RCEM
Royal College of Emergency Medicine

Consultant Sign-off

2022

National Quality Improvement Project

National Report

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Contents

Foreword

Dr Adrian Boyle, RCEM President

I am pleased to report on the performance of safe discharge of adult and child patients in the ED who are identified as higher risk from April to October 2022.

This Quality Improvement Project (QIP) builds on the previous Consultant Sign Off QIP done in 2016/17 by the College and allows us to see that despite the gap in meeting standards, we have seen improvements compared to 2016/17. The current results also show that recommendations from the 2016/17 QIP are just as valid now as they were valid then.

The standards within this QIP focus on the safe discharge of adult and child Patients in the ED who are identified as higher risk, with the goal of promoting the practice of senior review. This aims to prevent life-threatening conditions being missed diagnosed or inappropriately discharged by less experienced staff. The RCEM understands that some EDs, particularly those with lower numbers of EM consultants, might have found challenging to meet the standards of this QIP and, this is why the RCEM welcomes the recommendation to continue lobbying for growth in consultant numbers to meet the growing complexity of Emergency Care.

The RCEM Quality Assurance and Improvement Committee, are committed to continually evaluating the QIPs and improving them to best support you and improve patient care. We are aware that there are improvements we can make to strengthen local QI support, provide clearer data visualisation, and better communications. We welcome your feedback, ideas, and experiences to help us.

The College is dedicated to improving the quality of care in our Emergency Departments through these important QIPs, undertaking all obligations to ensure the best measures of patient safety are obtained.

Dr Adrian Boyle

RCEM President

Dr Dale Kirkwood

Co-Chair of Quality Assurance & Improvement Subcommittee

Dr Fiona Burton

Co-Chair of Quality Assurance & Improvement Subcommittee

Dr James France

Chair of Quality in Emergency Care Committee

Executive Summary

RCEM would like to thank every Emergency Department (ED) that participated in this Quality Improvement Project (QIP). Over a period of 6 months, this RCEM QIP had reviewed 18153 higher risk patients (12702 adults and 5451 children) from 126 emergency departments nationwide.

Overview

The primary driver was to increase the rate of senior review of high-risk patients as outlined by the 'Consultant sign-off' (CSO) guidance, updated in 2016. This group has a higher risk of death if a serious diagnosis is missed, or a patient is inappropriately discharged.

Key Findings

For the period 1 April 2022 – 3 October 2022, the National results demonstrated:

63% of patients are primarily seen by a Tier 3 or below clinician.

44% are however seen in person at some point by Tier 4 or above.

Half (50.7%) of higher risk adults had a senior review as per standard.

- 35% by Tier 5 clinicians
    - Up from 14% in 2016
- 15.7% by Tier 4 clinicians (overnight)

This drops to 39.6% for higher risk children.

- With a larger proportion conducted by Tier 4 as compared to adults
- However, 53% are seen in some capacity by a GP, Tier 4 or above. Some of the Tier 4 inputs would be in core hours and therefore not meet the standard

75.1-78.5% of Tier 5 and 82.7-84.8% of Tier 4 are documenting their senior reviews when they go and see the patient.

On average, of the 43 ED's surveyed the staff vacancy rate was similar in 2016 for Tier 4 and 5, however Tier 3 has increased from 1 to 4.

- 2 x Tier 5 (Consultants/Associates)
- 3 x Tier 4 (Senior Registrars)
- 4 x Tier 3 or below (more junior tiers)

58% of ED's have no system of being able to flag high-risk patients. 33-35% were able to flag patients who had returned within 72-hours with the same presentation. 16-19% were able to flag the high-risk symptom groups of chest pain, abdominal pain and fever in under-1s.

All staff cover over the weekend is reduced however, this only has a minimal impact on compliance with this standard (49% vs. 44%).

Of the 43 EDs surveyed they used 17 different providers of IT systems, with further subvariants of those systems. Cerner was the most popular at 23% (10) with another 19% (8) EDs using Symphony. There was a 20% difference in reports of standard compliance in the adult patient group at 59% for Symphony and 39% for Cerner.

Conclusion

There was not an improvement in the rate of Consultant sign-off at an aggregated national level for any patient group during the period of study. Variation in achieving this standard is extremely variable with an IQR spanning <38% to >61% for adults. Whilst each ED has its own unique set of challenges and there is not a like-for-like resource distribution to deliver care, the senior review CSO gap needs to be shrank.

Despite the gap in meeting standards, we have seen improvements compared to 2016. There has been a significant increase in the number of CSOs from around 1 in 7 (14%) patients to 1 in 3 (35%). The number of patients receiving at least a Tier 4 review has increased modestly from 43% to 50.7%.

In 2016 it was stated "the current problems encountered by EDs and the state of consultant staffing, and recruitment are likely significant impediments to higher performance". It still remains that there are not enough consultants to provide the necessary cover to meet this standard more comprehensively across adult and children's services. Whilst Consultant numbers have increased, so has demand on the service. Half of all discharged high-risk patients will not have a more experienced clinicians' input (at least documented) at any point during their ED visit.

Key recommendations

Recommendations

Patient level

1. Aim to have senior input for all patients classed as high-risk if they are to be discharged. Improve identification of this group.
2. Make concerted efforts to close the gap between higher risk children presentation, particular in mixed EDs where disparities are present.

Organisational and Staff level

1. Continue to engage with QI methods and evaluate interventions to drive improvement against these standards.
2. Improve education around this requirement and local understanding of why it is important.
3. Ensure all staff groups, but particularly those unfamiliar with the emergency department are informed to seek consultant input for all higher risk presentations.
4. Increase consultant numbers to meet the case volume and acuity as per RCEM guidance.
5. It is best practice to document one's own care and advice provision, or check versions documented on one's behalf. However, this is not always practical or efficient. For safety critical advice provided to tier 3 or below clinicians, those providing the advice should also document it to avoid misinterpretation. Otherwise, it remains at the discretion of the person providing the advice to delegate documenting as is currently practiced.

2016/17 CSO recommendations still in force

1. Departments appear to have more reliable methods for identifying patients making unscheduled returns. This still remains the case. RCEM encourages EDs to examine whether processes for this group can translate to a higher review rate for other high-risk groups.
    a. Consider updates to IT systems to improve documentation of senior input and explore prompts for junior staff to seek consultant sign-off for higher risk presentations if discharging. There still remains a gap between identifying 72-hour returners and those with chest pain, abdominal pain or infants with fever.

National level

1. RCEM to continue to lobby for growth in consultant numbers to meet the growing complexity of Emergency Care.
2. Health Education England and the Department of Health need to improve workforce planning to meet the growing need for fully trained Emergency Clinicians to deliver a service that is heavily reliant on junior staff.
3. Multi-agency approach to improve the retention of trainees to increase the numbers reaching Consultancy.

RCEM's national programme

1. Increase the length of QIP programme development and quality assurance prior to platform build.
2. Improve piloting methodology and platform testing prior to the launch of the programme.
3. Develop closer ties with our platform provider to improve IT system provision and functionality.
4. Increase focus on developing data visualisations that provide real insight.
5. Early review of data after launch and updates to the survey and platform.
6. Build into the platform stronger protections against the entry of data that is likely inaccurate e.g., due to typos or misunderstanding of the question.
7. Develop a national network to promote best practice sharing during the QIP cycle.
8. Integrate our programme with training requirements to facilitate meeting portfolio requirements and gaining QI comp

Introduction

Rationale

The purpose and primary driver of the QIP was to improve the safe discharge of adult and child patients in the ED who are identified as higher risk;

Adults

- Patients with chest pain aged 30 or older
- Patients with abdominal pain aged 70 or older
- Patients who had an unscheduled return with the same condition within 72 hours of discharge

Children (Under 18)

- Infants (0-12 months) presenting with fever
- Patients who had an unscheduled return with the same condition within 72 hours of discharge

by promoting the practice of senior (typically consultant) review. This aims to prevent life-threatening conditions being missed diagnosed or inappropriately discharged by less experienced staff. It is accepted that some EDs, particularly those with lower numbers of EM consultants, will find it challenging to achieve a high proportion of sign-off to meet the standards of this QIP but still should focus on improvement. The QIPs purpose is to promote improved risk management by reducing the possibility of catastrophic clinical error, whilst at the same time supporting the case for an expansion in EM consultant numbers to improve departmental safety.

Background

Emergency Medicine (EM) is a rapidly developing specialty. Over the past 50 years the ED has become the "front door" of the acute hospital, responsible for the management of 15 million patients every year in England alone. Some of the sickest patients in the hospital will be found in the ED. The level of clinical risk is high with EM clinicians required to make critical decisions under conditions of considerable uncertainty with limited information, resources and time.

During the most recent CSO national audit (2016/17), the five high-risk patient groups performed similarly. As such we have opted to focus on all groups specified in the previous version of CSO based on the systems of care they are looked after within – Adults or Children's. This reduces the data collection burden but still provides enough to understand individual EDs system performance.

In contrast to the previous CSO audit conducted in 2016/17, we have included Tier 4 clinicians as conforming to standard if they performed the senior review out of hours (22:00-08:00). This recognises the configuration of ED staffing nationally and the expertise of Tier 4 clinicians who will become the Tier 5 clinicians of tomorrow.

Problem description

The ED is an excellent training area for junior doctors. They are required to see a large number of acutely ill and injured patients and make important clinical decisions. This provides a breadth of exposure to develop their clinical acumen and gestalt, but it also has the effect of matching less experienced staff with sick patients. This pairing therefore requires senior oversight to ensure safety. In response, EM consultants and the college have put in place systems to support their teams and manage risk. Most EDs do not have enough EM consultants to provide a consistent 24/7 presence or the numbers to senior sign-off for those patients recommended in the guidance as demonstrated in 2016/17.

Patient data findings from 2016/17:

- 57% of higher risk cases were assessed by only junior staff
- 12% of patients in each high-risk group were seen and assessed by consultants
- Average review rate of 43% when including ST4 and above
- 4% of departments described their data collection as "fully automated"

National Drivers

To improve the overall rate of consultant sign-off nationally to improve patient safety.

Promote the need for more consultant numbers to match the growing complexity and risk present within Emergency Departments.

To empower and encourage EDs to run QI initiatives based on the data collected to drive improvement and track the impact of the QI initiative on their weekly performance data. Show EDs their performance relative to their own baselines to focus on improvement. EDs can also compare themselves to other participating departments to gauge how much resource may be required to perform as high-performance peers.

Methodology

For a detailed description of the methodology used in the QIP, please see the information pack

Intervention

All Type 1 EDs in the UK were invited to participate in September 2021. Data samples were submitted using an online data collection portal. The QIP was included in the NHS England Quality Accounts list for 2021/2022.

Participants were asked to collect data (Appendix 2) from ED patient records on cases who presented to the ED between 1 April 2022 – 3 October 2022 and encouraged to continue PDSA cycles and data collection beyond this locally, to continuously improve and further drive-up standards.

Measures

The national level data provides a benchmark so individual units who are below the national average can take steps to improve. Shifting towards a QIP methodology focuses on improvement so even those above the mean are encouraged to act locally to further develop their service. The aim being to increase the overall average and reduce the disparity between the best and worst-performing departments. Those with high performance may best focus resources on improving aspects of the service that has a greater need for improvement.

Questions and Standards

Please see Appendix 2 for the full question set used to collect data.

Standards		Grade
1	Adults Consultant Sign-off* review – Patients (aged 18 years and older) making an unscheduled return to the ED with the same condition within 72 hours of discharge, abdominal pain 70 years and over, or chest pain 30 years and over.	**F**
2	Children's Consultant Sign-off* reviewed – Fever in children under 1 year of age, or patients (aged under 18 years) making an unscheduled return to the ED with the same condition within 72 hours of discharge.	**F**

Grading explained

F - Fundamental	This is the top priority for your ED to get right. It needs to be met by all those who work and serve in the healthcare system. Behaviour at all levels of service provision, need to be in accordance with at least these fundamental standards. No provider should offer a service that does not comply with these fundamental standards, in relation to which there should be zero tolerance of breaches.
D - Developmental	This is the second priority for your ED. It is a requirement over and above the fundamental standard.
A - Aspirational	This is the third priority for your ED and is about setting longer term goals.

Results

Participants

Nationally, 18151 cases from 126 EDs were included in this QIP.

Right-click and select open hyperlink to access an interactive map of participating EDs.

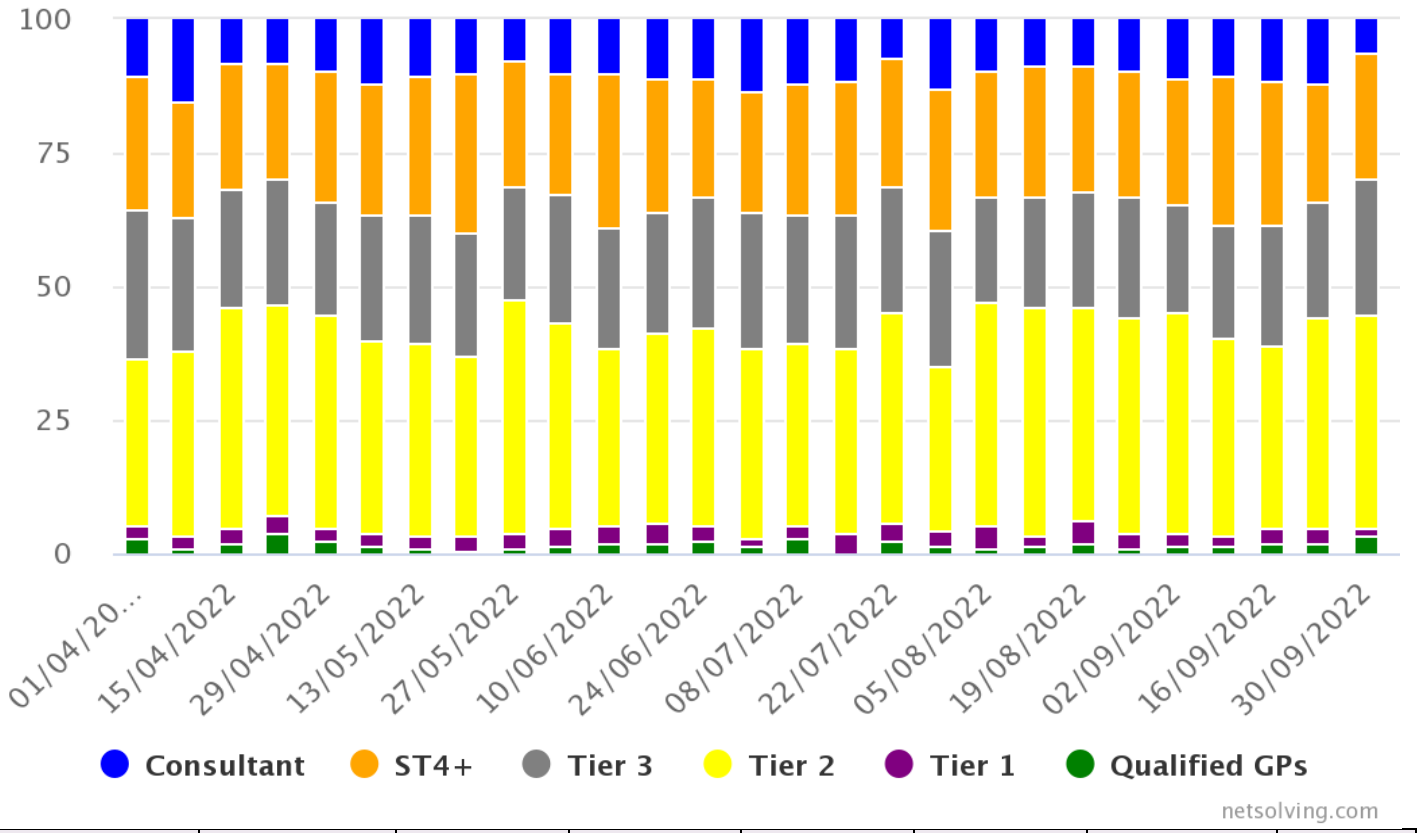
Country	Number of relevant EDs	Number of cases *
National total	126/234 (54%)	18151
England	121/177 (68%)	17631
Scotland	0/29 (0%)	0
Wales	4/13 (31%)	414
Northern Ireland	1/11 (9%)	106
Isle of Man / Channel Islands	0/4 (0%)	0
* analysis includes complete cases only		

Performance against clinical standards

Standard 1: Adult Consultant Sign-off

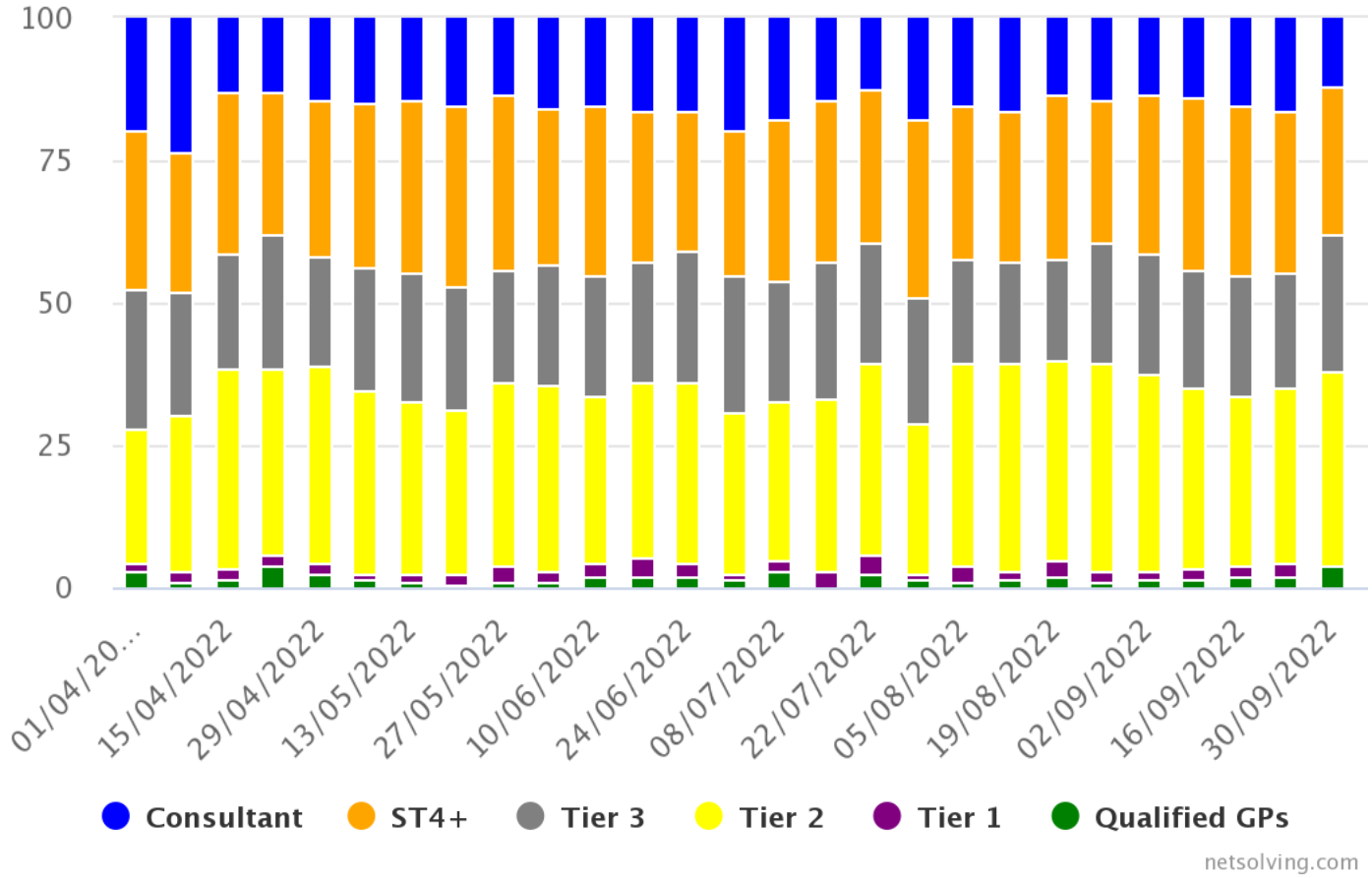
Fundamental standard

Tier of the primary 'named' clinical high-risk adults were seen by before discharge groups ('named' clinician)



Grade	Tier 5/ Entrustment level 4 (Consultant)	Tier 5/ Entrustment level 4 (Associate Specialist)	Tier 4/ Entrustment level 3 (ST4+ senior clinical fellows SAS)	Tier 3/ Entrustment level 2b (CT3 clinical fellows junior SAS ACPs)	Tier 2/ Entrustment level 2a (F2 CT1-2 GP trainees)	Tier 1/ Entrustment level 1 (FY1 trainee practitioners)	Qualified GPs
% of records	8%	2%	24%	23%	37%	3%	2%
Average per week	37	12	115	109	175	13	8

Tier of the most senior clinician to actually see the high-risk adults before discharge



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% of records	13%	3%	28%	21%	31%	2%	2%
Average per week	61	13	131	101	148	9	8

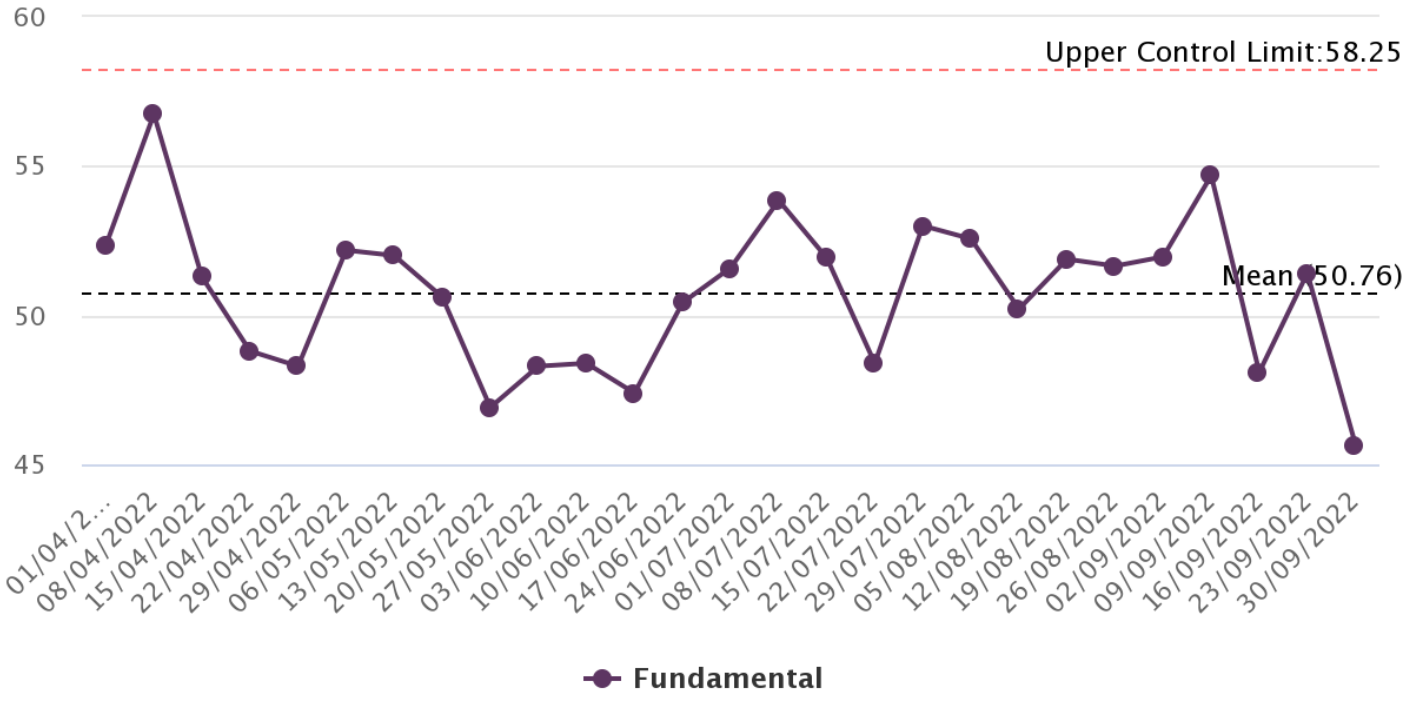
Commentary

- The primary clinician proportions by tier remained consistent throughout the period. As did the rates of most senior in person review of patients
- Two-thirds of ED patients are seen primarily by a Tier 3 clinicians or below
- 44% are eventually reviewed in person by a more senior clinician in some capacity

Fundamental standard

Percentage of high-risk adults who have had a consultant sign-off

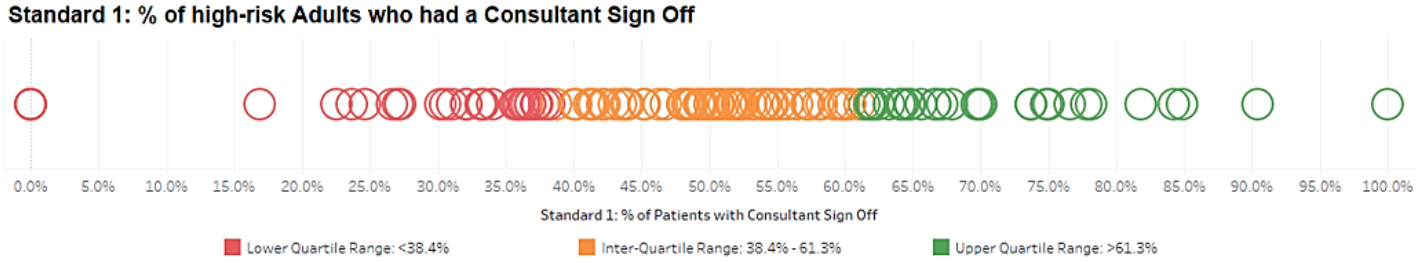
(For the time period: 6468 records conforming to standard; from a total of 12702 eligible.)



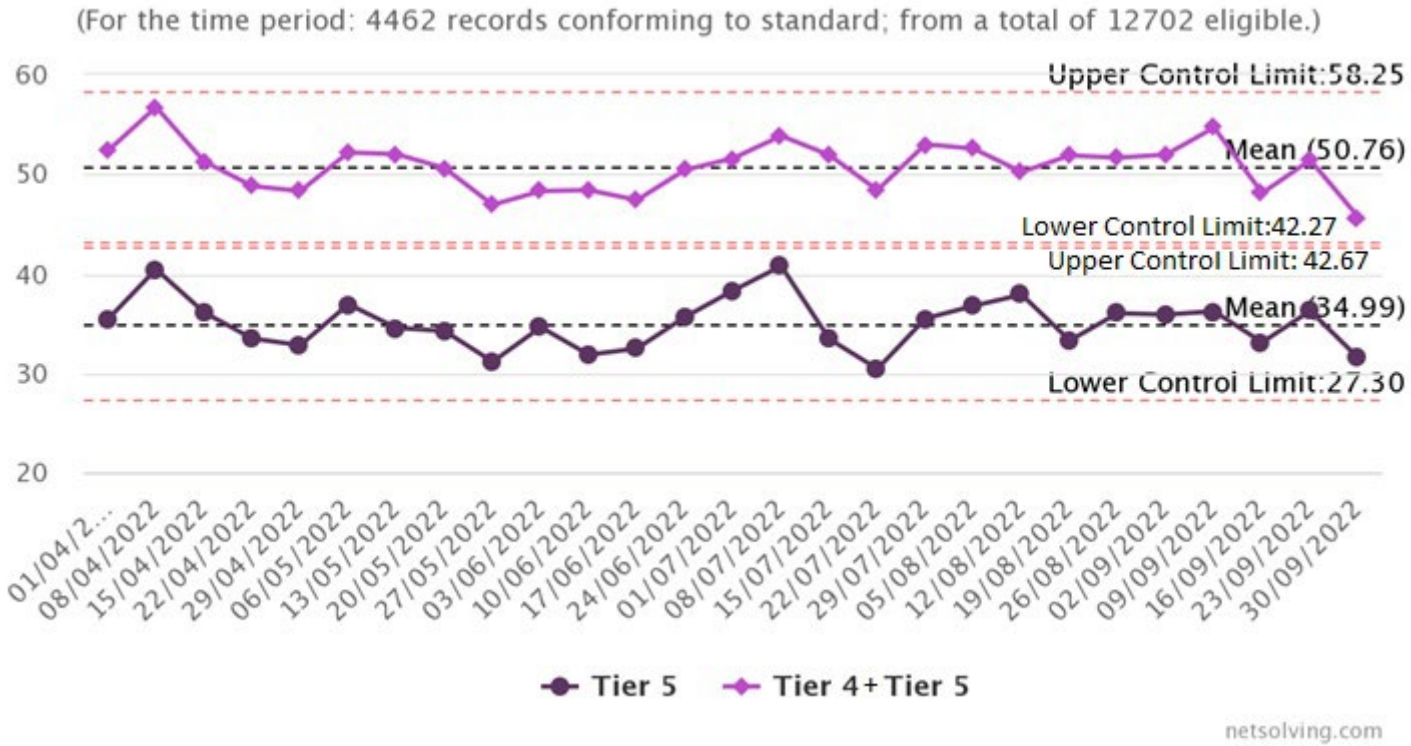
netsolving.com

Site performance

All adult patients (n=12702) – 6468 (50.8%) conformed to standard



Percentage of high-risk adults who have had a consultant sign-off (discussed or seen) prior to discharge – Tier 4 and 5 breakdowns



Of all adult patients (n=12702), 4462 (35%) conformed to standard. Patients that were either seen or discussed by a Tier 5 (Consultant) or Tier 5 (Associate Specialist); 6468 (50.8%) conformed to standard when including Tier 4 overnight (2200-0800) reviews.

Commentary

- During the data-collection period of the QIP, there was no demonstrable improvement in senior review rates by either tier of doctor at a national level
- The IQR shows significant variability between the higher and lower performing departments approach a third of patients
- 50.8% of high-risk patients received senior review as per standard. Including Tier 4 when conducted overnight,
    - Just over one-third of high-risk patients are reviewed by consultants or associate specialists (Tier 5)

There is need for improvement nationally. However, with current pressures on emergency departments, just to maintain current standards would be an achievement. When the landscape materially improves, or consultant numbers per 10000 patients do, we should also aim to achieve this standard for more high-risk patients.

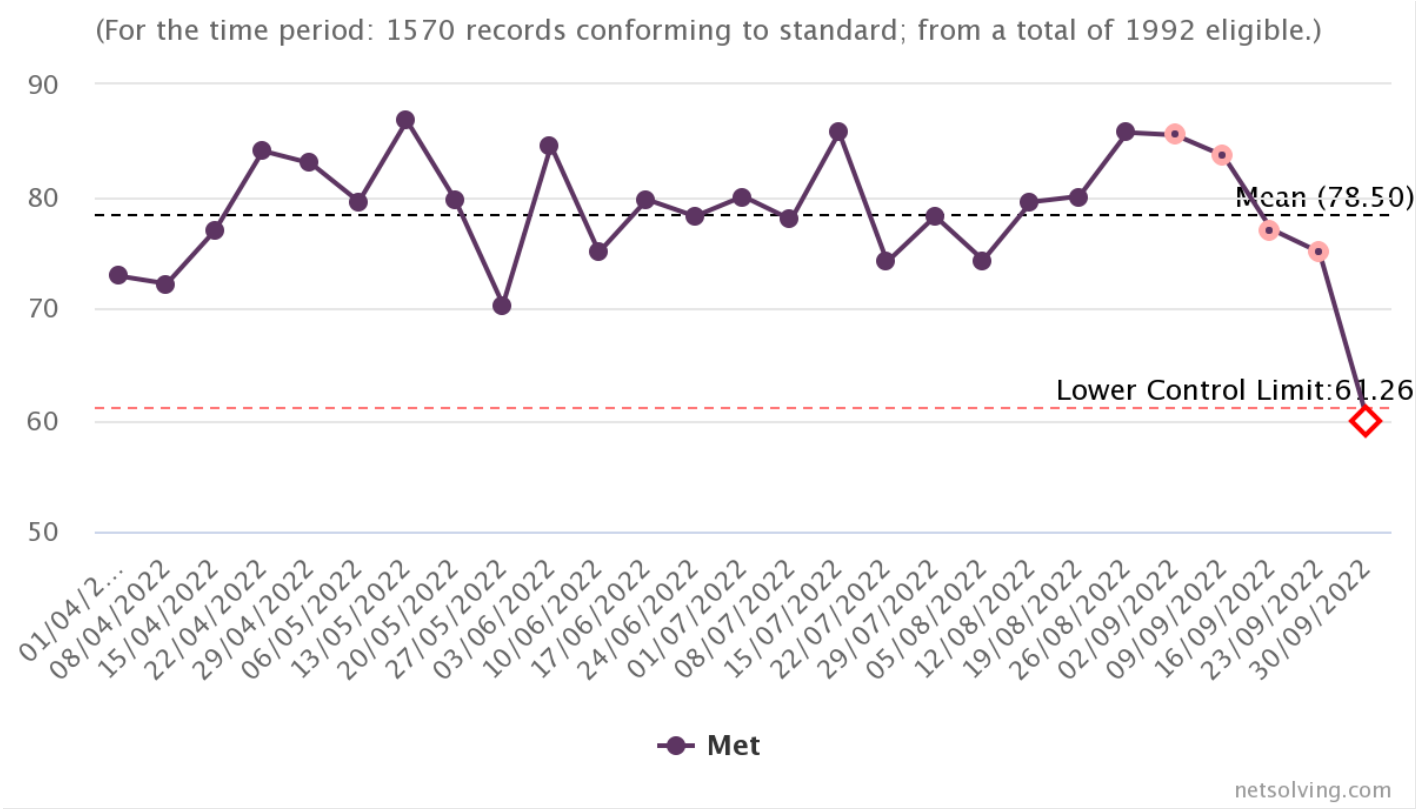
Recommendations

- If not already achieved, build into the IT system locally a flagging system that prompts juniors to seek a senior review for high-risk patient groups that they are discharging
- Ensure juniors, especially those less familiar with working in the ED (e.g. GPST), have the requirement to discuss these patients with seniors included in induction and local teaching

Consider locally how improvements can be made to meet this standard, such as staffing and teaching.

Fundamental standard

Adult Consultant Sign-off: Proportion of Tier 5 documenting their own senior reviews when they actually see the patient

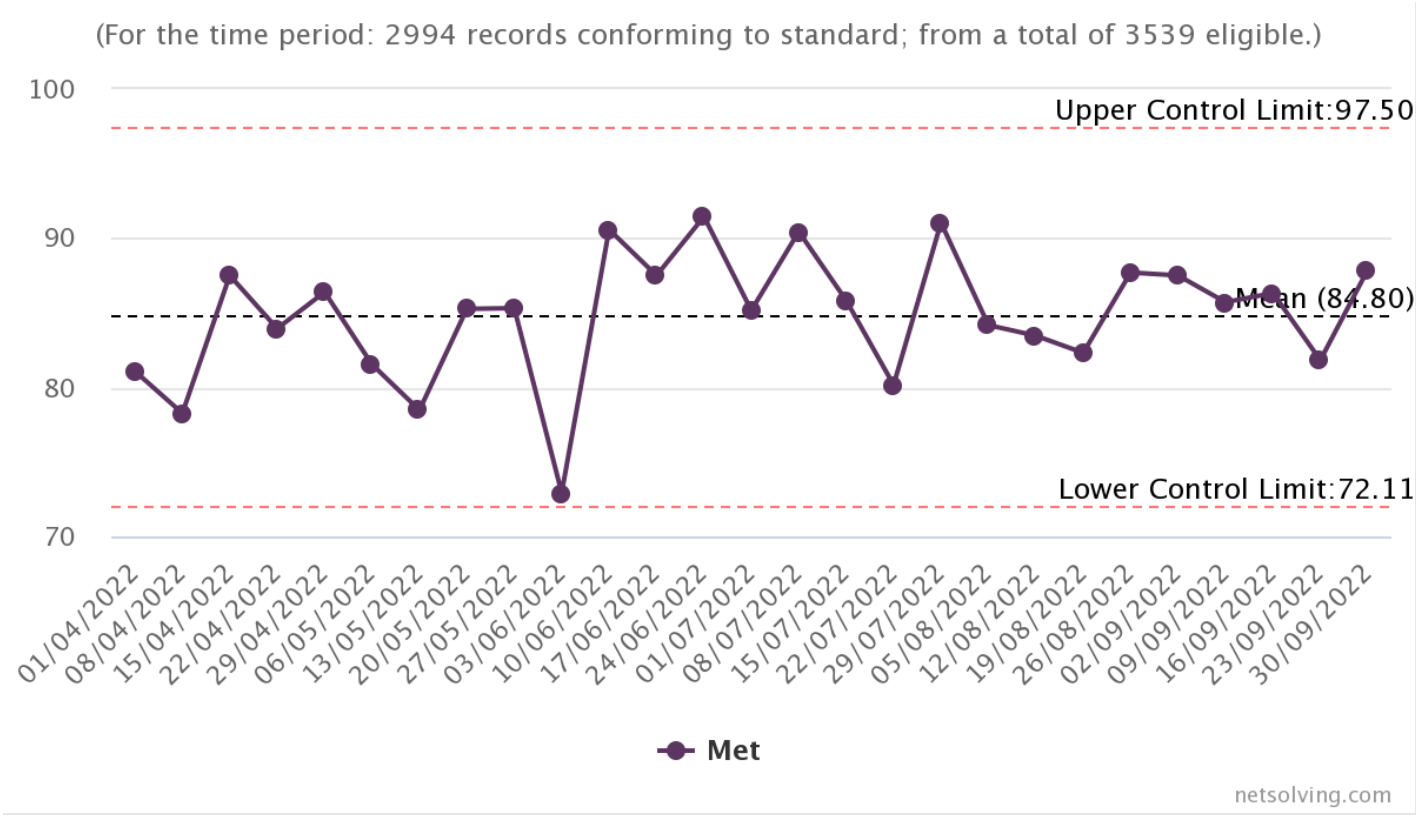


Understanding this SPC chart – See appendix

Commentary

- During the data-collection period of the QIP, there was no demonstrable improvement in documentation rates by Tier 5 doctors (consultants) who conduct an in-person senior review
- At the end of the QIP data-collection period, during September, there were 5 points in a downward trend. The last point had fallen below the lower control limit. We know from other QIPs that the last week of data in the collection period is often anomalous and therefore it would not be best to overinterpret this
- The rates of documentation are reasonably high at 78.5% amongst Tier 5 doctors. Although 6.3% lower than their registrars. Consultants may also be more likely to entrust such documentation if the advice was given for example, to their registrars. As stated before, it is not outside the normal scope of practice to entrust documentation to more junior colleges, particularly if they were witnessing the review and if departmental pressures preclude the senior from documenting themselves. Whilst documenting one's own reviews and advice is preferable, the realities of ED practice and pressures means this is not always possible
- This data will not capture if these seniors are checking the account the junior has written on their behalf. Therefore, the actual rate of ensuring the advice is documented as given is likely a little higher

Adult Consultant Sign-off: Proportion of Tier 4 documenting their own senior reviews when they actually see the patient



Understanding this SPC chart – See appendix

Commentary

- During the data-collection period of the QIP there was no demonstrable improvement in documentation rates by Tier 4 doctors who conduct an in-person senior review
- The rates of documentation are already high at 84.8% amongst tier 4 doctors. It is not outside the normal scope of practice to entrust documentation to more junior colleges, particularly if they were witnessing the review and if departmental pressures preclude the seniors from documenting themselves. Whilst documenting one's own reviews and advice is preferable, the realities of ED practice and pressures mean this is not always possible
- This data will not capture if these seniors are checking the account the junior has written on their behalf. Therefore, the actual rate of ensuring the advice is documented as given is likely higher

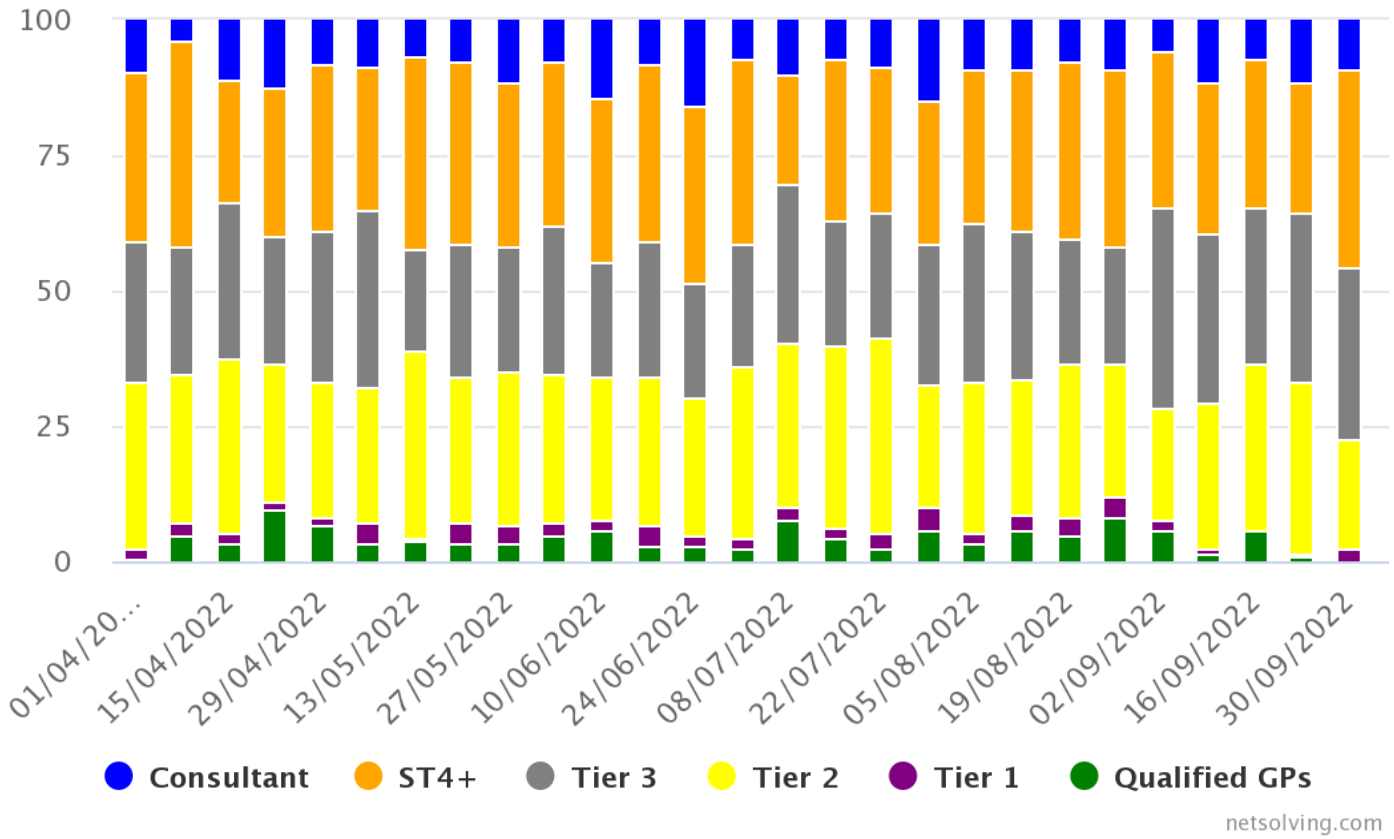
Recommendations

- Continue to encourage staff to document their own account of advice, particularly where safety critical advice is provided. For less critical or contentious advice, it may be appropriate to entrust that documentation to the junior advised, particularly when the senior involved may be stretched between other more safety-critical time constraints. In the case of the consultant group, it is reasonable for them to entrust registrars and staff they are familiar with to document their advice accurately
- When pressure preclude documenting one's own advice and the information is particularly critical, reviewing the junior's notes to ensure it was interpreted as intended is good practice

Standard 2: Children Consultant Sign-off

Fundamental standard

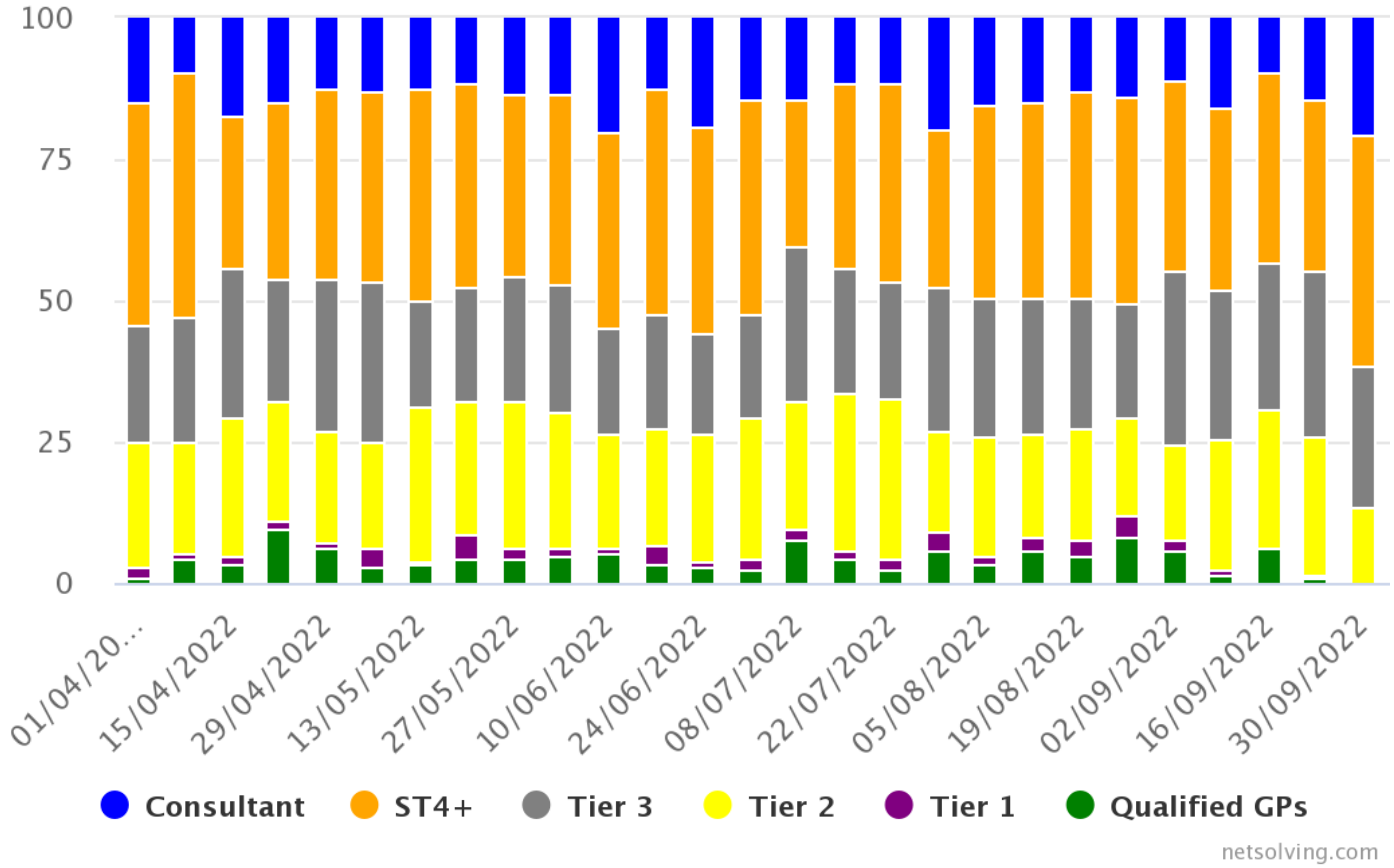
Tier of the primary 'named' clinician high-risk children were seen by before



discharge

Grade	Tier 5/ Entrustment level 4 (Consultant)	Tier 5/ Entrustment level 4 (Associate Specialist)	Tier 4/ Entrustment level 3 (ST4+ senior clinical fellows SAS)	Tier 3/ Entrustment level 2b (CT3 clinical fellows junior SAS ACPs)	Tier 2/ Entrustment level 2a (F2 CT1-2 GP trainees)	Tier 1/ Entrustment level 1 (FY1 trainee practitioners)	Qualified GPs
% of records*	8%	1%	30%	26%	28%	2%	4%
Average per week	16	3	60	52	57	5	9

Tier of the most senior clinician to actually see high-risk children before discharge



Grade	Tier 5/ Entrustment level 4 (Consultant)	Tier 5/ Entrustment level 4 (Associate Specialist)	Tier 4/ Entrustment level 3 (ST4+ senior clinical fellows SAS)	Tier 3/ Entrustment level 2b (CT3 clinical fellows junior SAS ACPs)	Tier 2/ Entrustment level 2a (F2 CT1-2 GP trainees)	Tier 1/ Entrustment level 1 (FY1 trainee practitioners)	Qualified GPs
% of records	13%	2%	34%	23%	22%	2%	4%
Average per week	25	3	69	47	45	4	9

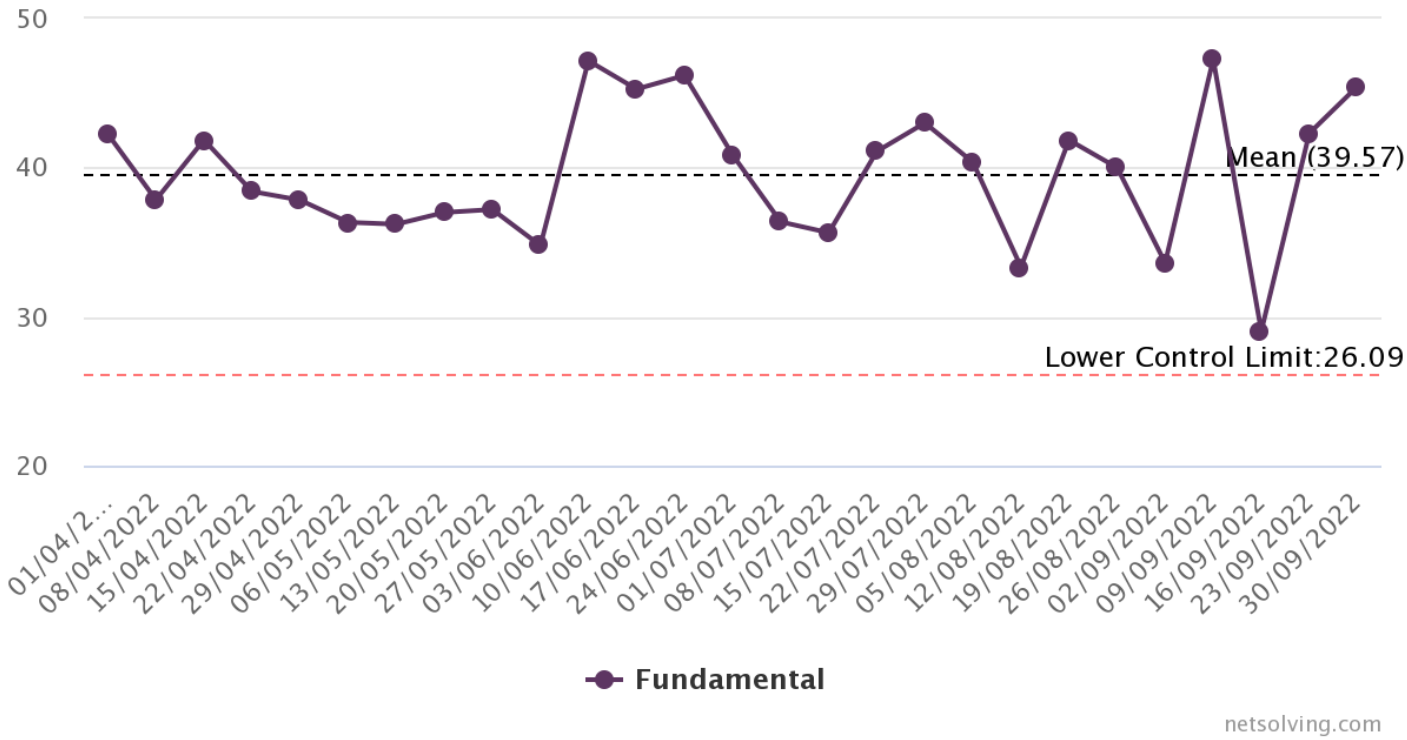
Commentary

- Please see the commentary on the adult section depicting a similar graph
- There is little difference in the composition of who sees children as compared to adults
    - However, similar amounts are eventually at least seen by a consultant and slightly more overall by at least a Tier 4. This likely reflects the increased unease juniors (and seniors) feel when caring for children
- There is greater GP input in this patient group as compared to adults (2% of all adult patients vs 4% of all child patients).

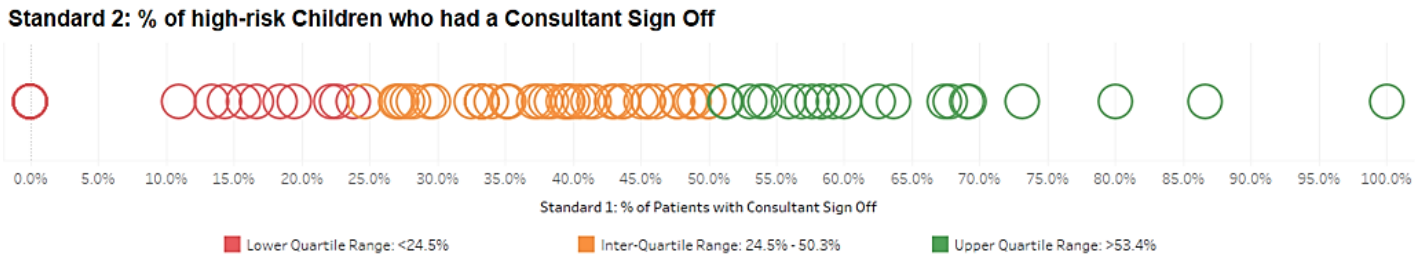
Fundamental Standard

Percentage of high-risk children who have had a Consultant Sign-off (discussed or seen)

(For the time period: 2146 records conforming to standard; from a total of 5451 eligible.)

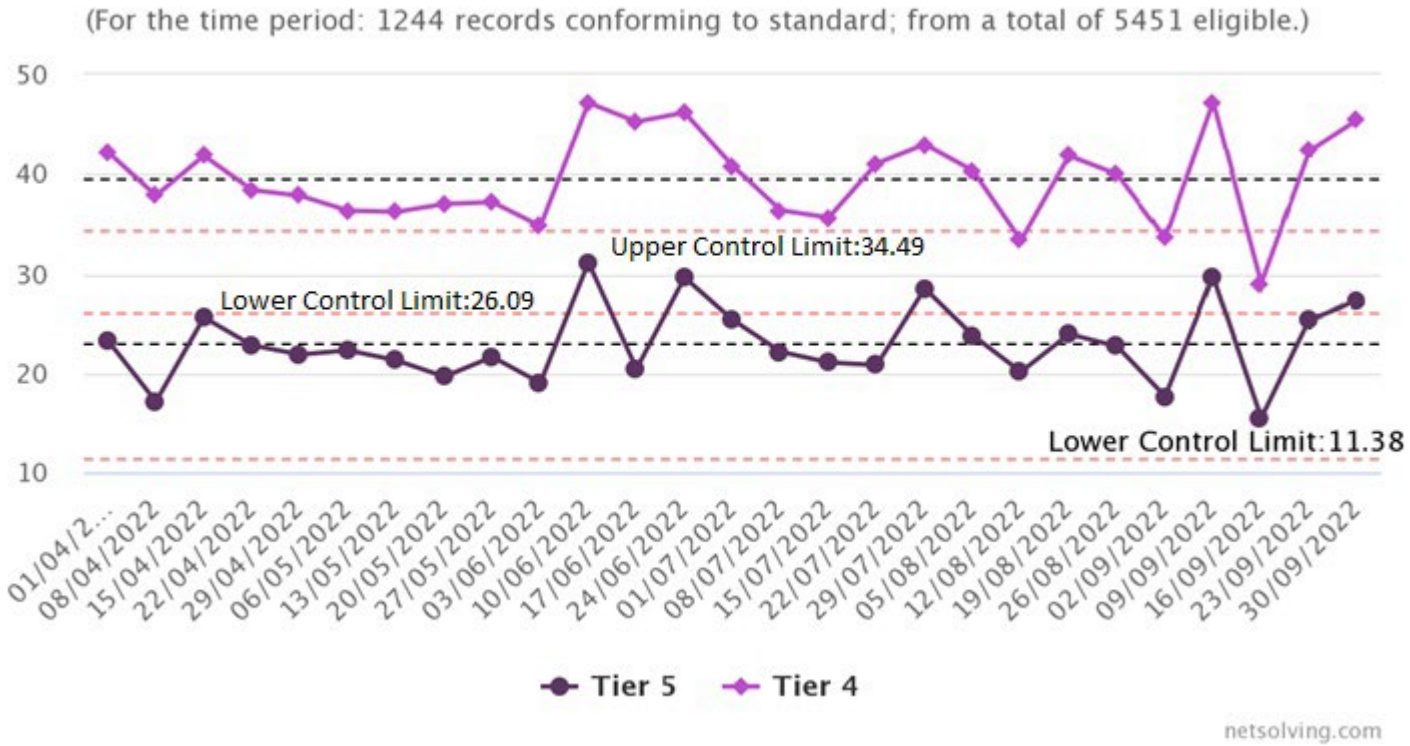


Site performance



All patients aged under 18 (n=5451) – 2146 (39.6%) conformed to standard (Patients that were either seen or discussed by a Tier 5 (Consultant) or Tier 5 (Associate Specialist), or that were either seen or discussed overnight (22:00 – 08:00) by a Tier 4 (ST4+, senior clinical fellows, SAS)

Percentage of high-risk children who have had a Consultant Sign-off (discussed or seen) prior to discharge – Tier 4 and 5 breakdowns



Breakdown of those meeting standard by Tier 5 and overnight Tier 4 review. All patients aged under 18 (n=5451) – 1244 (22.9%) were reviewed by a Tier 5 clinician.

Commentary

- During the data-collection period of the QIP, there was no demonstrable improvement in senior review rates by either tier of doctor.
- 39.6% of high-risk children received senior review as per standard. Including Tier 4 when conducted overnight,
    - Almost one-quarter (22.9%) of high-risk children are reviewed by consultants or associate specialists (Tier 5).
    - Both these figures are lower than those in the adult patient group.

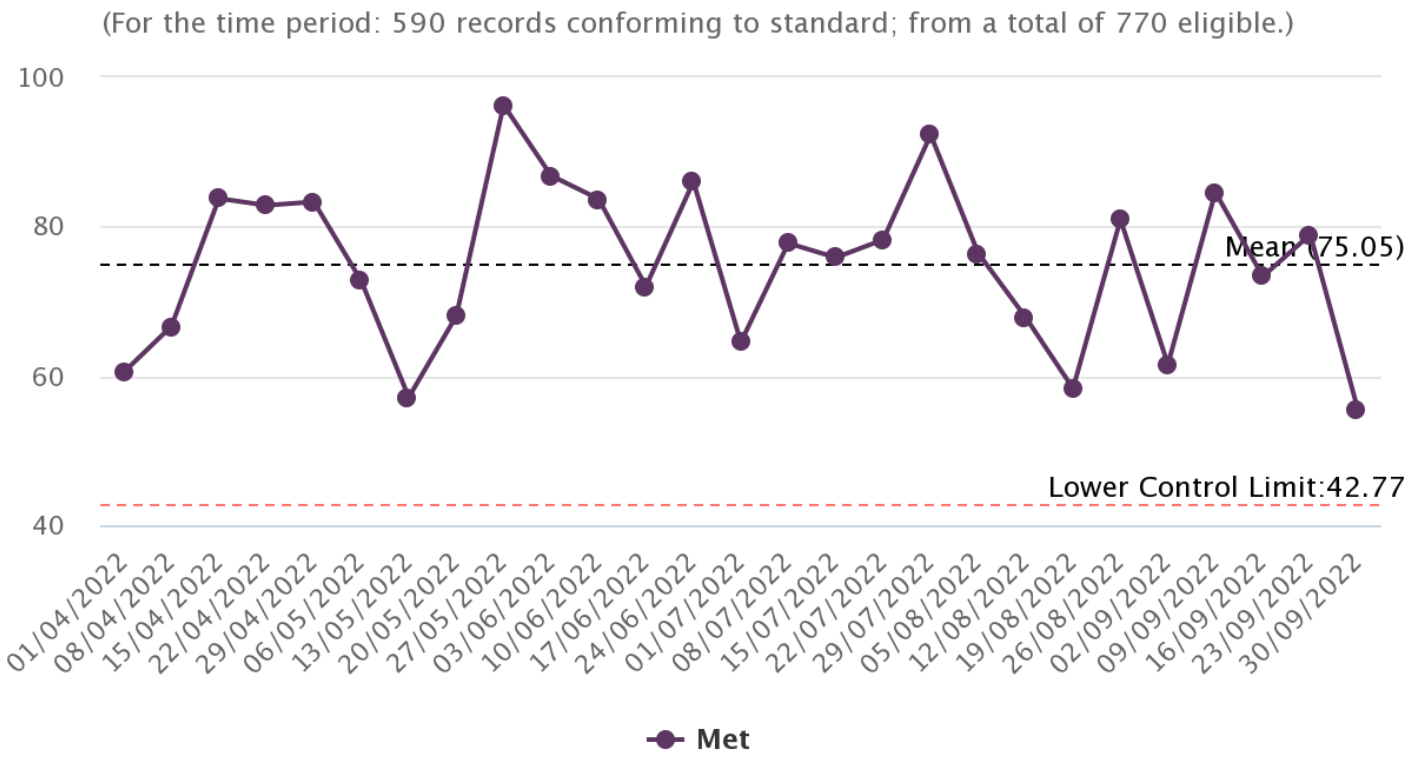
- There is need for improvement nationally. However, with current pressures on emergency departments just to maintain current standards would be an achievement. When the landscape materially improves, or consultant numbers per 10000 patients do, we should also aim to achieve this standard for more high-risk patients

Recommendations:

- Mixed EDs should review their data and where a difference between children and adults exists, explore why and attempt to close the gap
- If not already achieved, build into the IT system locally a flagging system that prompts juniors to seek a senior review for high-risk patient groups they are discharging
- Ensure juniors, especially those less familiar with working in the ED (e.g., GPST), have the requirement to discuss these patients with seniors included in induction and local teaching.
- Consider locally how improvements can be made to meet this standard, such as staff mix and teaching.

Fundamental standard

Proportion of Tier 5 documenting their own senior reviews when they actually see the child

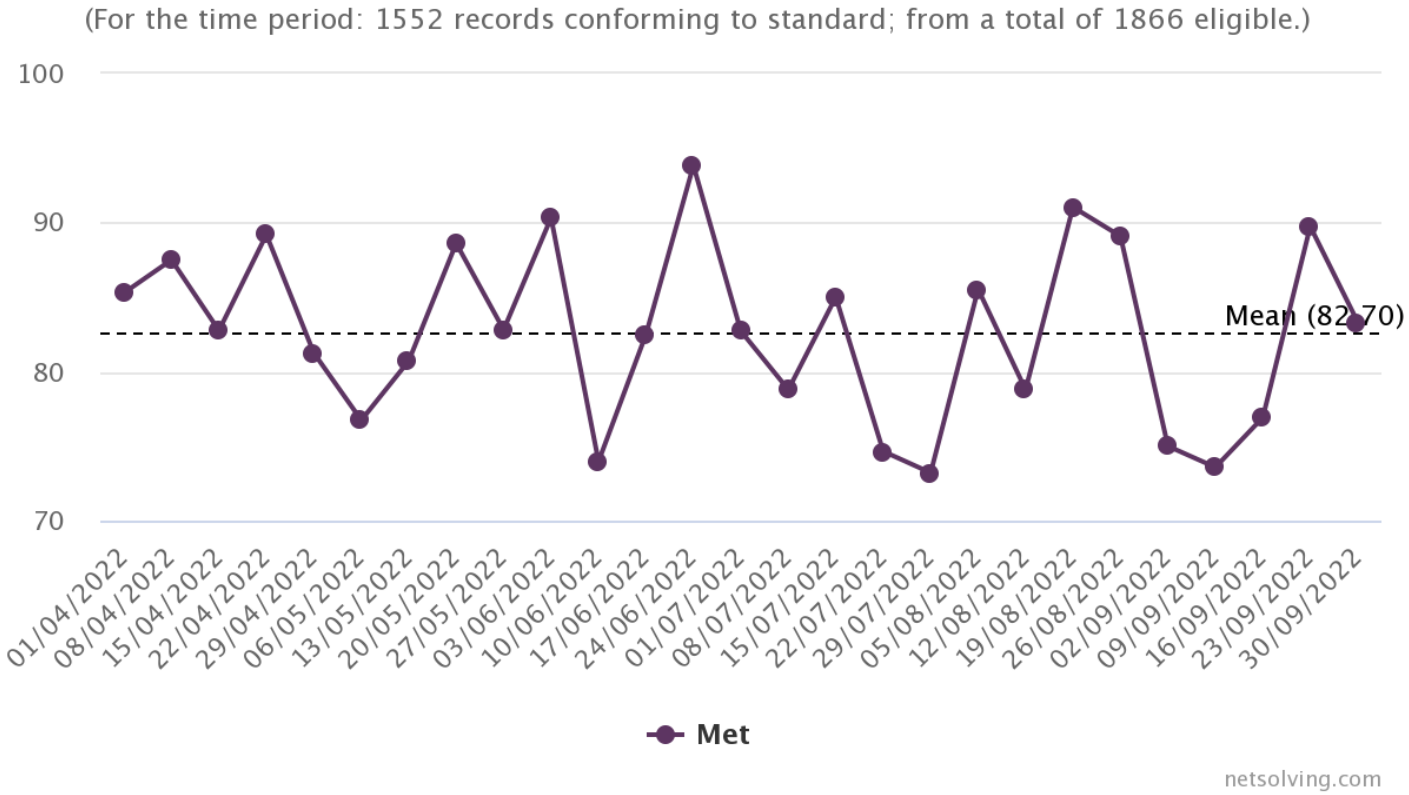


Commentary

- During the data-collection period of the QIP there was no demonstrable improvement in documentation rates by Tier 5 doctors (consultants) who conduct an in-person senior review
- The rates of documentation are reasonably high at 75.1% (marginally lower than in adults 78.5%) amongst Tier 5 doctors. Although 7.6% lower than their registrars. Consultants may also be more likely to entrust such documentation if the advice was given for example, to their registrars. As stated before, it is not outside the normal scope of practice to entrust documentation to more junior colleges, particularly if they were witnessing the review and if departmental pressures preclude the senior from documenting themselves. Whilst documenting one's own reviews and advice is preferable, the realities of ED practice and pressures means this is not always possible
- This data will not capture if these seniors are checking the account the junior has written on their behalf. Therefore, the actual rate of ensuring the advice is documented as given is likely slightly higher

Fundamental standard

Proportion of Tier 4 documenting their own senior reviews when they actually see the child



Commentary

- During the data-collection period of the QIP there was no demonstrable improvement in documentation rates by Tier 4 doctors who conduct an in-person senior review
- The rates of documentation are already high at 82.7% (marginally lower than in adults 84.8%) amongst Tier 4 doctors. It is not outside the normal scope of practice to entrust documentation to more junior colleges, particularly if they were witnessing the review and if departmental pressures preclude the seniors from documenting themselves. Whilst documenting one's own reviews and advice is preferable, the realities of ED practice and pressures mean this is not always possible
- This data will not capture if these seniors are checking the account the junior has written on their behalf. Therefore, the actual rate of ensuring the advice is documented as given is likely slightly higher

Recommendations

- Continue to encourage staff to document their own account of advice, particularly where safety critical advice is provided. For less critical or contentious advice, it may be appropriate to entrust that documentation to the junior advised, particularly when the senior involved may be stretched between other more safety-critical time constraints. In the case of the consultant group, it is reasonable for them to entrust registrars and staff they are familiar with to document their advice accurately
- When pressure preclude documenting one's own advice and the information is particularly critical, reviewing the junior's notes to ensure it was interpreted as intended is good practice

Organisational Audit

ED Casemix

All EDs (n=43)

Exclusions

Only includes EDs that have submitted a complete organisational audit questionnaire

- For this project, data was not collected for EDs that are for child patients only

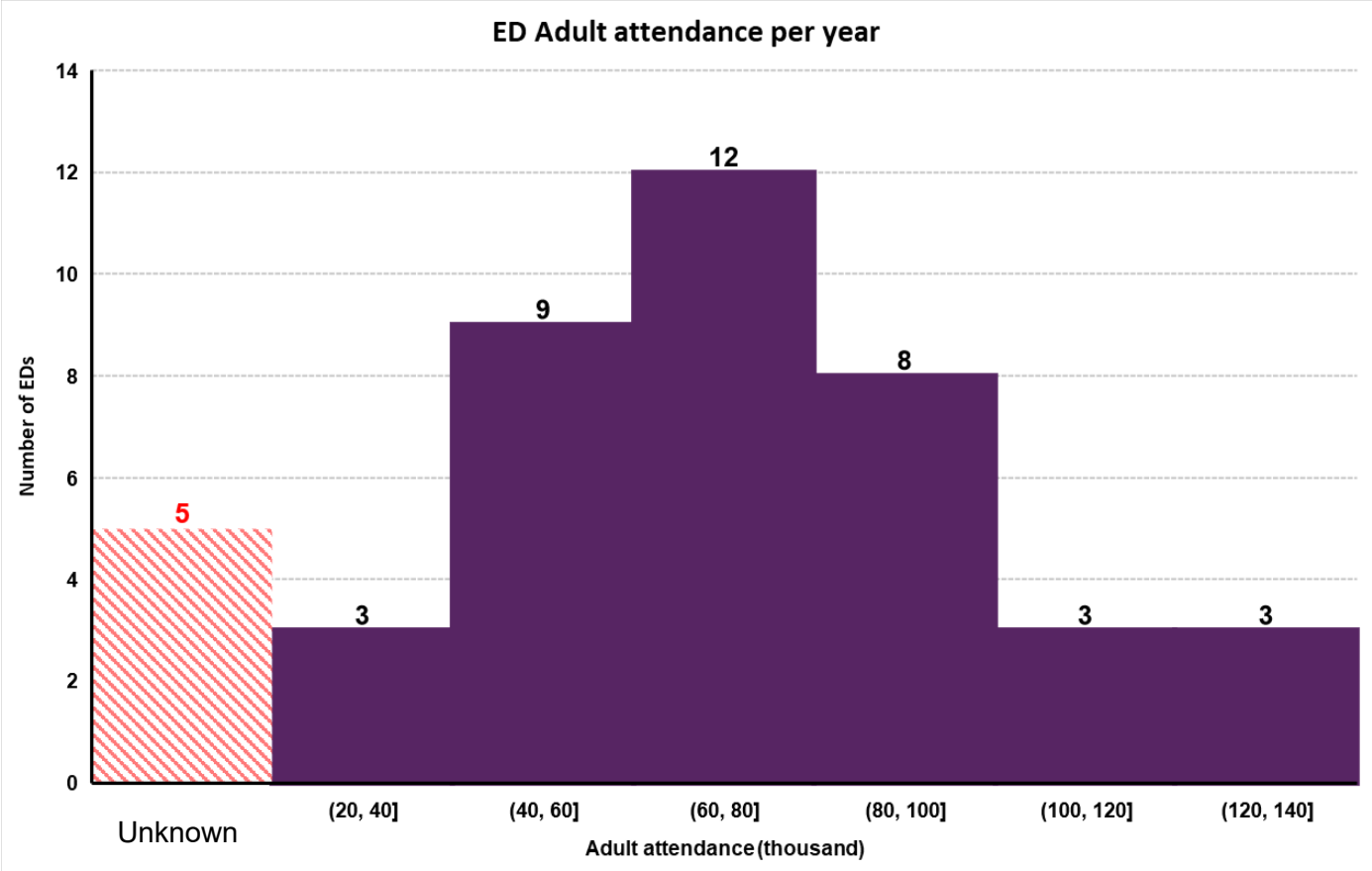
Commentary

- 63 EDs did not complete an organisational audit
- The data reveals that the vast majority of EDs are attended by both adults and children, with only 9% of the participating EDs being dedicated to adult patients only

Recommendation

- The RCEM team should follow up lack of completion and prompt local QI leads to increase engagement This will enable analysis of the data at a deeper level such as exploring consultant/patient ratios and correlations to performance against the metrics
    - QI leads to please complete the organisational audit. It is only expected to be done once annual per QIP
    - RCEM are now linking the Organisational audit more explicitly to the QIP standards to help drive improvement by monitoring interventions such as development of new policy, leadership roles, equipment or training

ED Adult attendance per year

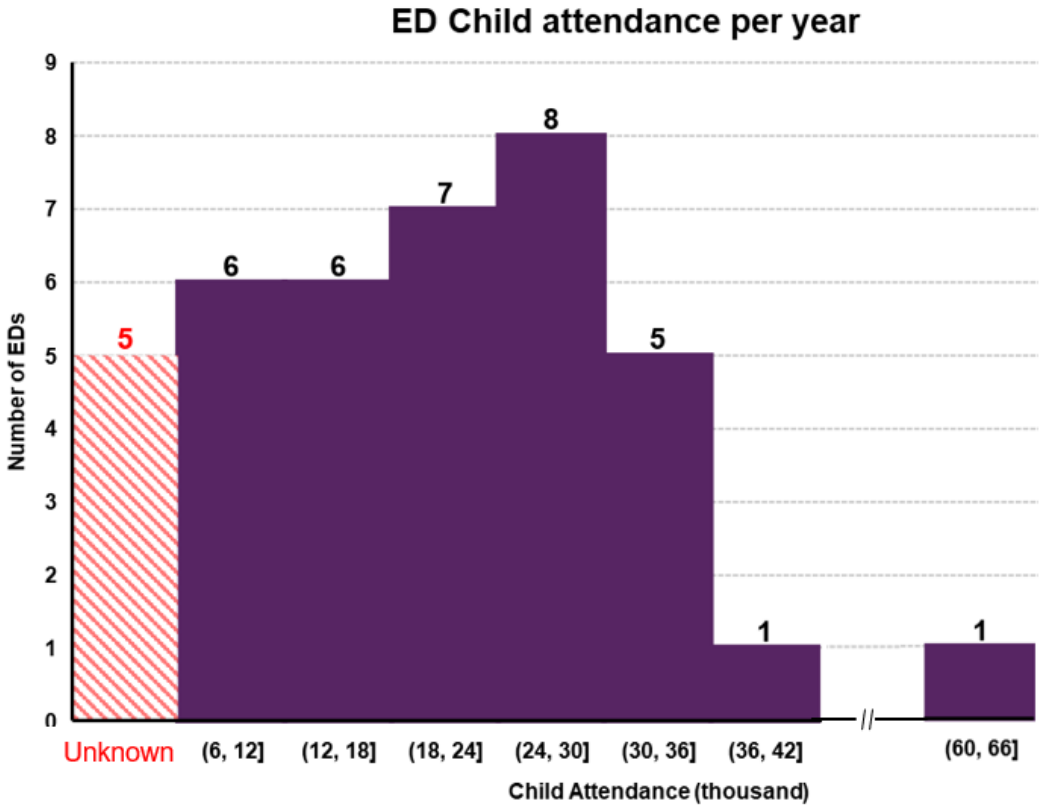


All EDs (n=43)

Commentary

- 67% of the EDs reported an annual adult attendance number between 40,000 to 100,000.
- The average number of attendances is 77,526 patients per year
- The quarter of EDs with the lowest reported attendance numbers reported no more than 60,000 attendances and, the quarter of EDs with the highest reported attendance numbers had no fewer than 94,500 attendances per year
- The ED with the lowest reported number of attendances had 21,000 patients attend and the highest reported number of attendances had 140,000 patients attend the ED during 2022

ED Child (less than 18 years old) attendance per year



All EDs* (n=39)

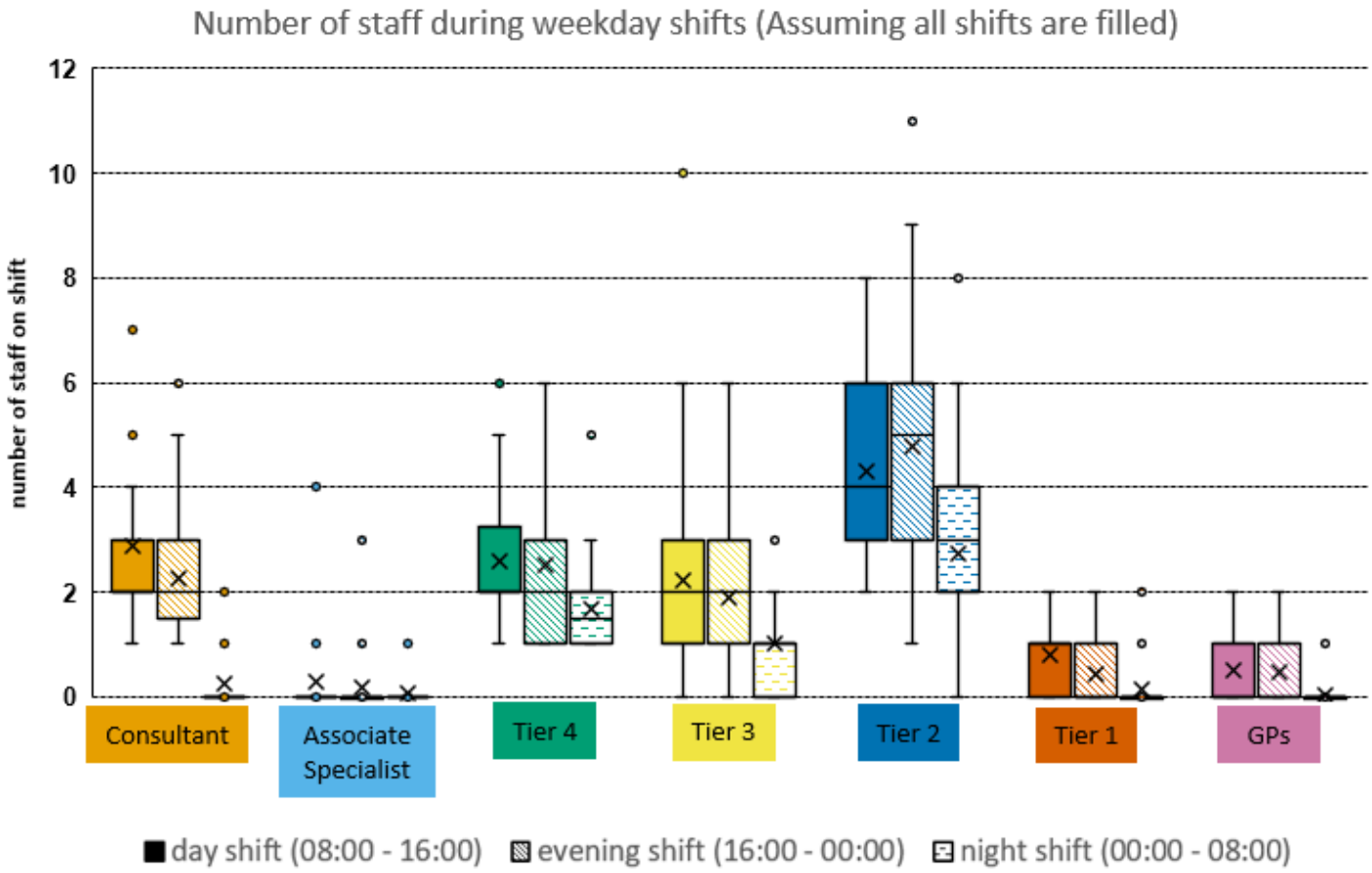
Exclusions

- Only includes EDs that have submitted a complete organisational audit questionnaire
- Does not include Adult only EDs (n= 4)

Commentary

- The mean attendance is 21,939 child patients per year. Please note that this is the average when excluding the ED that reported the highest number of attendances as this ED is an outlier.
- The quarter of EDs with the lowest attendance reported no more than 15,250 child attendances per year. The quarter of EDs with the highest attendance reported no fewer than 30,000 child attendances per year
- The same 5 EDs that were not able to report on the number of adult attendances, were also not able to report on the number of child patient attendance
- The ED with the lowest reported number of attendances had 7,000 and the highest reported number of attendances had 61,000 child patients attend the ED during 2022

Number of Staff on Clinical Shift – Weekdays

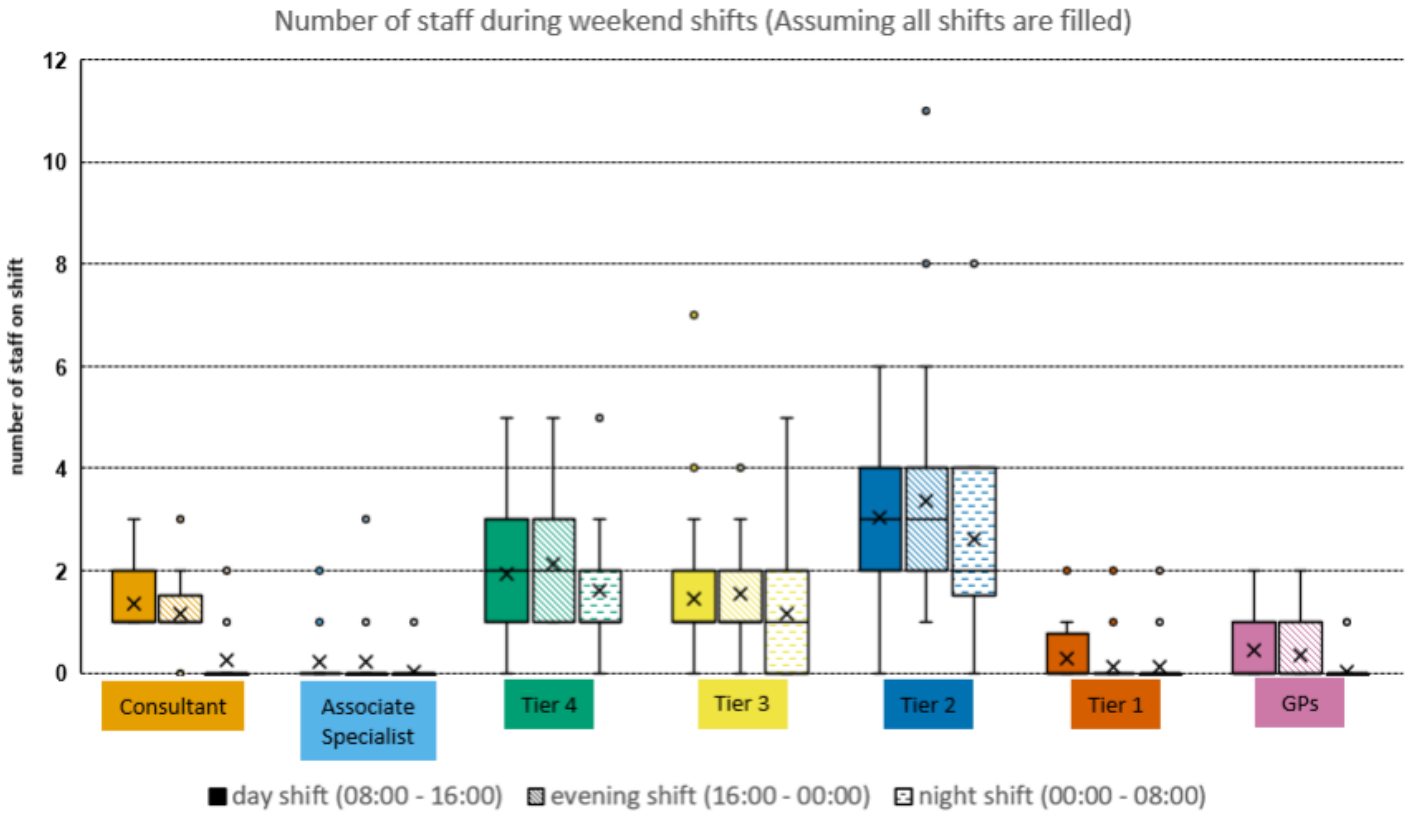


N = 43 EDs

Commentary

- 75% of the EDs will have no more than 3 consultants on shift during the weekday dayshift
- Tier 2 staff is the group with the highest number of staff on shift during the weekday dayshift, with 75% of EDs operating with no more than 6 Tier 2 staff
- The number of EDs not able to provide the number of staff working varies depending on the specific staff grade. The grades with the highest number of EDs not being able to provide the number of staff working are Qualified GPs, Tier 2 and Tier 5 (Associate Specialist). Only one ED was not able to provide the staff numbers for every grade

Number of Staff on Clinical Shift – Weekend

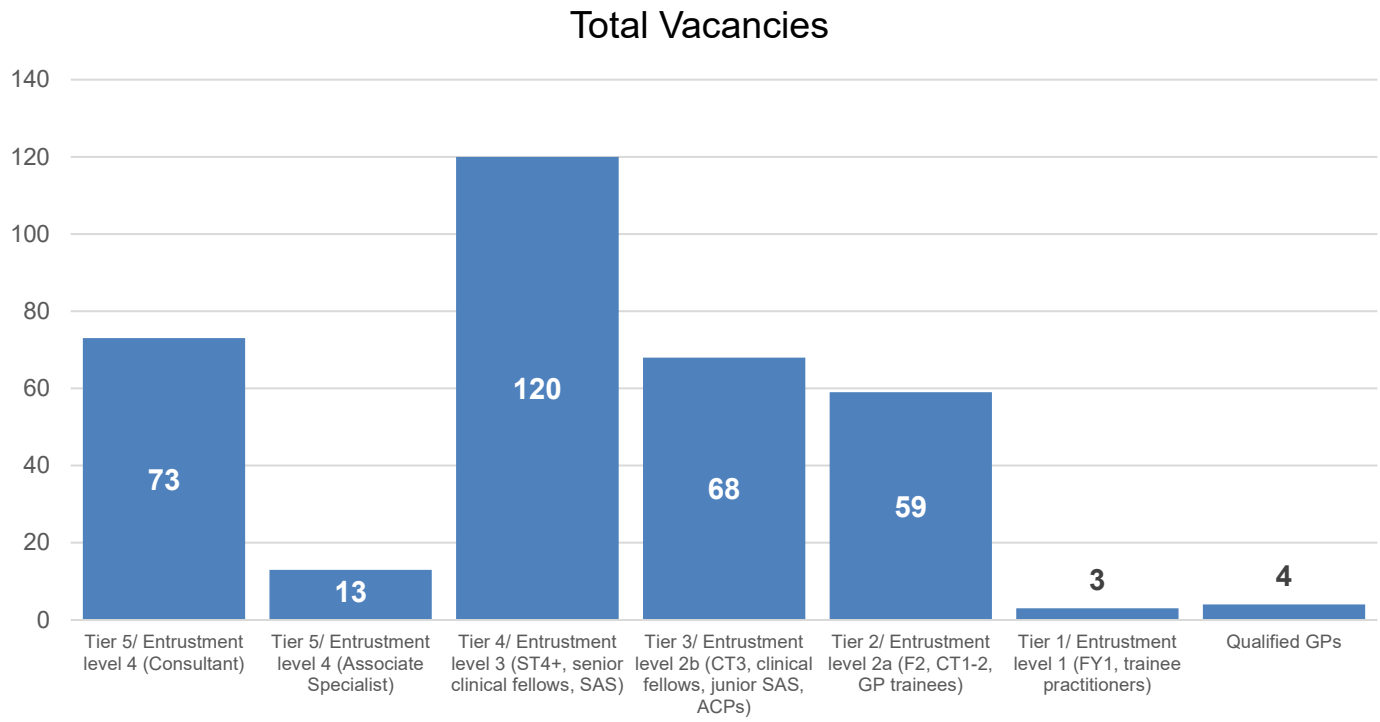


All EDs (n=43)

Commentary

- When compared to the weekday dayshift, there is a reduction in the number of consultants working. During weekends, 75% of all EDs are operating with no more than 2 consultants on shift (compared to 3 on weekdays)
- 75% of EDs are operating with 4 or less Tier 2 staff on weekends. This group is still the one with most staff on shift but, the number of staff is also reduced when compared to weekdays where 75% of EDs are operating with 6 or less Tier 2 staff

Vacancies



	average vacancies per ED (rounded to the nearest whole number)	Number of EDs unable to provide this information
Tier 5/ Entrustment level 4 (Consultant)	2	3
Tier 5/ Entrustment level 4 (Associate Specialist)	0	5
Tier 4/ Entrustment level 3 (ST4+, senior clinical fellows, SAS)	3	4
Tier 3/ Entrustment level 2b (CT3, clinical fellows, junior SAS, ACPs)	2	4
Tier 2/ Entrustment level 2a (F2, CT1-2, GP trainees)	2	4
Tier 1/ Entrustment level 1 (FY1, trainee practitioners)	0	4
Qualified GPs	0	9

All EDs (n=43)

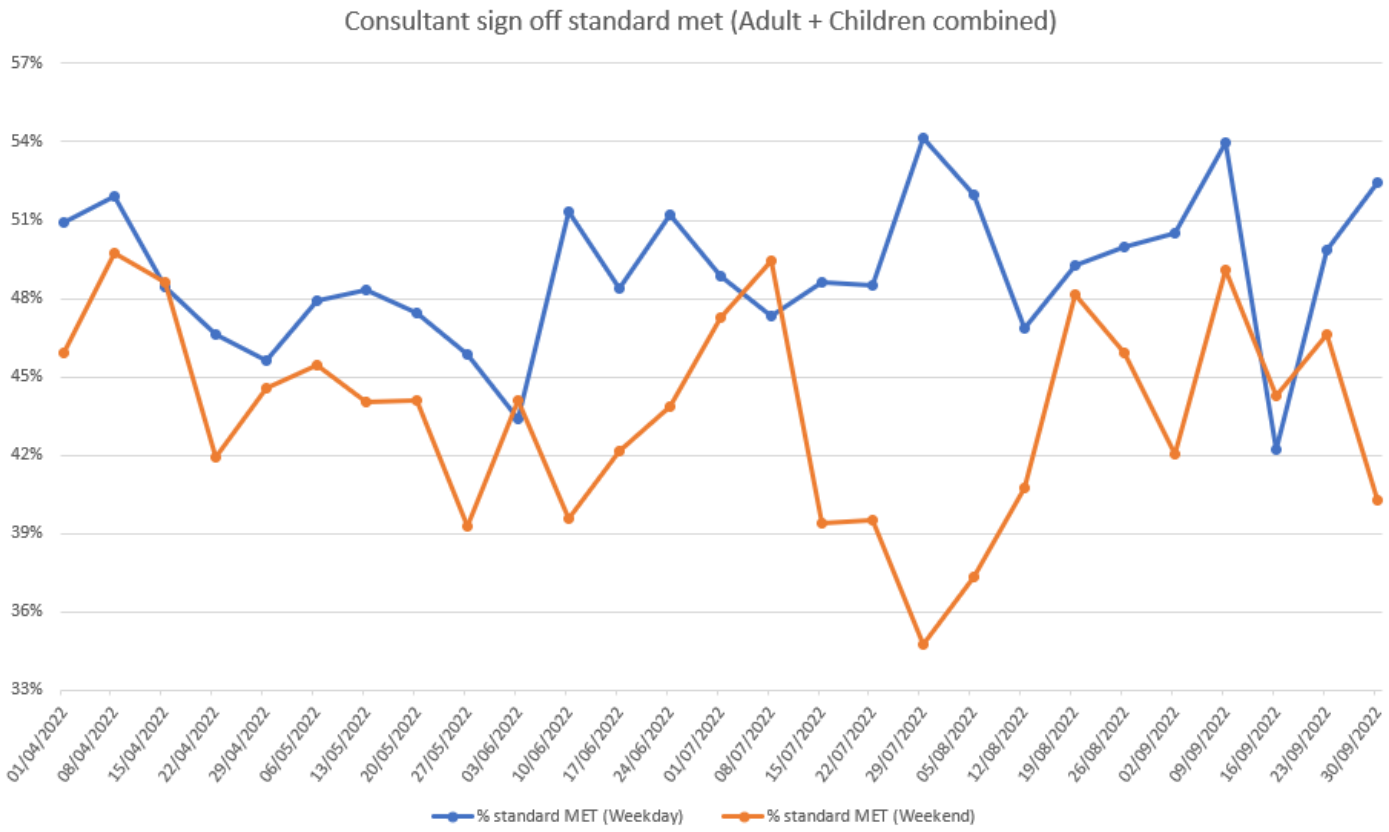
Commentary

- The data indicates that the largest gap in staff is for Tier 4. Not only is this group being the one with the most vacancies, but this is also the group with the highest number of EDs looking to hire. Only 10 out of the 43 EDs have no vacancies for Tier 4 staff.
- When looking at the average number of vacancies, EDs are on average short of 2 consultants. The data also indicates that more than half of EDs are advertising for consultant posts (23 out of 43 EDs have consultant vacancies)

Recommendations

- Health Education England and the Department of Health need to improve workforce planning to meet the growing need for fully trained Emergency Clinicians to deliver a service that is heavily reliant on junior staff

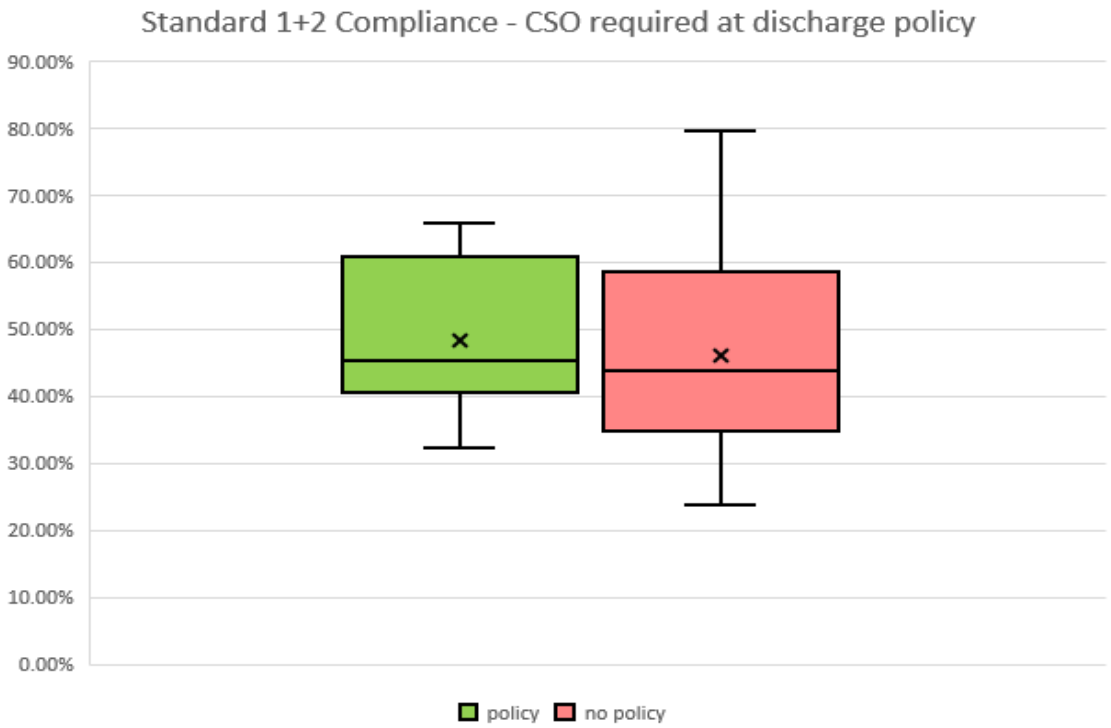
Weekday (49%) vs. Weekend (44%) sign off comparison



Commentary

1. Despite the decreased number of Consultant on the weekend, the impact on overall consultant sign off rates appears minimal compared to the weekdays. This may be due to a similar ratio of consultants to other staff during both the weekend and weekdays

Impact of a policy on rates of Consultant Sign-off



N= 12 (Policy)

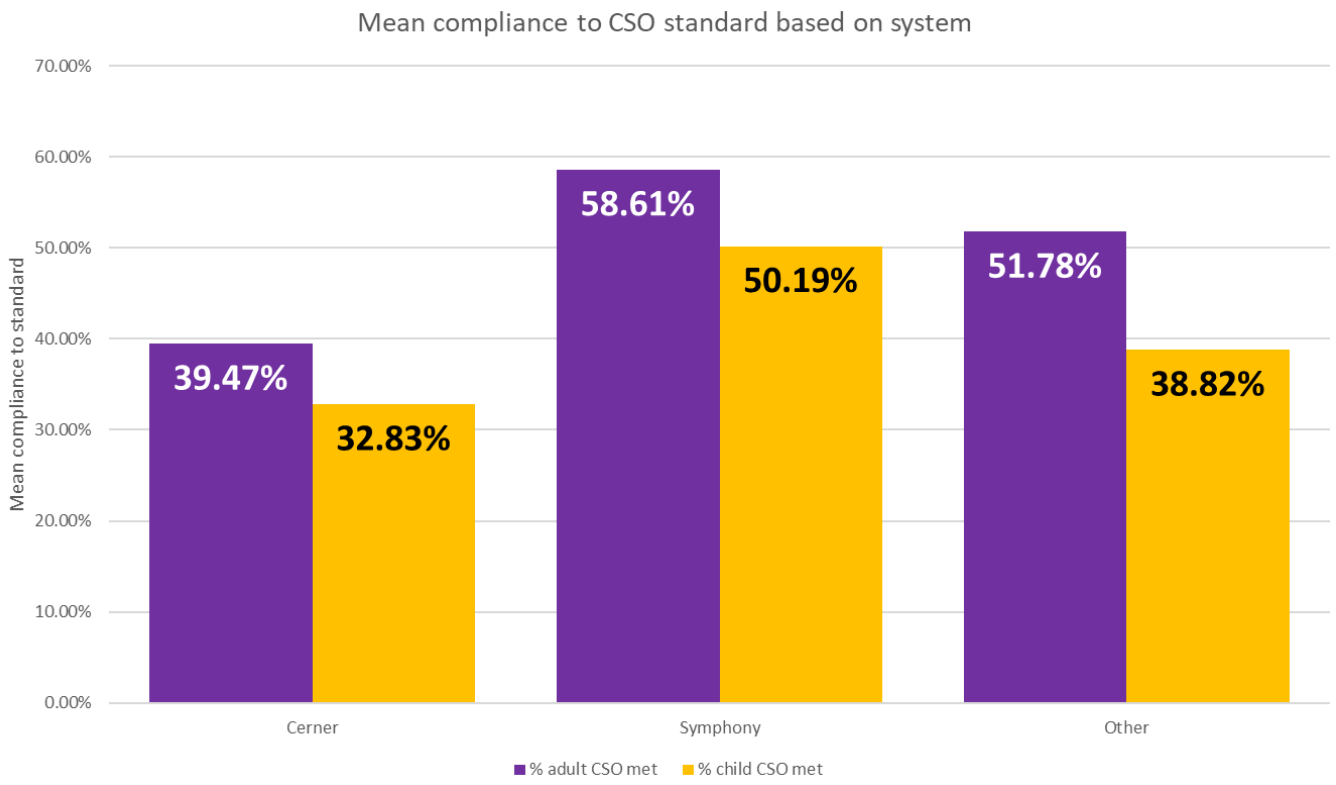
N=33 (No policy)

Those without the policy submitted a total of 5385 cases, those with a policy, 1757 cases.

Commentary

- There appears to be no significant difference between those with and without a specific local Consultant Sign-off policy on the rates of compliance. However, the variance in the group without a specific policy appears higher

Impact of different IT systems on rates of Consultant Sign-off



system	adult patient records (sample size)	Mean % adult CSO met	child patient records (sample size)	Mean % child CSO met
Cerner	992	39.47%	491	32.83%
Symphony	1100	58.61%	422	50.19%
Other	2608	51.78%	1529	38.82%

Primary EPR/System in use

System	EDs using the system	% of EDs using the system
Allscripts	2	5%
Care flow	5	12%
Care flow (system C)	1	2%
Cerner	5	12%
Cerner FirstNet	3	7%
Cerner FirstNet / EPR	1	2%
Cerner Millenium	1	2%
EDIS	1	2%
FIRST NET	1	2%
ICLIP/Cerner	1	2%
LORENZO	1	2%
Lorenzo / EMIS Health /GEH Portal	1	2%
Meditech	1	2%
Nerve Centre	2	5%
Oceano	1	2%
PENS	1	2%
Semma Helix - ATOS	2	5%
Silverlink PCS	1	2%

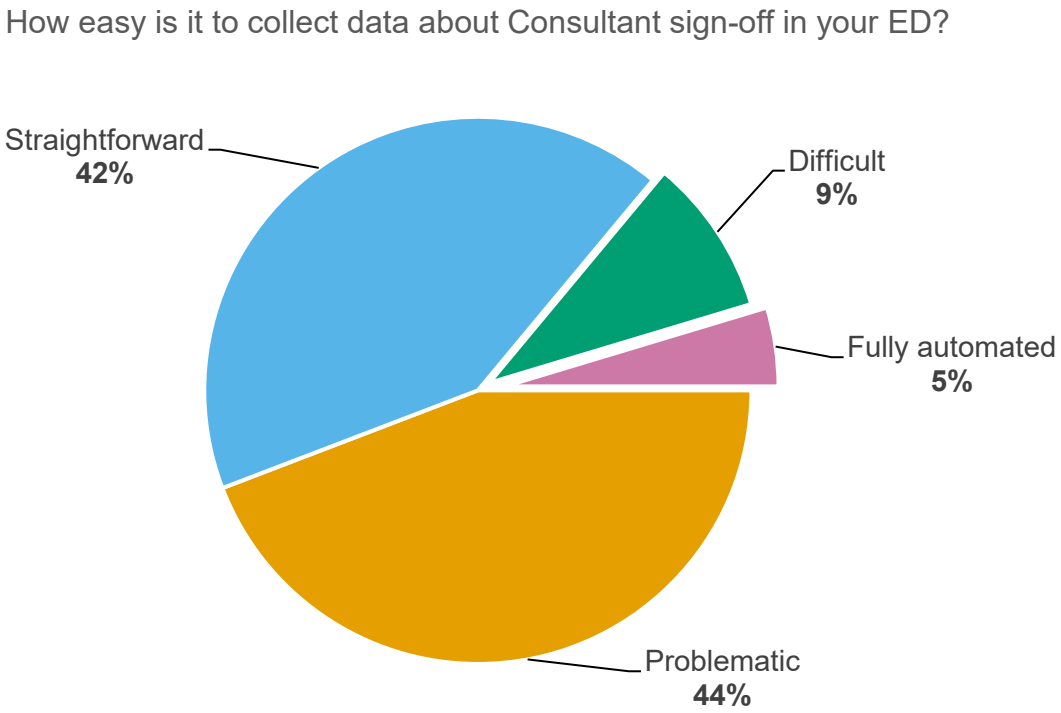
SUNRISE by Allscripts	1	2%
Sunrise EPR	2	5%
Symphony	7	16%
Symphony and Etrack	1	2%
Trakcare by Intersystems for majors (adult and children). SystemOne for minors (adult and children) on collocated urgent care centre.	1	2%

All EDs (n=43)

Commentary

- The two most common systems were Cerner and Symphony variants
- IT systems appear to have an impact on overall compliance. This may be related to the integration of prompts when discharging high-risk patients or flags that help identify them in real time. The difference may possibly be partly down to how this data is captured

Consultant Sign-off data collection



All EDs (n=43)

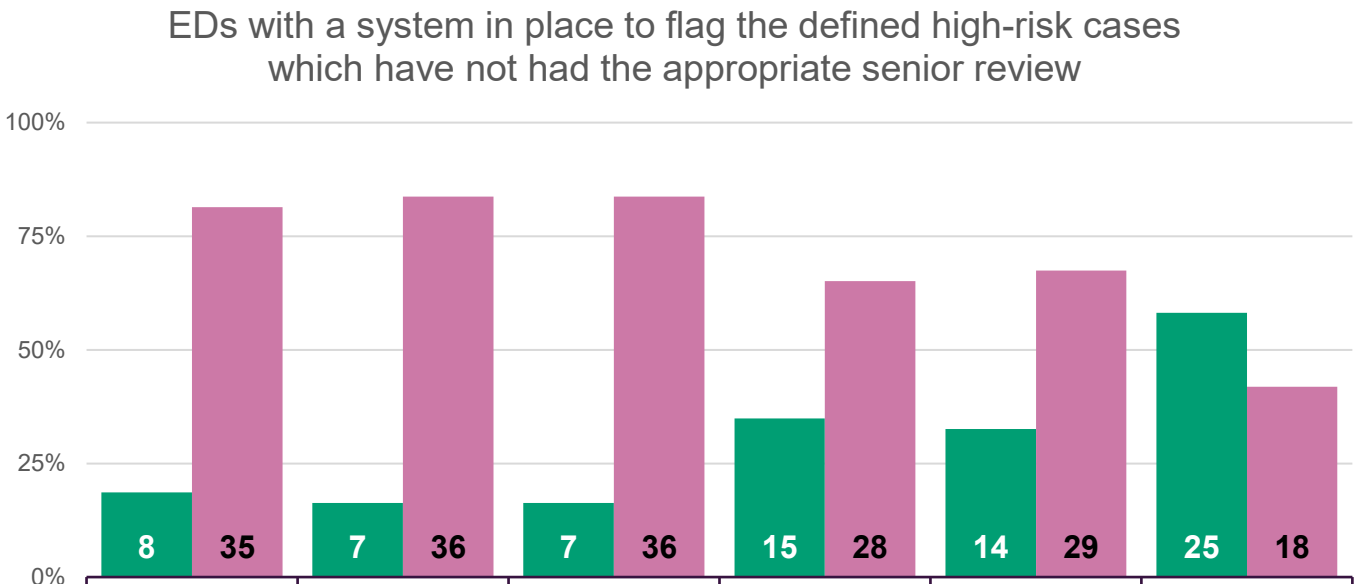
Commentary

- The data indicates that more than half of EDs staff (53%) do not find it easy to collect consultant sign-off data, with 44% of EDs indicating that their data collection is problematic and 9% indicating that data collection is difficult
- While 47% of EDs staff reported consultant sign-off data collection being easy, only 5% have been able to fully automate their system – this is similar to 2016 at 4%

Recommendation

- Consider changes to the IT infrastructure to capture this data in a standardised manner and to prompt a CSO when a junior staff member is discharging a patient with a high-risk presentation code

ED system for high-risk cases



	Chest pain 30 years and over	Abdominal pain 70 years and over	Febrile infant	Unscheduled return (child)	Unscheduled return (adult)	None of the high-risk cases specified
Yes	19%	16%	16%	35%	33%	58%
No	81%	84%	84%	65%	67%	42%

All EDs (n=43)

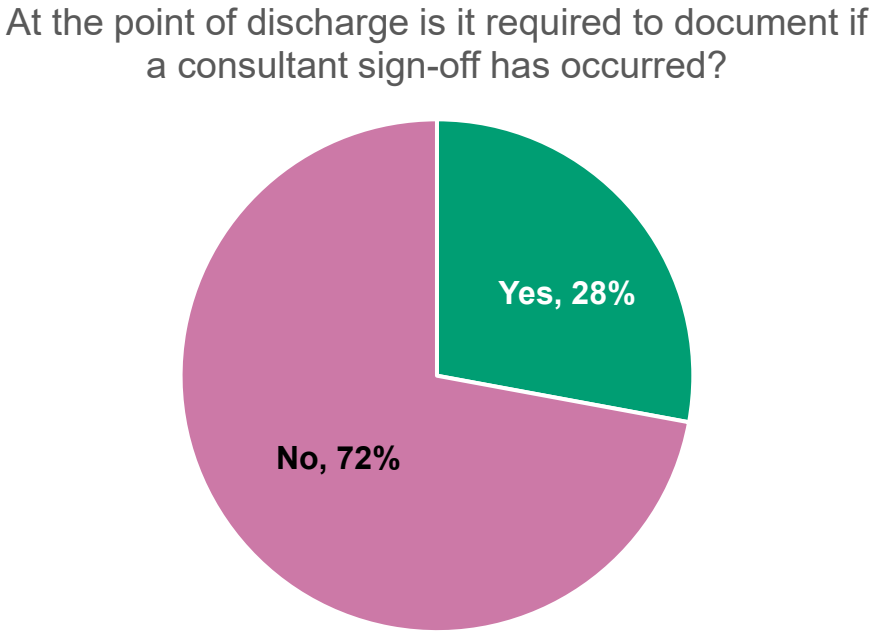
Commentary

- Out of the 43 EDs, only 5 EDs have a system in place to flag all the defined high-risk cases specified.
- The cases that are at the highest risk of not being flagged are Abdominal pain (70 years old and over) and febrile infant. Both having only 16% of EDs with systems in place to flag these cases when the patient did not have the appropriate senior review

Recommendation

- EDs should move towards a system that prompts juniors to consider the needs for a CSO when discharging those coded with high-risk symptom flags or a 72-hour return

Consultant Sign-off documentation



All EDs (n=43)

Commentary

- Results show that nearly three-quarters of EDs do not require documentation that a consultant sign-off occurred at the point of discharge. Out of the 31 EDs that do not require documentation, 58% also reported data collection about consultant sign-off being either difficult or problematic. When compared to the 12 EDs that require documentation, only 33% reported data collection about consultant sign-off being either difficult or problematic

Discussion

Summary

This QIP has accumulated **12702** adult and **5451** children's cases from **126** EDs nationwide. This is a drop from 180 departments in 2016/17.

Of the main standards addressed nationally, the results show:

1. 35% of high-risk adults had a CSO, increasing to 50.8% of patients when including ST4+ reviews overnight.
    a. 78.5% of Tier 5 staff document their own senior reviews of adult patients
2. 26.1% of high-risk children had a consultant sign-off, increasing to 39.6% when including ST4+ overnight and 53% including ST4+ in the day.
    a. 75.1% of Tier 5 staff document their own senior reviews of child patients

Overall half of patients in both adult and children high-risk groups are not having the senior input that is desired to increase the safety of their discharge.

Individual departments will have varying results that they will need to analyse and engage with, to design and evaluate interventions. Some areas may well be high performing and therefore, it may be prudent to expend resources on other areas of care. For departments performing below the national picture, priority should be given to raise standards.

The need to include nurses, trainees, medical directors, clinical leads, IT system managers and other colleagues in improvement work, is more important than ever to ensure the ED is always a safe place for patients.

In addition to the clinical team, RCEM recommend sharing the report with the quality improvement department, departmental governance meeting, ED Clinical Lead, Head of Nursing and Medical Director as a minimum. Without having visibility of the data and recommendations, we cannot expect to see improvements in practice.

Engaging staff in the process of action planning and PDSA cycles, will lead to more effective implementation and sustainable improvements. The RCEM portal will remain live so that departments can continue to track their performance and evaluate the effects of further PDSA cycles.

For further QI advice and resources, please visit the RCEM Quality Improvement webpage

Limitations

As with every national QIP and the nature of having hundreds of data collectors gathering information from different IT systems, there is always a risk of interpreting the data collection tool differently. We attempt to mitigate this with our information packs.

In efforts to understand why performance may vary we designed the organisation audit to potentially provide insights into the drivers of quality such as staffing levels, skill mix, IT system providers and policy requirements (or local expectations) to document a senior review. Only 43 departments engaged with this aspect of the QIP.

Going forward the RCEM team will provide encouragement to follow up this aspect of the project, to enhance our power to analysis into the whys possible drivers of quality at a national level.

Data excluded post-validation

The data used to create the charts in this report contains only the cases that have been submitted within the data entry period. The records submitted were also validated to ensure poor quality data was excluded to prevent distortion of the means and charts. Some of the cases submitted during the data collection period have been removed due to incomplete information and data entry errors that were not identified by the data entry system.

Conclusion

There was not an improvement in the rate of Consultant Sign-off at an aggregated national level for any patient group during the period of study. Variation in achieving this standard is extremely variable with an IQR spanning <38% to >61% for adults. Whilst each ED has its own unique set of challenges and there is not a like-for-like resource distribution to deliver care the senior review CSO gap needs to be shrank.

Despite the gap in meeting standards, we have seen improvements compared to 2016. There has been a significant increase in the number of CSOs from around 1 in 7 (14%) patients to 1 in 3 (35%). The number of patients receiving at least a Tier 4 review has increased modestly from 43% to 50.7%.

In 2016 it was stated "The current problems encountered by EDs and the state of consultant staffing and recruitment, are likely significant impediments to higher performance". It still remains that there are not enough consultants to provide the

necessary cover to meet this standard more comprehensively across adult and children's services. Whilst consultant numbers have increased, so has demand on the service. Half of all discharged high-risk patients will not have a more experienced clinician's input (at least documented) at any point during their ED visit.

Key recommendations

Recommendations

Patient level

1. Aim to have senior input for all patients classed as high-risk if they are to be discharged. Improve identification of this group.
2. Make concerted efforts to close the gap between higher risk children presentation, particular in mixed EDs where disparities are present.

Organisational and Staff level

1. Continue to engage with QI methods and evaluate interventions to drive improvement against these standards.
2. Improve education around this requirement and local understanding of why it is important.
3. Ensure all staff groups, but particularly those unfamiliar with the emergency department are informed to seek consultant input for all higher risk presentations.
4. Increase consultant numbers to meet the case volume and acuity as per RCEM guidance.
5. It is best practice to document one's own care and advice provision, or check versions documented on one's behalf. However, this is not always practical or efficient. For safety critical advice provided to Tier 3 or below clinicians, those providing the advice should also document it to avoid misinterpretation. Otherwise, it remains at the discretion of the person providing the advice to delegate documenting as is currently practiced.

2016/17 CSO recommendations still in force

1. Departments appear to have more reliable methods for identifying patients making unscheduled returns. This remains the case. RCEM encourages EDs to examine whether processes for this group can translate to a higher review rate for other high-risk groups.

2. Consider updates to IT systems to improve documentation of senior input and explore prompts for junior staff to seek consultant sign-off for higher risk presentations if discharging. There still remains a gap between identifying 72-hour returners and those with chest pain, abdominal pain or infants with fever.

National level

1. RCEM to continue to lobby for growth in consultant numbers to meet the growing complexity of Emergency Care.
2. Health Education England and the Department of Health need to improve workforce planning to meet the growing need for fully trained Emergency Clinicians to deliver a service that is heavily reliant on junior staff.
3. Multi-agency approach to improve the retention of trainees to increase the numbers reaching consultancy.

RCEM's national programme

1. Increasing the length of QIP programme development and quality assurance prior to platform build.
2. Improve piloting methodology and platform testing prior to the launch of the programme.
3. Developing closer ties with our platform provider to improve IT system provision and functionality.
4. Increase focus on developing data visualisations that provide real insight.
5. Early review of data after launch and updates to the survey and platform.
6. Build into the platform stronger protections against the entry of data that is likely inaccurate e.g., due to typos or misunderstanding of the question.
7. Develop a national network to promote best practice sharing during the QIP cycle.
8. Integrate our programme with training requirements to facilitate meeting portfolio requirements and gaining QI competency

Further Information

Thank you for taking part in this QIP. We hope that you find the process of participating and results helpful.

If you have any queries about the report, please e-mail quality@rcem.ac.uk

Details of the RCEM QIP Programme can be found under the Current QIPs section of the RCEM website

Feedback

We would like to know your views about this report and participating in this QIP. Please email lucas.dalla-vecchia@rcem.ac.uk

We will use your comments to help us improve our future topics and reports.

Useful Resources

- Site-specific report – available to download from the QIP portal (registered users only)
- Online dashboard charts – available from the QIP portal (registered users only). The dashboard remains open after the end of the national QIP project so you can keep monitoring local performance and doing PDSA cycles
- Local data file – available from the QIP portal (registered users only)
- Guidance on understanding SPC charts
- RCEM Quality Improvement Guide – guidance on PDSA cycles and other quality improvement methods

Report authors and contributors

This report is produced by the Quality Assurance and Improvement Committee subgroup of the Quality in Emergency Care Committee, for the Royal College of Emergency Medicine.

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- Net Solving – Technical partner providing the data entry portal and dashboard

Appendices

Appendix 1: Glossary of terms and abbreviations

Term	Definition
Consultant Sign-off (CSO)	This includes both consultants and associate specialists. For the purpose of this QIP ST4+ overnight* reviews are consider to conform to standard.
Discharge	Discharge from the ED. Do not include patients discharged by another specialty from the ED.
*Nights	Nights is defined as 2200-0800 on every day of the week. During this period, ST4+ reviews would be considered to meet the CSO standard as agreed by the Quality in Emergency Care committee of RCEM.
SAS	The term 'SAS doctor' includes specialty doctors and specialist grade doctors with at least four years of postgraduate training, two of which are in a relevant specialty. The NHS website provides a useful definition of this.
Fever	Temperature of >38˚C at triage/ED arrival, not prior to arrival or subsequently.
Unscheduled return	Do not include patients who leave before being seen and then re-attend within 72 hours.

Appendix 2: CSO data collection tool

Q1a	What is the casemix of your ED?	Adults only			
		Children only			
		Both adults and children			
Q1b	How many adults attend the main Emergency Department per year? *(To nearest thousand per annum)*	*Leave blank if unknown*			
Q1c	How many children attend the main Emergency Department per year? *(To nearest thousand per annum)*	*Leave blank if unknown*			
Q2 On a **weekday**, assuming all shifts are filled, how many staff would **usually** be on each **clinical*** shift? *Do not include managerial teaching research SPA or EDT activity. **Please ensure no shift is double counted. If a shift traverses two shift categories select the one with the majority of hours. If this is equal, select the one that is the later shift category. *Mirrored with RCEM curriculum entrustment levels*		Approximate shift time**	0800 – 16:00 (Day shift)	16:00-00:00 (Late/evening)	00:00 – 08:00 (Nights)
		Tier 5/ Entrustment level 4 (Consultant)	*Leave blank if unknown*	*Leave blank if unknown*	*Leave blank if unknown*
		Tier 5/ Entrustment level 4 (Associate Specialist)	*Leave blank if unknown*	*Leave blank if unknown*	*Leave blank if unknown*
		Tier 4/ Entrustment level 3 (ST4+, senior clinical fellows, SAS)	*Leave blank if unknown*	*Leave blank if unknown*	*Leave blank if unknown*
		Tier 3/ Entrustment level 2b (CT3, clinical fellows, junior SAS, ACPs)	*Leave blank if unknown*	*Leave blank if unknown*	*Leave blank if unknown*
		Tier 2/ Entrustment level 2a (F2, CT1-2, GP trainees)	*Leave blank if unknown*	*Leave blank if unknown*	*Leave blank if unknown*
		Tier 1/ Entrustment level 1 (FY1, trainee practitioners)	*Leave blank if unknown*	*Leave blank if unknown*	*Leave blank if unknown*
		Qualified GPs	*Leave blank if unknown*	*Leave blank if unknown*	*Leave blank if unknown*

Q3 – As above but for **weekend** numbers

	*Taken from Medical Practitioner staffing in Emergency Departments ** Take from the RCEM Scotland's Emergency Medicine Workforce Census

Q5	How easy is it to collect data about Consultant Sign-off in your ED?	Fully automated
		Straightforward
		Problematic
		Difficult
Q6	Does your department have a system in place to flag the defined high-risk cases which have not had the appropriate senior review?	Chest pain 30 years and over
		Abdominal pain 70 years and over
		Febrile infant
		Unscheduled return (child)
		Unscheduled return (adult)
		None of the above
Q7	At the point of discharge is it required to document if a Consultant Sign-off has occurred?	Yes
		No
Q8	Which primary EPR/System does your hospital use?	Please state provider: (free text) N/A

Q1	How easy is it to source data about a patient's characteristics within your EPR?	Characteristics	Age	Sex	Ethnicity
		Straightforward (intuitive)			
		Problematic (not intuitive)			
		Difficult (you required additional assistance to locate the data)			
		Not recorded			
		Characteristics	Age	Sex	Ethnicity

Q2a – (if response to Q1a in the organisational data section is “adults only” or “both adults and children”)	Please select the 10 patients currently in department* with the longest waits in **Majors** and enter age, gender and ethnicity. *if there is less than 10 – use the most recently discharged in time order till 10 are entered	Majors' patient one			
		Majors' patient two			
		Majors' patient three			
		Majors' patient four			
		Majors' patients five			
		Majors' patient six			
		Majors' patient seven			
		Majors' patient eight			
		Majors' patient nine			
		Majors' patients ten			
Q2b (if response to Q1a in the organisational data section is “adults only” or “both adults and children”)	Please select the 10 patients currently in department* with the longest waits in **Minors** and enter age, gender and ethnicity. *if there is less than 10 – use the most recently discharged in time order till 10 are entered	Characteristics	Age	Sex	Ethnicity
		Minors’ patient one			
		Minors’ patient two			
		Minors’ patient three			
		Minors’ patient four			
		Minors’ patient five			
		Minors’ patient six			
		Minors’ patient seven			
		Minors’ patient eight			
		Minors’ patient nine			
		Minors’ patients ten			

Q2c (if response to Q1a in the organisational data section is “children only” or “both adults and children”)	Please select the 10 patients currently in department* with the longest waits in **Childrens/PED** (Or under 16 if not segregated) and enter age, gender and ethnicity. *if there is less than 10 – use the most recently discharged in time order till 10 are entered	Characteristics	Age	Sex	Ethnicity
		Childrens’ patient one			
		Childrens’ patient two			
		Childrens’ patient three			
		Childrens’ patient four			
		Childrens’ patients five			

		Childrens' patient six			
		Childrens' patient seven			
		Childrens' patient eight			
		Childrens' patient nine			
		Childrens' patient ten			
Q3	Once you are on your EPR and have a patient record loaded – How many steps (clicks) thereafter are required to reach information about a patient's ethnicity?	Number of steps			

Clinical

Q1	Patient reference (anonymised)	
Q2	Ethnic category	• White British • White Irish • Any other White background • White and Black Caribbean • White and Black African • White and Asian • Any other mixed background • Indian • Pakistani • Bangladeshi • Any other Asian background • Caribbean • African • Any other Black background • Chinese • Any other ethnic group • Not recorded • I do not know where to find this info
Q3a	Date of arrival (dd/mm/yyyy)	dd/mm/yyyy
Q3b	Time of arrival (Use 24-hour clock e.g., 11.23pm = 23:23)	HH:MM
Q4a	Date of discharge (dd/mm/yyyy)	dd/mm/yyyy
Q4b	Time of discharge (Use 24-hour clock e.g., 11.23pm = 23:23)	HH:MM
Q5	Patient group Only select one – If the person is an unscheduled return, with chest or abdominal pain in adults, or a fever in children under 1 – Select unscheduled return.	Adult Unscheduled return to the ED with the same condition within 72 hours of discharge (age 18 years and over) Adult Abdominal pain in patients 70 years and over Adult Atraumatic chest pain in patients 30 years and over

		Children Fever in children under 1 year of age
		Children Unscheduled return to the ED with the same condition within 72 hours of discharge (age under 18 years old)
Q5b	Patient outcome	Discharged from the ED – by ED Clinician
		Patient died
		Not recorded
Q6	Tier of the ED clinician who first seen the patient and completed an initial comprehensive review (the named clinician – "seen by").	Tier 5/ Entrustment level 4 (Consultant)
		Tier 5/ Entrustment level 4 (Associate Specialist)
		Tier 4/ Entrustment level 3 (ST4+, senior clinical fellows, SAS)
		Tier 3/Entrustment level 2b (CT3, clinical fellows, junior SAS, ACPs)
		Tier 2/ Entrustment level 2a (F2, CT1-2, GP trainees)
		Tier 1/ Entrustment level 1 (FY1, trainee practitioners)
		Qualified GPs
Q7a	Tier of most senior ED clinician to actually see and assess the patient in person.	Tier 5/ Entrustment level 4 (Consultant)
		Tier 5/ Entrustment level 4 (Associate Specialist)
		Tier 4/ Entrustment level 3 (ST4+, senior clinical fellows, SAS)
		Tier 3/Entrustment level 2b (CT3, clinical fellows, junior SAS, ACPs)
		Tier 2/ Entrustment level 2a (F2, CT1-2, GP trainees)
		Tier 1/ Entrustment level 1 (FY1, trainee practitioners)
		Qualified GPs
Q7b **If 7a = Tier 5 or Tier 4**	Did the most senior ED clinician who actually seen the patient ALSO document their own review and outcomes?	Yes – They have made their own documentation No – It was documented within a more junior doctors notes

Q8a	Tier of most senior ED clinician with whom the patient was discussed during their visit to the ED.	Tier 5/ Entrustment level 4 (Consultant)
		Tier 5/ Entrustment level 4 (Associate Specialist)
		Tier 4/ Entrustment level 3 (ST4+, senior clinical fellows, SAS)
		Tier 3/Entrustment level 2b (CT3, clinical fellows, junior SAS, ACPs)
		Tier 2/ Entrustment level 2a (F2, CT1-2, GP trainees)

		Tier 1/ Entrustment level 1 (FY1, trainee practitioners)
		Qualified GPs
Q8b	Was this review a retrospective case note review?	Yes
		No
Q8c **If Q8b = Yes**	Did it change the outcome?	Yes
		No
Q8d **If 8a = Tier 5 or Tier 4**	Did the most senior ED clinician, this patient was discussed with ALSO document their own discussion and outcomes?	Yes – They have made their own documentation
		No – It was documented within the juniors notes
Q8e	Was this review done overnight between 22:00 and 08:00hrs	Yes

Appendix 3: EDI Monitoring

Equality, Diversity and Inclusion statement: We have integrated ethnicity data monitoring into our platform to form the start of a data set containing thousands of cases which can then be analysed to detect differences in care quality along sex, race and age lines. We have representation from the EDI committee at our programme development meetings and attend theirs to update this body of work.

The last QI cycles reported a lot of the data as missing. We want to determine why. Without accurate data establishing care disparities is more challenging, hampering efforts to target resources and find solutions in priority areas. We have nested these questions to establish the interhospital variability of ethnicity data recording and better understand the barriers to this data set. This exercise will take 15-20 minutes but provides a significant insight into this issue. Please encourage your team locally to input this data and show them how to find it to improve the collection process.

This data is only going to be used nationally however we do encourage local systems to better capture this data so insights and research can be undertaken in this important space.

Standard 1

Population	Sample Size	Conforming to standard (% of specific population)	Not conforming to standard (% of specific population)
African	155	49.03%	50.97%
Any other Asian background	297	52.86%	47.14%
Any other black background	97	48.45%	51.55%
Any other ethnic group	388	44.07%	55.93%
Any other mixed background	84	65.48%	34.52%
Any other white background	572	47.38%	52.62%
Bangladeshi	100	45.00%	55.00%
Caribbean	91	56.04%	43.96%
Chinese	28	57.14%	42.86%
I do not know where to find this info	660	48.18%	51.82%
Indian	258	52.33%	47.67%
Not recorded	2500	51.00%	49.00%
Pakistani	328	49.09%	50.91%
White and Asian	37	48.65%	51.35%
White and black African	43	32.56%	67.44%
White and black Caribbean	44	43.18%	56.82%
White British	6864	51.75%	48.25%
White Irish	147	56.46%	43.54%

Standard 2

Descriptor (Fundamental)

Population	Sample Size	Conforming to standard (% of specific population)	Not conforming to standard (% of specific population)
African	64	35.94%	64.06%
Any other Asian background	185	44.86%	55.14%
Any other black background	58	34.48%	65.52%
Any other ethnic group	284	39.44%	60.56%
Any other mixed background	120	47.50%	52.50%
Any other white background	571	35.20%	64.80%
Bangladeshi	58	41.38%	58.62%
Caribbean	23	21.74%	78.26%
Chinese	13	23.08%	76.92%
I do not know where to find this info	273	45.42%	54.58%
Indian	102	39.22%	60.78%
Not recorded	735	42.99%	57.01%
Pakistani	247	44.94%	55.06%
White and Asian	47	29.79%	70.21%
White and black African	31	38.71%	61.29%
White and black Caribbean	51	50.98%	49.02%
White British	2563	37.65%	62.35%
White Irish	33	51.52%	48.48%

Appendix 4: Participating Emergency Department

England

Alexandra Hospital
Arrowe Park Hospital
Barnet Hospital
Barnsley Hospital
Basildon University Hospital
Basingstoke and North Hampshire Hospital
Bassetlaw Hospital
Bedford Hospital
Birmingham City Hospital
Blackpool Victoria Hospital
Bradford Royal Infirmary
Broomfield Hospital
Charing Cross Hospital
Chelsea and Westminster Hospital
Cheltenham General Hospital
Chorley and South Ribble Hospital
Colchester Hospital
Conquest Hospital
Countess of Chester Hospital
Croydon University Hospital
Cumberland Infirmary
Darent Valley Hospital
Dewsbury and District Hospital
Diana, Princess of Wales Hospital
Doncaster Royal Infirmary
Ealing Hospital
East Surrey Hospital
Eastbourne District General Hospital
Fairfield General Hospital
Furness General Hospital
George Eliot hospital
Gloucestershire Royal Hospital
Hillingdon Hospital
Homerton University Hospital
Huddersfield Royal Infirmary
Ipswich Hospital
James Cook University Hospital
James Paget Hospital
Kettering General Hospital
King George Hospital
King's College Hospital (Denmark Hill)
Kingston Hospital
Leeds General Infirmary
Leighton Hospital
Lincoln County Hospital
Luton & Dunstable University Hospital
Macclesfield District General Hospital
Manchester Royal Infirmary
Milton Keynes University Hospital
Musgrove Park Hospital
Newham University Hospital
Norfolk and Norwich University Hospital
Northampton General Hospital
Northern General Hospital
Northwick Park Hospital
Peterborough City Hospital
Pilgrim Hospital
Pinderfields Hospital
Poole General Hospital
Princess Alexandra Hospital
Princess Royal University Hospital (PRUH)
Queen Alexandra Hospital
Queen Elizabeth Hospital (Woolwich)
Queen's Hospital (RBH)
Rotherham District General Hospital
Royal Berkshire Hospital
Royal Blackburn Teaching Hospital
Royal Bolton Hospital
Royal Bournemouth Hospital
Royal Cornwall Hospital
Royal Derby Hospital
Royal Devon and Exeter (Wonford) Hospital
Royal Liverpool Hospital
Royal Preston Hospital
Royal Shrewsbury Hospital
Royal Stoke University Hospital
Royal Surrey County Hospital
Royal United Hospital
Russells Hall Hospital
Salford Royal
Salisbury District Hospital
Sandwell General Hospital
Scarborough Hospital
Scunthorpe General Hospital
South Tyneside District Hospital
Southampton General Hospital
Southport General Infirmary
St George's Hospital (Tooting)
St James's University Hospital
St Mary's Hospital (Imperial College Healthcare NHST)
St Thomas' Hospital
Stepping Hill Hospital
Stoke Mandeville Hospital
Sunderland Royal Hospital
Tameside General Hospital
The County Hospital
The County Hospital (Wye valley NHS Trust)
The Maidstone Hospital
The Princess Royal Hospital (Shrewsbury and Telford NHST)
The Royal Free Hospital
The Royal Lancaster Infirmary
The Royal London Hospital
The Royal Oldham Hospital
The Tunbridge Wells Hospital
Torbay Hospital
University Hospital Aintree
University Hospital Lewisham
University Hospital of North Tees
Walsall Manor Hospital
Warwick Hospital
West Cumberland Hospital
West Middlesex University Hospital
West Suffolk Hospital
Wexham Park Hospital
Whiston Hospital
Whittington Hospital
Worcestershire Royal Hospital
Worthing Hospital
Wythenshawe Hospital
Yeovil District Hospital
York Hospital

Northern Ireland

Daisy Hill Hospital

Wales

Morriston Hospital
Princess of Wales Hospital
Royal Glamorgan Hospital (The)
Ysbyty Gwynedd

Appendix 5: Privacy policy, terms of website use and website acceptable use policy

Privacy policy

The Royal College of Emergency Medicine (RCEM) recognises the importance of protecting personal information and we are committed to safeguarding members, non-members and staff (known as “The User” in this document) privacy both on-line and off-line. We have instituted policies and security measures intended to ensure that personal information is handled in a safe and responsible manner. This Privacy statement is also published on the RCEM web site so that you can agree to the kind of information that is collected, handled and with whom this data is shared with.

RCEM strive to collect, use and disclose personal information in a manner consistent with UK and European law and under the General Data Protection Regulation (GDPR). This Privacy Policy states the principles that RCEM follows and by accessing or using the RCEM site you agree to the terms of this policy.

For further information, click ***here***.

Terms of website use

For further information, click ***here***.

Website acceptable use policy

For further information, click ***here***.

Appendix 6: References

1. RCEM's Consultant Sign off Report (2016)
2. RCEM's Best Practice Guideline: Consultant Sign Off

Appendix 7: Template to submit your QI initiatives for publication on the RCEM website

If you would like to share details of your QI initiative or PDSA cycle with others, please complete this this form by scanning the QR code below or complete here.

Appendix 8: Pilot sites

A pilot of the QIP was carried out during March 2022. This tested the standards, questions, quality of data collectable, as well as the functioning of the online portal and reporting templates.

Several improvements were made to the final project based on feedback from the pilot sites.

RCEM were grateful to contacts from the following Trusts for helping with the development of the audit and integrated QIP:

Alder Hey Children's NHS Foundation Trust

Blackpool Teaching Hospitals NHS Foundation Trust

Noble's Hospital (Isle of Man)

The Princess Alexandra Hospital NHS Trust

Northern Care Alliance NHS Foundation Trust

Southport & Ormskirk Hospital NHS Trust

Appendix 9 - Understanding your SPC charts

See the RCEM QI guide for further QI details.

Statistical Process Control (SPC) charts are a key visualisation tool for QI work to measure the impacts of change initiatives. Our SPC charts plot your data every week so you can see whether you are improving, if the situation is deteriorating, whether your system is likely to be capable to meet the standard, and whether the process is reliable or variable.

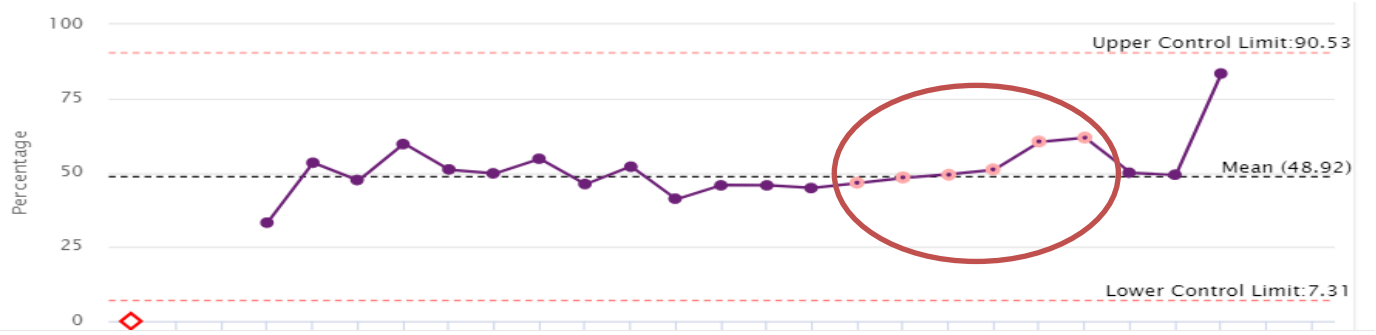
As well as seeing your actual data plotted each week you will see a black dotted average line, this is the **mean**. The SPC chart will point out if your data has a run of points above (or below) the mean by changing the dots to white. If your data is consistently improving (or deteriorating), the dots will turn red, so the trend is easy to spot. If a positive run or trend of data happens when you are trying a PDSA/change intervention, this is a good sign that the intervention is working.

As well as the dotted mean line, you will see two other lines that are known as the **upper and lower control limits**. The control limits are automatically determined by how variable the data is. 99% of all the data will fall between the upper and lower control limits, so if a data point is outside these lines, you should investigate why this has happened. This is known as special cause variation.

Interpreting your data

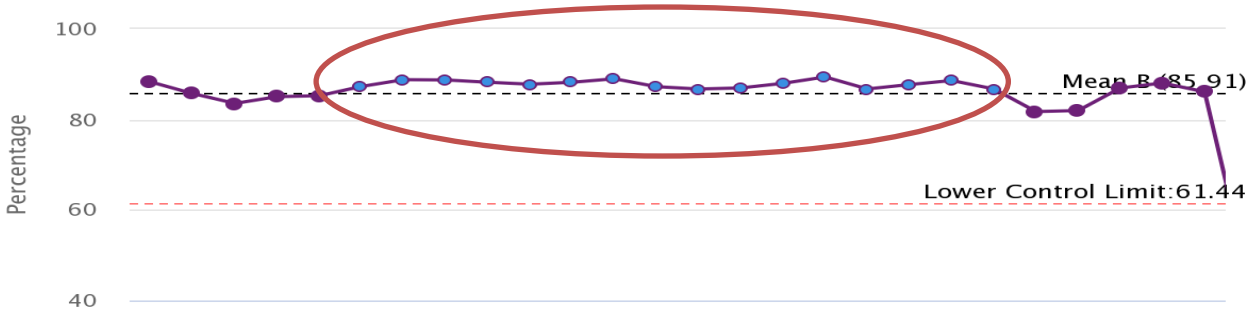
1. Performance is improving (or deteriorating)

A consistent run of data points going up or down with be highlighted with **red dots,** so they are easy to spot. A run of data going up is a good sign that your service is making improvements that are really working. If the data is going down this, may indicate that service is deteriorating for some reason – watch out for a lack of resources or deterioration because of a change somewhere else in the system.



2. Performance is consistently above (or below) the mean

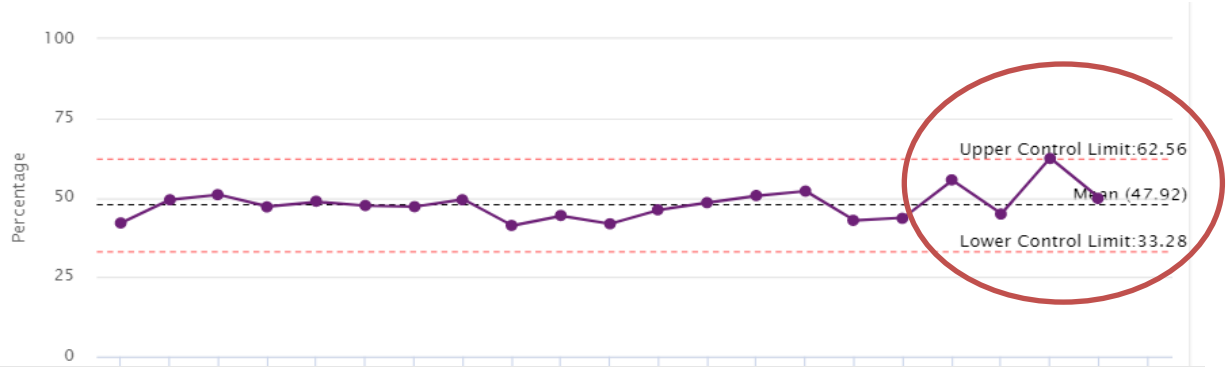
A consistent run of data that is above or below the mean will be highlighted with **blue dots** so they are easy to spot. If your data has been quite variable, this is a good sign that the process is becoming more reliable.



3. Is your system likely to be capable of meeting the standard?

The **control limits** show where you can assume 99% of your data will be. If you find that the standard is outside your control limits, it is very unlikely that your system is set up to allow you to meet the standard. If you do achieve the standard, this will be an unusual occurrence and very unlikely to be sustained. If this is the case, it is recommended that you look at how the process can be redesigned to allow you to meet the standard.

In the below example, the process is performing consistently at around 50%. The control limits show us that most of the time we would expect the process to be between 33% - 62%. If the standard for this process was 50%, then the process is well designed. If, however, the standard was 75% then the chart warns us that the system is not currently set up to allow the process to achieve the standard.



4. Something very unusual has happened!

The majority of your data should be inside the upper and lower control limits; these are automatically calculated by the system. If a single data point falls outside these limits, then something very unusual has happened. This will be flagged up with a **red diamond** so you can spot it.

In some cases, it may mean that the data has been entered incorrectly and should be checked for errors. It may also mean that something unexpected has had a huge impact on the service and should be investigated.