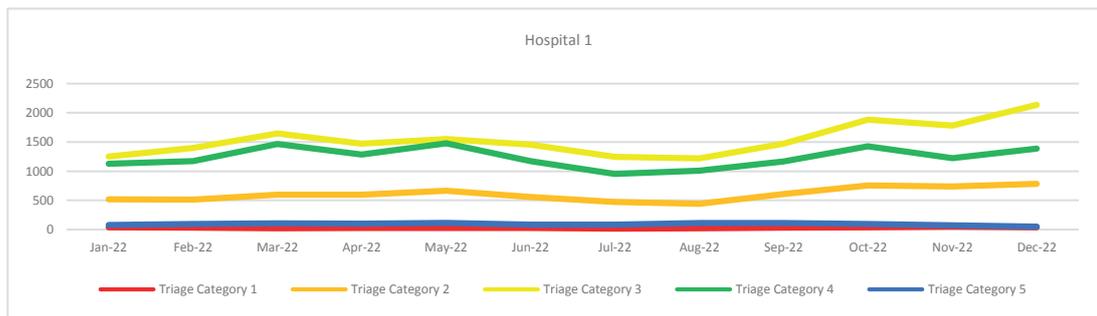
Appendix IV: Clinical Audit Tool for Data Collection for Part III

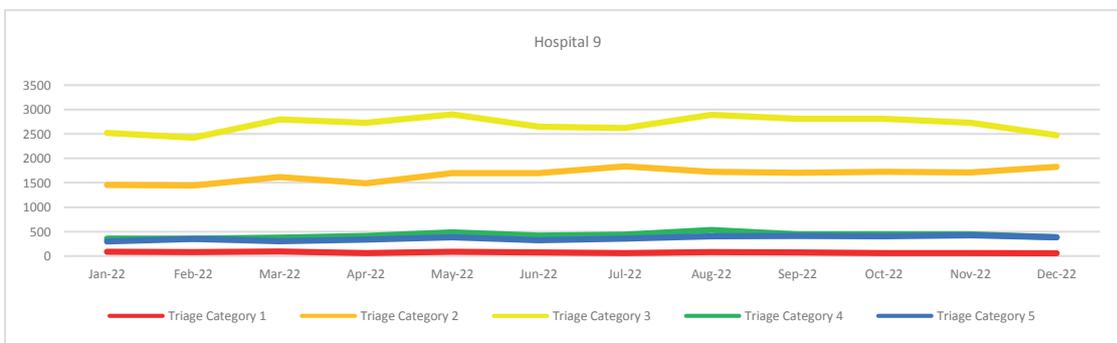
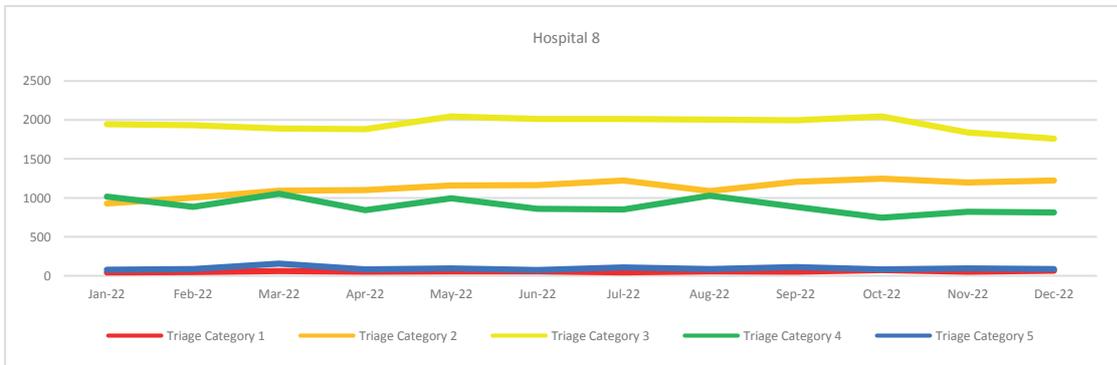
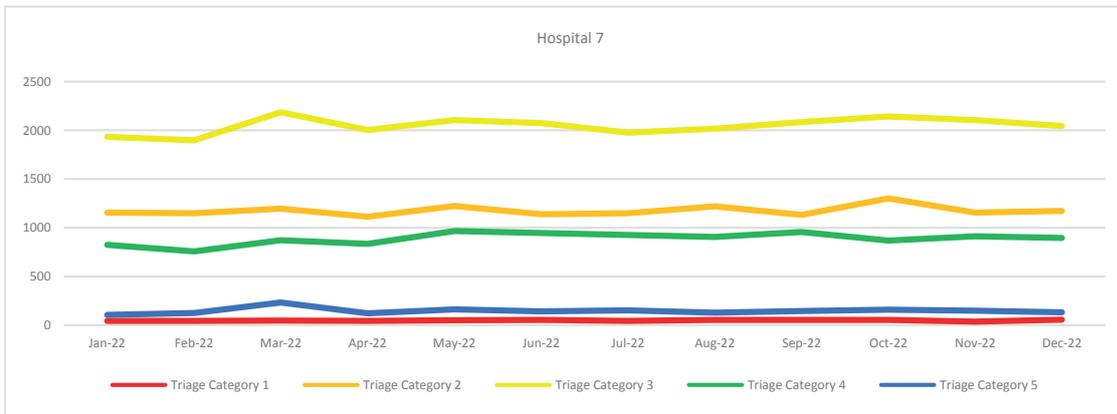
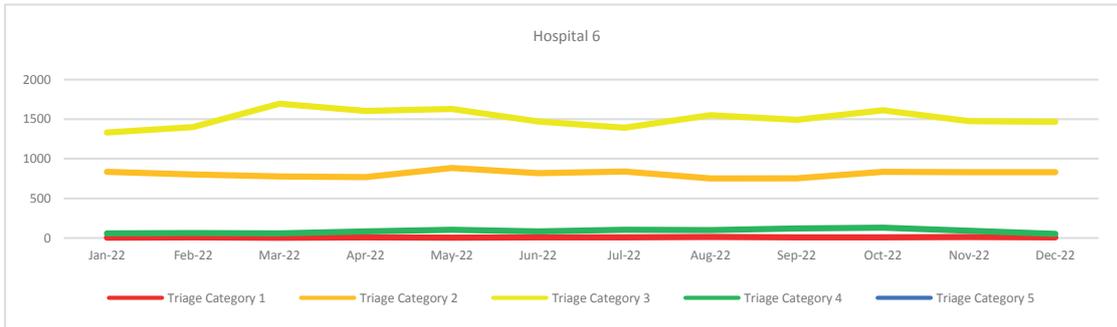
ED Triage Audit Tool									
Name of Hospital _____									
Date of Data Collection _____									
Data Collector Name: _____									
Which ICT system is Triage recorded on? (Use drop down in column B)									
Which Triage system was used?									
Which edition of Triage was used									
Is there a named nurse assigned to all Triage Assessments (not agency or locum)									
Number	Date of Presentation	Time of Presentation	Correct use of Presentation flow chart	Specific Discriminators correctly selected	Indicate the category assigned	Correct Triage Category Assigned	If No, Please indicate the correct Triage Category	Pain Score Recorded?	Comment
1									
2									
3									
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6									
7									
8									
9									
10									

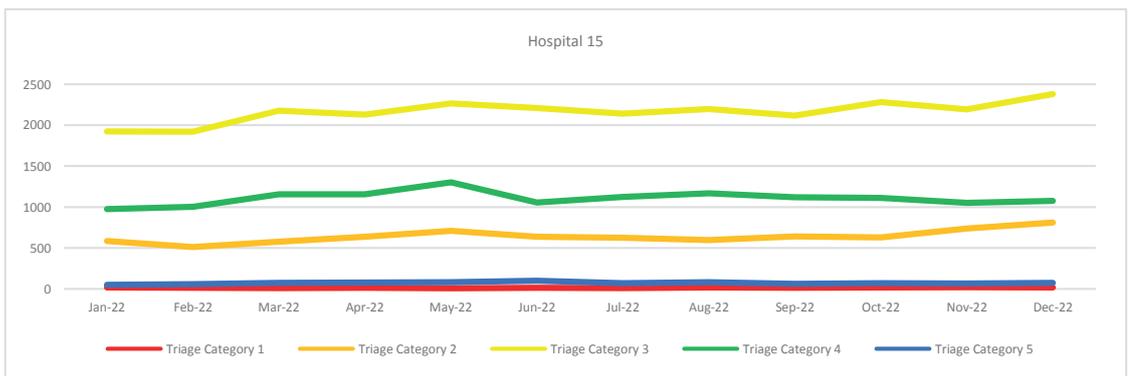
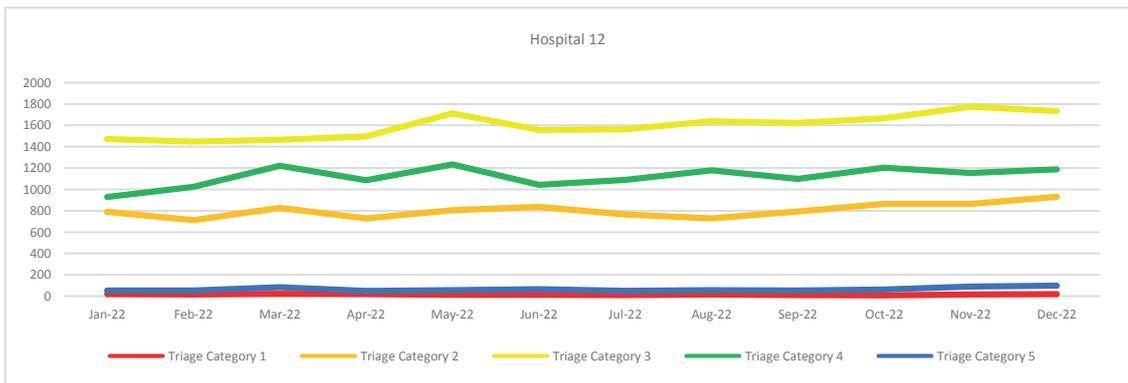
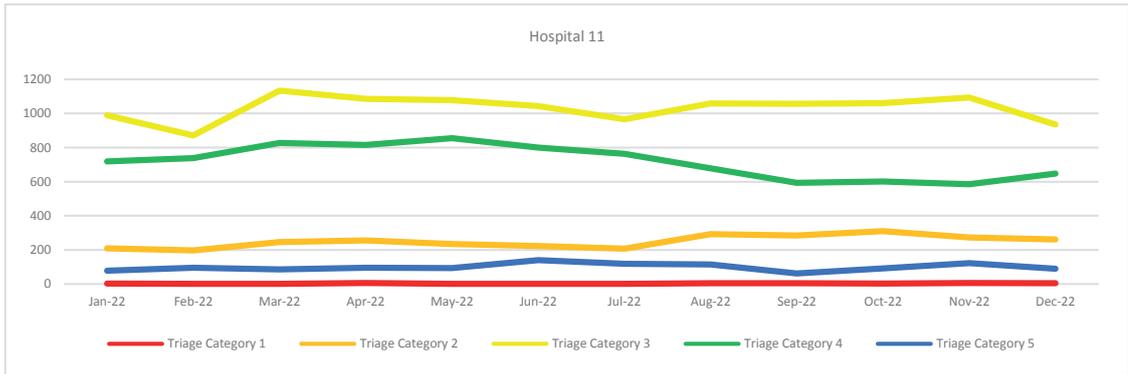
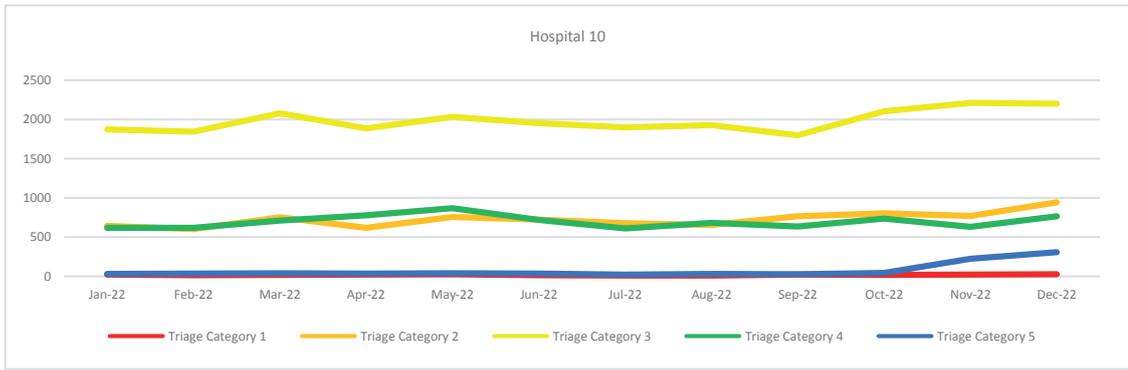


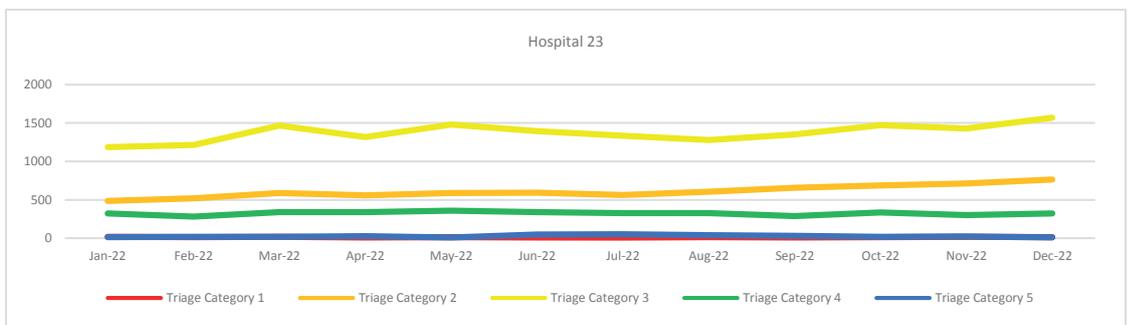
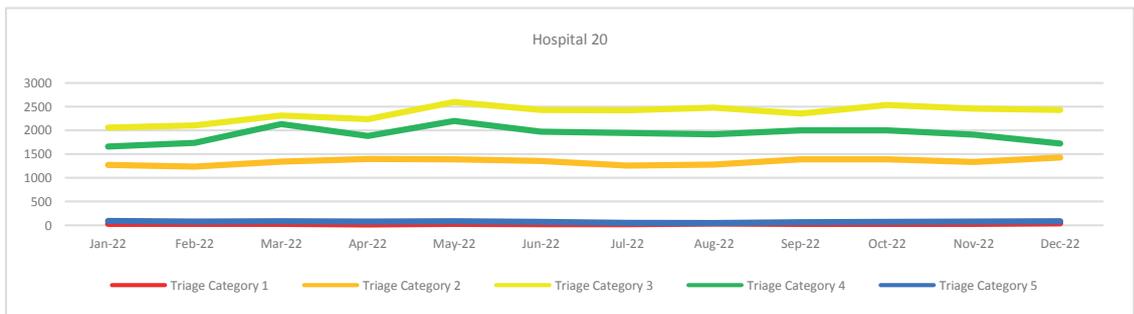
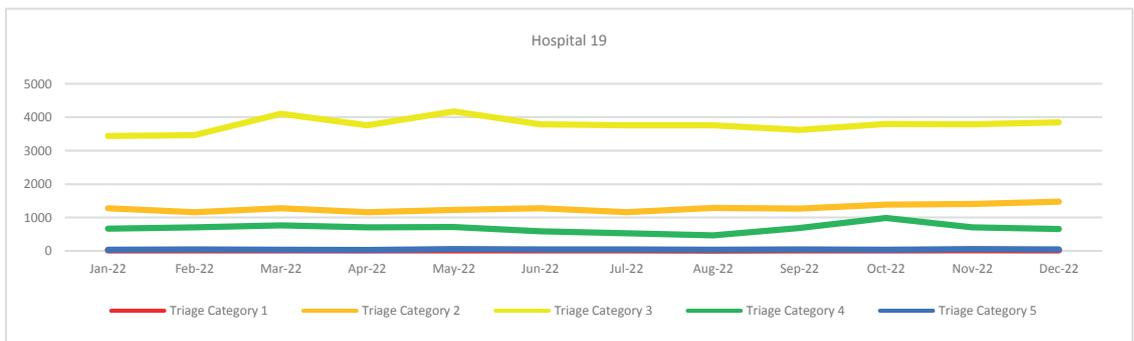
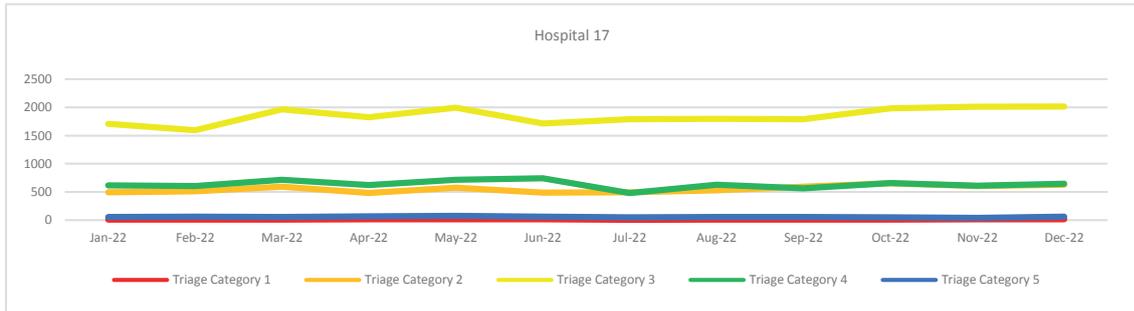
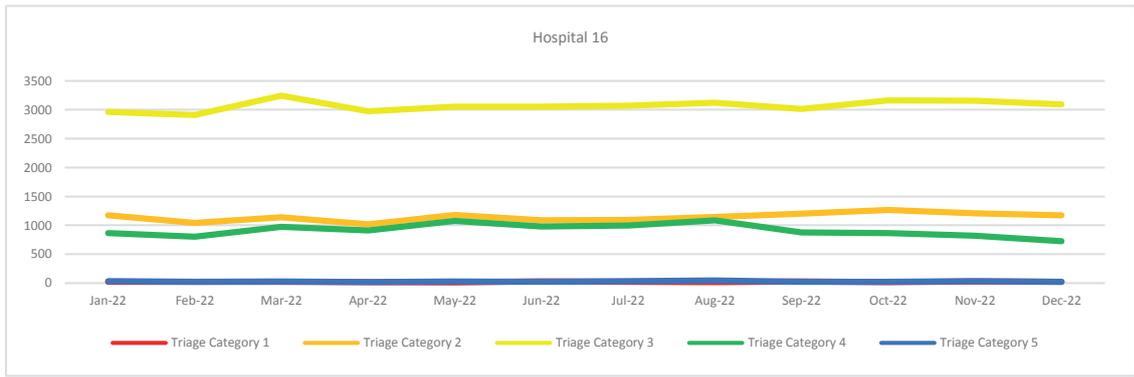
Appendix V – Trends in Triage Category by Individual Hospital for Months in 2022

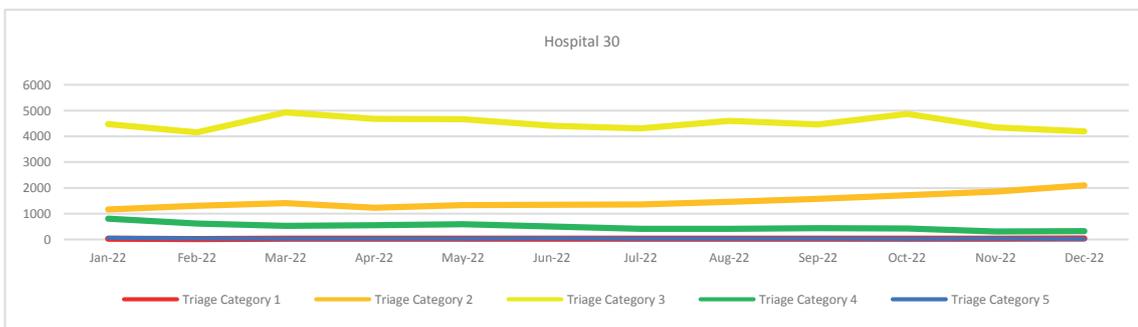
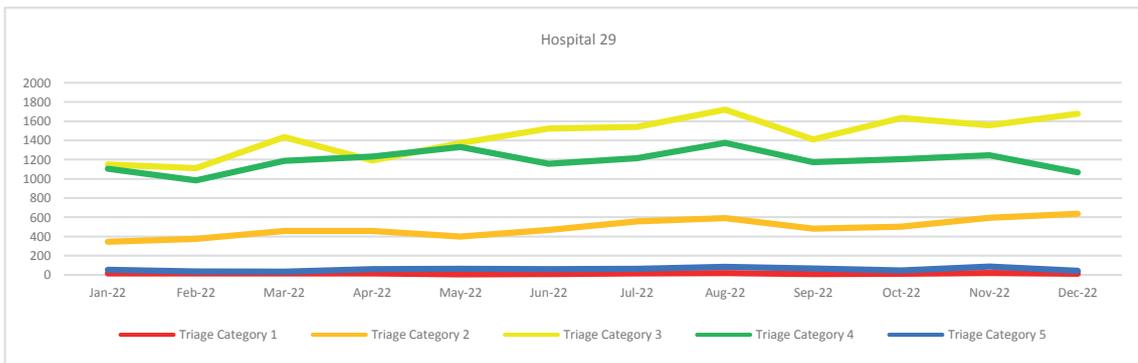
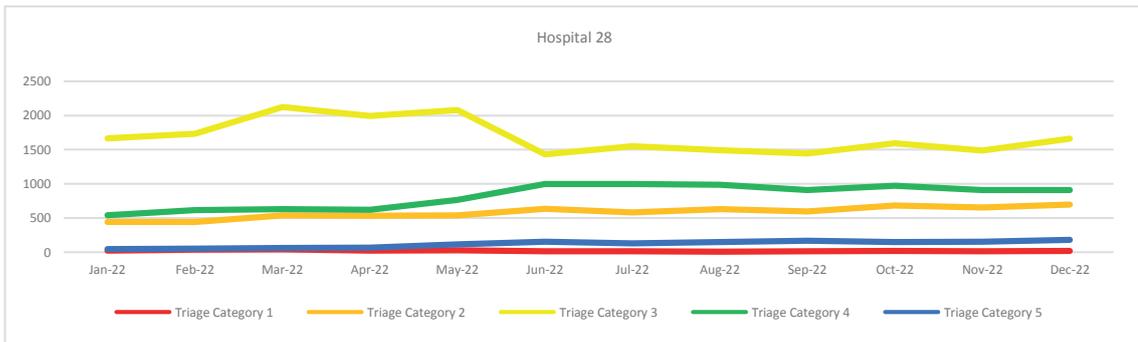
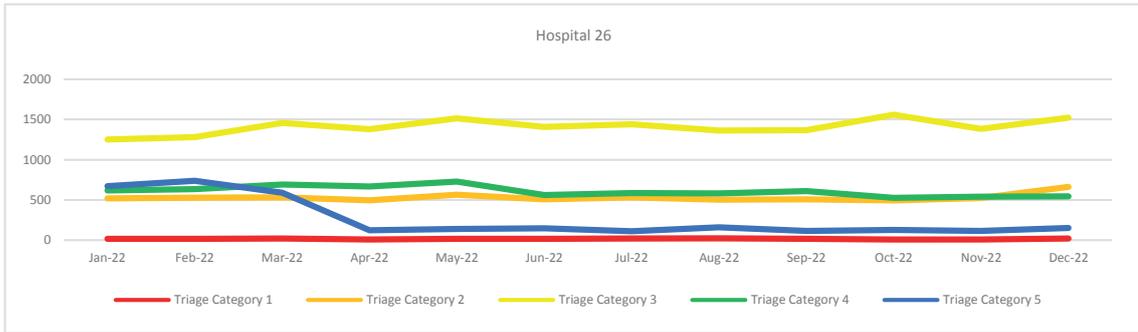
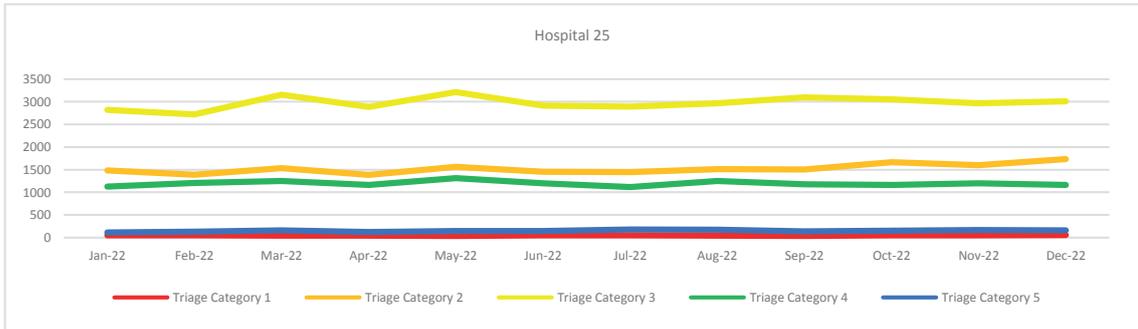
(*Excluded Hospitals 13, 14, 18, and 21 and 24 - due to no or partial data available)



















About the HSE National Centre for Clinical Audit National Quality and Patient Safety Directorate

The National Quality and Patient Safety Directorate (NQPSD) was established within the Office of the Chief Clinical Officer in Summer 2021, following the HSE Corporate Centre review. It merged a number of functions from the former national Quality Assurance and Verification Division (QAVD) and National Quality Improvement Team (NQIT). National QPSD is anchored in the HSE Patient Safety Strategy 2019-2024. It works to embed a culture of patient safety improvement at every level of the health and social care service. This is achieved through developing a collaborative culture aimed at repeating and improving on positive outcomes and minimizing adverse outcomes.

The HSE National Centre for Clinical Audit (NCCA) established within the QPSD, follows publication of the HSE National Review of Clinical Audit Report in 2019, and will be primarily responsible for implementing the report's recommendations. This step confirms the HSE's commitment to developing clinical audit as an essential quality and patient safety tool in Ireland, promoting improved patient outcomes.

Clinical audit is an integral component of safety in all modern healthcare systems and the programme will ensure delivery of a standardised approach. Establishing the HSE NCCA marks an important step in the HSE's continued efforts to improve the quality and safety of healthcare for patients. This will strengthen the development of an end-to-end process for clinical audit in accordance with the recommendations in the report and meet the needs of clinical audit service providers and multi-disciplinary stakeholders.

For further information, please contact:

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Health Service Executive
Dr Steevens Hospital
Dublin D08 W2A8

e: ncca@hse.ie

w: <https://www2.healthservice.hse.ie/organisation/ncca/>



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