

RCEM
Royal College
of Emergency
Medicine

RCEM National Quality Improvement Programme

2021/22 Infection Prevention and Control

Year 2 Interim Report

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Contents

Foreword	3
Topic Team	4
Introduction	6
National Quality Improvement Programmes.....	6
Infection Prevention Control: Year 2 Interim Report.....	6
Executive Summary Interim Report 21/22	7
Overview	7
Key Findings.....	7
Standard 1 Screening on Arrival	7
Standard 2: Patients with an Identified Vulnerability isolated in a side room	7
Standard 3: Patient's identified as potentially infectious moved to an appropriate area.....	7
Discussion	7
Key Recommendations.....	8
Patient Journey	9
Summary Charts of Standards	10
Standard 1 - % of patients screened on arrival (all 3 specified conditions).....	10
Standard 1a - % of patients screened on arrival for Covid.....	11
Standard 1b - % patient screened on arrival for vulnerable conditions	12
Standard 1c - % of patients screened on arrival for other infectious diseases	13
Standard 2 - % patients with identified vulnerability isolated in a side room	14
Standard 3 (% of Patients identified as potentially infectious moved to an appropriate area	15
Organisational Audit results	16
Celebrating Excellence	17
Appendices	18
Appendix 1 – Number of participating centres/cases per nation.....	18
Appendix 2 – Summary of 20/21 results vs 21/22	19
Appendix 3 – Data returns from each centre.....	20
Appendix 4 – Standard 1 – no screening undertaken for any of the three categories.....	21
Appendix 5 – Standard 2 – Average time taken to isolate patient with identified vulnerability in a side room	22
Appendix 6 – Standard 3 – Average time to move potential or confirmed infectious patient to an appropriate area.	23
Appendix 7 - Understanding your SPC charts.....	24
Appendix 9 – Understanding your IQR visualisation	26
Appendix 10: Template to submit your QI initiatives for sharing at QIP study days, conferences and within the QI leads network.....	27
Appendix 11 – Useful resources	28
Appendix 12 – Stakeholder.....	29



Foreword

Dr Adrian Boyle, RCEM President

I am pleased to report on the performance of infection prevention and control measures in the Emergency Department from October 2021 to October 2022.

This Quality Improvement Project (QIP) builds on previous Infection Prevention and Control QIP done in 2020/21 by the College and allows us to see that performance has remained stable with no significant improvement from 20/21 nor across 21/22. The results also show that the average time to movement into a side room has significantly increased from 18 minutes in 20/21 to 61 minutes in 21/22.

The standards were focused on both organisational policies and clinical care with a focus on infection prevention and control measures aimed at improving staff experience and outcomes through preventing occupationally acquired infections.

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

Topic Team



Dr Fiona Burton

Fiona is the IPC topic team lead and co-chair of the RCEM QA&I committee. Fiona is a Scottish Quality & Safety fellow graduating with Cohort XI. She has a passion for QI and improving care for her patients.



Dr Catherine A Ward

Dual EM/ ICM trainee in Glasgow, regional TERN Rep and QA&I beginner



Sarah Chadwick

MSc in Medical and Molecular Microbiology from the University of Manchester. Antimicrobial Resistance Programme Manager at NHS West Yorkshire Integrated Care Board. Sarah trained as a healthcare scientist and has worked in the NHS over 25 years, with a background in both Medical Microbiology and Clinical effectiveness and audit. She has particular interest in clinical diagnostics and infection prevention and control, and a passion for Quality Improvement.



John Stokes

John Stokes – Member, RCEM Lay Advisory Group

John is an organisation development consultant with international experience in public and private sectors – specialising in issues of leadership, change, and performance management – most recently with the World Bank. His role as a lay representative is to champion the cause of the patient.

He has been working with the college for the past 6 years on various committees and SIGs, including Informatics, Same Day Emergency Care, Working Practices, and Toxicology.

John has a degree in economics from Cambridge University.



Principal Information Analyst, Public Health Scotland and Data Analyst for RCEM QA&I Team.

Alex has worked in the NHS since 2005 starting out as an NHS Graduate Management Trainee. He has worked within Information Management for over 10 years and has an MSc in Healthcare Leadership and Management and a PGD in Health Informatics. He currently develops national benchmarking dashboards within the Discovery Team of Public Health Scotland to support service and quality improvement across Scotland's territorial Health Boards.

Alex Royle



Consultant in Emergency Medicine

At University Hospital Dorset

QI Fellowship Wessex

Starting my RCEM QI journey with this great team

Dr Vanessa Bell

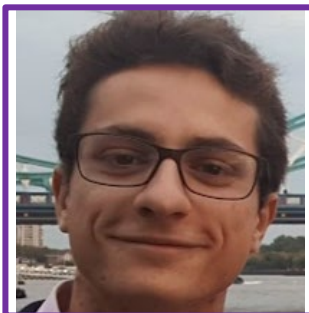


Consultant ACP in Paediatric Emergency Care at Salford Royal.

Member of the QA+I committee and the RCEM ACP Credentialing committee.

Doctoral researcher at The University of Salford.

Dr Katie Hemmings-Trigg



Lucas Dalla Vecchia, RCEM Senior Quality Officer

Lucas has been working at the RCEM for over 3 years and is the current administrator for the QA&I Committee.

Introduction

National Quality Improvement Programmes

At the RCEM, we have moved from an annual audit programme to a national Quality Improvement Programme (QIP). Life cycles of our QIPs will now be three years with the committee having spent up to a year in advance of the launch of each QIP designing the programme and engaging with our members.

Each Emergency Department that takes part in each QIP is provided with access to an online reporting portal that allows data collection/recording and monitoring of performance against agreed standards over time. Functionality is included that allows PDSA cycles to be highlighted and that identifies changes in performance. Real time benchmarking of performance against peers is also included.

In addition to this RCEM will provides a range of online Quality Improvement resources and to further support sites running QIPs it is planned to develop regular online 'Zoom' project surgeries where anyone involved can join in, ask questions, share stories, improvement experiences and suggestions. Details will be circulated centrally by RCEM communications team.

It is intended that after year 1 of a QIP RCEM will produce a Baseline Report showing performance against the identified standards. An Interim Report will be generated following year 2 of the QIP with a final report produced at the end of Year 3.

Infection Prevention Control: Year 2 Interim Report

The majority of the sites involved in the year 1 audit continued into the year 2 cycle and this is our first interim report for a national QIP

This Year 2 interim report has been generated to provide a national picture across the agreed IPC Standards for 2021/22. To review how performance has changed over the last two years and to allow centres to benchmark their performance against this national picture and to generate discussion within teams.

To this end in addition to presenting our normal National SPC charts for each standard we have developed a new Inter-Quartile Range (IQR) visualisation to show the range of performances for the individual sites involved in this QIP. These IQR visualisations provide a benchmarked view of how all sites compare to each other across the full time-period.

It is hoped these new views will help generate discussion within the individual site QIP Team as it means that they will be able to benchmark their performance against all other sites.

At this point we don't expect to see significant improvements and we want to focus on sharing good practice. We have plans on how we can achieve this and using the results from the interim report will help. We will contact centres in both the bottom and top inter-quartile ranges to learn more about their processes, how they've achieved their outcomes, encourage them to share their patient stories/learning and support as we can.

Our national QIP programme is very new and will continue to develop. We hope you find this report useful and please feel free to contact us on quality@rcem.ac.uk with any suggestions or questions.

Executive Summary Interim Report 21/22

Overview

RCEM would like to thank all 129 Emergency Departments (ED) that participated in Year 2 of this Quality Improvement Project (QIP).

Infection prevention and control (IPC) has always been a key element of high quality and safe care. The topic became even more relevant to our healthcare service because of the COVID-19 pandemic. For this reason, RCEM was pleased to introduce our first national QIP on infection prevention and control to support EDs in maintaining and improving high standards of patient care and organisational effectiveness.

The standards are focused on both organisational policies and clinical care with a focus on infection prevention and control measures aimed at improving staff experience and outcomes through preventing occupationally acquired infections.

These are exceptional times in Emergency Departments across the four nations and the fact that any Quality Improvement is being conducted is remarkable as staff struggle to get through the day.

Key Findings

The performance summary charts in the next section are a summary of the national weekly performance against the 3 main standards between 4th October 2021 – 3rd October 2022. In addition to this we have developed a new Inter-Quartile Range (IQR) visualisation for each of the standards to show the range of performance for the individual sites involved in this QIP.

Standard 1 Screening on Arrival

- The overall % of patients screened for either COVID, Other Infectious Diseases or Vulnerable conditions in 21/22 was similar to 2020/21
- Screening for all 3 conditions was 25.1% which is a marginal increase from 24.1% in 2020/21. Screening for the individual conditions was as follows:
 - COVID-19 symptoms continued to have the highest national mean with 64.8% of patients being screened on arrival
 - 37.8% of patients were recorded as being screened on arrival for Other Infectious Diseases

- 42.5% of patients were screened on arrival for vulnerable conditions

Standard 2: Patients with an Identified Vulnerability isolated in a side room

- 23.6% of patients with an identified vulnerability were recorded as being isolated in a side room. In 2020/21 this was 37.1%
- The average time taken to isolate these patients was 61 minutes, although it should be noted that over 70% of these patients with an isolation time were moved within 30 minutes of their arrival time. In 2020/21 the average time to isolation was 18 minutes.

Standard 3: Patient's identified as potentially infectious moved to an appropriate area

- 79.8% of patients potentially or confirmed as infectious were moved to an appropriate area. In 2020/21 this was 85.6%
- On average, patients were moved to an appropriate area within 83 minutes from the time of arrival. It should be noted that 65% of patients with a recorded movement time were moved within 30 minutes of their arrival time. In 2020/21 the average time for patients to be moved to an appropriate area was 46 minutes.

Discussion

One of the most striking things about the results was that in comparison to the first cycle in 20/21 there was relatively little difference in performance in either direction.

At first this may not seem like something to celebrate but we must acknowledge that during these difficult times managing to maintain performance from the previous cycle is extremely challenging, it is something to be celebrated.

Staff are exhausted with high rates of burnout and moral injury. Flow through departments has almost come to a standstill with doctors essentially caring for inpatient wards, not an ED.

Inevitable delays in time to triage will be impacting upon the results in the report, especially with time to isolation in a side room. It's hugely concerning to think of the number of patients that will potentially be coming to harm as our systems are unable to screen early at triage and move patients to appropriate areas.

We must also remember that another aim of this QIP is to help prevent staff from acquiring infection

in their workplace. This along with the effects on our patients, could contribute to staff sickness absence and prolonged lengths of stay for our patients who have acquired secondary infections.

Processes have changed and this will impact upon results. Routine COVID screening stopped in the UK on the 31st August 2022. Departmental footprints have also changed. In our bid to create more side-rooms during the pandemic, we saw radical changes in configuration, often with expansion out-with our normal areas. We are now in the 'restorative' phase with regards to COVID and our departments have shrunk, and side-rooms have disappeared.

We have noticed a discrepancy in the quantity of data returned from centres. Some have been able to maintain recommended returns in a real time fashion but it's understandably a struggle for others. We want to know what support these departments are getting to allow them to maintain their data input. How can this be replicated in other areas where the burden is probably on the exhausted frontline workers. QI must be conducted by a team with support from the organisation, it is not a lone pursuit.

The new IQR visualisations show that some ED departments have been able to perform at a high level and that it has been more challenging for others, as we evolve from Audit into more Quality Improvement, we want to be able to share learning and good practice and we hope that you will engage with us to help us support you and each other on this journey. To this end we ask you to complete the QI initiative template in Appendix 10 or via QR code that will allow us to be able to share experiences and learning with each other within our resource areas and as part of our new Quality Improvement Project Surgeries.

Key Recommendations

- RCEM recommend sharing the report with the clinical audit and/or 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

- Current results indicate that screening processes can be improved
- RCEM encourages the clinical team and audit department to work together to review the effectiveness of PDSA cycles already completed, and design further cycles to improve performance which the data shows are required
- The data collected during this QIP indicates that a number of records did not conform to Standard 2 or 3 because the patient movement was not recorded. This indicates that improvement efforts should also consider recordkeeping as an area that requires improvement

We plan to share this report widely with stakeholders out with the immediate departments. As we embed this in our routine practice, we seek to get the support that EDs require to help them in their QI activities.

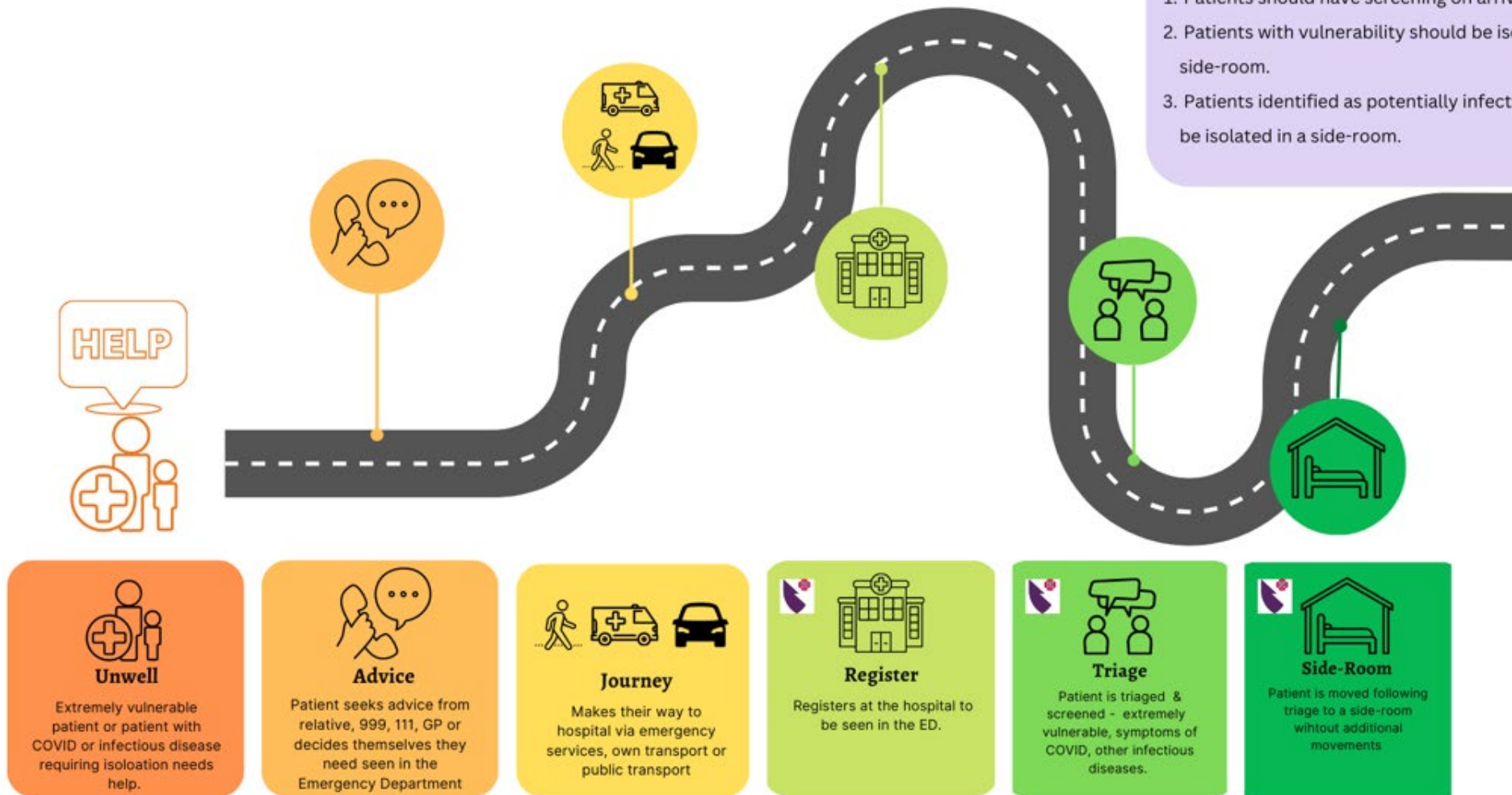
We want to thank everyone who has participated and congratulate you on what you've achieved. If everyone could share the best thing that they've done to help maintain their situation we would have a wealth of learning to share with each other. Please email us on quality@rcem.ac.uk, tweet #IPCEMQI, #EMQI or feedback via our QR code below;



Patient Journey

Standards

1. Patients should have screening on arrival.
2. Patients with vulnerability should be isolated in a side-room.
3. Patients identified as potentially infectious should be isolated in a side-room.



Summary Charts of Standards

4th October 2021 – 3rd October 2022 - Data extracted at 08:33 AM hours on 18/10/22

Standard 1 - % of patients screened on arrival (all 3 specified conditions)

National SPC Chart (weekly)	Site Performance (full time period)
<p>Infection Control V2 Clinical – Standard 1 – Patient Screening on arrival</p> <p>(For the time period: 5925 records conforming to standard; from a total of 24159 eligible.)</p> <p>Upper Control Limit: 42.96 Mean: 25.13 Lower Control Limit: 7.31</p> <p>Conforming to standard 1</p> <p>netsolving.com</p>	<p>Standard 1: % of Patients Screened on Arrival (by site) For all 3 specified conditions</p> <p>Lower Quartile Range: <0.7% Inter-Quartile Range: 0.7% - 35.5% Upper Quartile Range: >35.5%</p>
<p>National average performance was 25.13%.</p> <p>This is a marginal increase from 24.1% in 20/21</p> <p>Slight improvement in recorded performance since February 22</p> <p>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.</p>	<p>Variation between sites in overall performance.</p> <p>Median performance 9.3%.</p> <p>28 of 129 registered EDs did not record any patients being screened for all 3 conditions</p>

Standard 1a - % of patients screened on arrival for Covid

National SPC Chart (weekly)	Site Performance (full time period)
<p>Infection Control V2 Clinical – Standard 1a – Patient screening on arrival breakdown – Covid symptoms</p> <p>(For the time period: 15640 records conforming to standard; from a total of 24159 eligible.)</p> <p>Percentage</p> <p>Upper Control Limit: 76.6</p> <p>Mean (64.77)</p> <p>Lower Control Limit: 52.59</p> <p>● Covid symptoms</p> <p>netsolving.com</p>	<p>Standard 1a: % of Patients Screened on Arrival for COVID (by site)</p> <p>0.0% 5.0% 10.0% 15.0% 20.0% 25.0% 30.0% 35.0% 40.0% 45.0% 50.0% 55.0% 60.0% 65.0% 70.0% 75.0% 80.0% 85.0% 90.0% 95.0% 100.0%</p> <p>% of Patients recorded as Screened for COVID</p> <p>■ Lower Quartile Range: <37.9% ■ Inter-Quartile Range: 37.9% - 90.0% ■ Upper Quartile Range: >90%</p>
<p>National average performance was 64.8%.</p> <p>This is slightly less than 65.7% in 20/21</p> <p>Slight improvement in recorded performance since February 22.</p> <p>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.</p>	<p>Median performance was 69%.</p> <p>The upper quartile was 90% which means that 25% of the ED departments were screening at least 9 out of 10 patients for COVID</p>

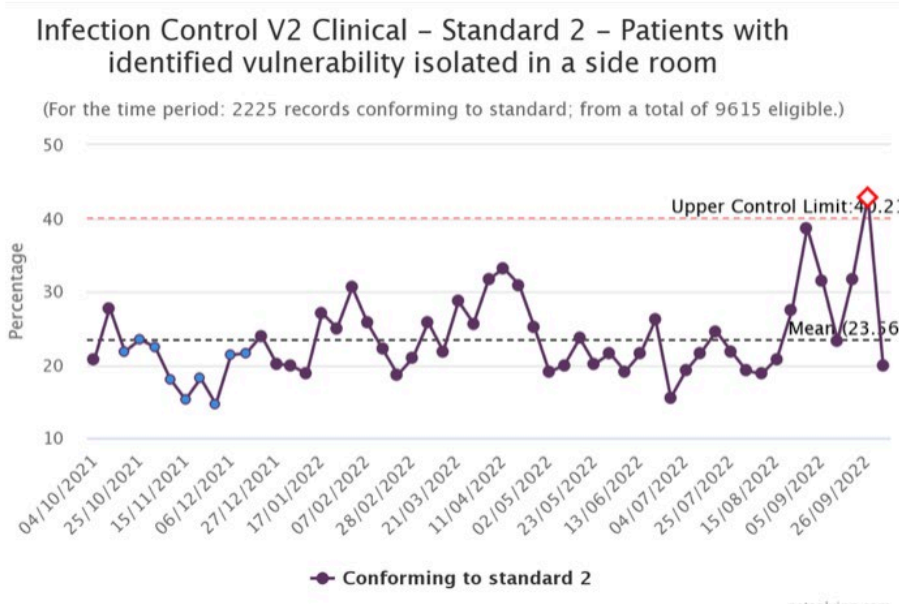
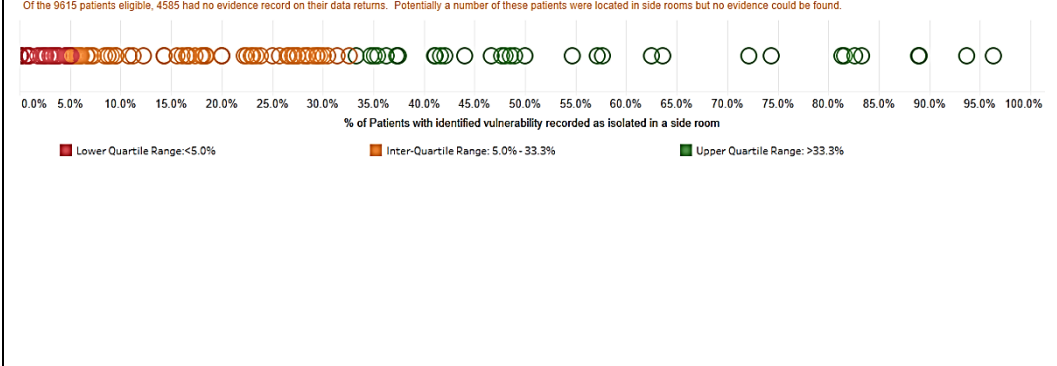
Standard 1b - % patient screened on arrival for vulnerable conditions

National SPC Chart (weekly)	Site Performance (full time period)
<p>(For the time period: 10065 records conforming to standard; from a total of 24159 eligible.)</p> <p>Percentage</p> <p>Upper Control Limit: 63.90</p> <p>Mean (42.47)</p> <p>Lower Control Limit: 21.03</p> <p>● Vulnerable conditions</p> <p>netsolving.com</p>	<p>0.0% 5.0% 10.0% 15.0% 20.0% 25.0% 30.0% 35.0% 40.0% 45.0% 50.0% 55.0% 60.0% 65.0% 70.0% 75.0% 80.0% 85.0% 90.0% 95.0% 100.0%</p> <p>% of Patients recorded as Screened for Vulnerable Conditions</p> <p>■ Lower Quartile Range: <12.5% ■ Inter-Quartile Range: 12.5% - 60.9% ■ Upper Quartile Range: >61%</p>
<p>National average performance was 42.5%</p> <p>Largely unchanged from 42.1% in 20/21</p> <p>Again, there was a slight improvement in recorded performance since February 22.</p> <p>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.</p>	<p>Median performance was 33.5%.</p> <p>The Lower Quartile was 12.5% and the upper quartile was 61%.</p> <p>Overall, this range of performance is slightly better than the standard for Other Diseases.</p>

Standard 1c - % of patients screened on arrival for other infectious diseases

National SPC Chart (weekly)	Site Performance (full time period)
<p>(For the time period: 8980 records conforming to standard; from a total of 24159 eligible.)</p> <p>Percentage</p> <p>Upper Control Limit: 55.90</p> <p>Mean (37.88)</p> <p>Lower Control Limit: 19.85</p> <p>Other infectious diseases</p> <p>netsolving.com</p>	<p>0.0% 5.0% 10.0% 15.0% 20.0% 25.0% 30.0% 35.0% 40.0% 45.0% 50.0% 55.0% 60.0% 65.0% 70.0% 75.0% 80.0% 85.0% 90.0% 95.0% 100.0%</p> <p>% of Patients recorded as Screened for Other Infectious Diseases</p> <p>Lower Quartile Range: <9.81%</p> <p>Inter-Quartile Range: 9.8% - 60.8%</p> <p>Upper Quartile Range: >60.8%</p>
<p>National average performance was 37.9%</p> <p>This is slightly less than 40.8% in 20/21</p> <p>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.</p>	<p>Median performance was 24.5%.</p> <p>The upper quartile was 61% which means that 25% of the ED departments were screening at least 6 out of 10 for other infectious diseases.</p>

Standard 2 - % patients with identified vulnerability isolated in a side room

National SPC Chart (weekly)	Site Performance (full time period)
<p>Infection Control V2 Clinical – Standard 2 – Patients with identified vulnerability isolated in a side room</p> <p>(For the time period: 2225 records conforming to standard; from a total of 9615 eligible.)</p>  <p>Percentage</p> <p>Upper Control Limit: 40.21</p> <p>Mean: 23.56</p> <p>Conforming to standard 2</p> <p>natechling.com</p>	<p>Standard 2: % of Patients with an Identified Vulnerability Recorded as isolated in a Side-Room</p> <p>Of the 9615 patients eligible, 4585 had no evidence record on their data returns. Potentially a number of these patients were located in side rooms but no evidence could be found.</p>  <p>Lower Quartile Range: <5.0%</p> <p>Inter-Quartile Range: 5.0% - 33.3%</p> <p>Upper Quartile Range: >33.3%</p>
<p>National average performance was 23.6%</p> <p>Marginally less than 37.1% in 20/21</p> <p>5024 out of 9605 had 'no evidence' recorded on their data returns.</p> <p>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.</p>	<p>Median performance was 17.4%</p> <p>The lower quartile was 5% and the upper quartile was 33%</p> <p>For 50% of sites less than 1 in 5 patients identified as vulnerable were recorded as being moved to a side-room.</p>

Standard 3 (% of Patients identified as potentially infectious moved to an appropriate area)

National SPC Chart (weekly)	Site Performance (full time period)
<p>Infection Control V2 Clinical – Standard 3 – Patients identified as potentially or confirmed as infectious were moved to an appropriate area</p> <p>(For the time period: 3584 records conforming to standard; from a total of 4487 eligible.)</p> <p>Percentage</p> <p>Upper Control Limit: 97.95</p> <p>Mean: 79.78</p> <p>Lower Control Limit: 61.62</p> <p>Conforming to standard 3</p> <p>netsolving.com</p>	<p>Standard 3: Patients identified as potentially or confirmed as infectious moved to an appropriate area</p> <p>0.0% 5.0% 10.0% 15.0% 20.0% 25.0% 30.0% 35.0% 40.0% 45.0% 50.0% 55.0% 60.0% 65.0% 70.0% 75.0% 80.0% 85.0% 90.0% 95.0% 100.0%</p> <p>% of Infectious Patients Recorded as Moved Area (Standard 3)</p> <p>Lower Quartile Range: <60.0% Inter-Quartile Range: 60.0% - 93.3% Upper Quartile Range: >93.3%</p>
<p>National average performance was 79.8%</p> <p>Slight decrease from 85.6% in 20/21</p> <p>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.</p>	<p>Median performance was 81.4%</p> <p>The lower quartile was 60% and the upper quartile was 93.3%.</p> <p>This means that 50% of sites were able to move 4 in 5 patients identified as infectious into an appropriate area.</p> <p>It should be noted that for some sites this standard is based on a small cohort of patient records. 21 sites returned less than 10 patients for this standard</p>

Organisational Audit results



62 returns

- Half submitted the previous year too
- For those that had submitted previously:
 - 2 no longer have an IPC lead
 - 1 had implemented a new handwashing training
 - 3 reported no longer self-assessing against the [RCEM control checklist](#) (see page 18)
- The average checklist score was 19/24 items

Celebrating Excellence

RCEM would like to acknowledge and celebrate the emergency departments that showed the best overall improvement per standard. Using this, we hope to explore best practices implemented in various departments and share any advice, resources, and tools nationwide.

We investigated by splitting the study data into 3 distinct time periods: the start, middle and end of the QIP study period, consisting of 120 days each with a minimum of 60 data entries within the study period. The average of each period was calculated as a percentage between the first and third period.

Standard 1a - % of patients screened on arrival for Covid

1. Northumbria Specialist Emergency Care Hospital (50%)
2. The Royal Free Hospital (31%)
3. King's College Hospital (Denmark Hill) (24%)

Standard 1b - % of patients screened on arrival for other infectious diseases

1. Southampton General Hospital (33%)
2. James Paget Hospital (22%)
3. Whipps Cross Hospital (22%)

Standard 1c - % patient screened on arrival for vulnerable conditions

1. Southampton General Hospital (35%)
2. James Paget Hospital (26%)
3. Whipps Cross Hospital (22%)

No screening performed*

1. James Paget Hospital (-43%)
2. Whipps Cross Hospital (-13%)
3. Prince Charles Hospital (-6%)

Standard 2 - % patients with identified vulnerability isolated in a side room

1. The Royal Free Hospital (32%)
2. Prince Charles Hospital (22%)
3. James Paget Hospital (8%)

Standard 3 (% of Patients identified as potentially infectious moved to an appropriate area)

1. James Paget Hospital (39%)
2. The Royal Free Hospital (26%)
3. Southampton General Hospital (13%)

(*) Percentages shown as negative percentages to indicate a reduction in patients not been screened. The higher the percentage, the greater is the reduction in patients that were not screened since the start of the project.

Appendices

Appendix 1 – Number of participating centres/cases per nation

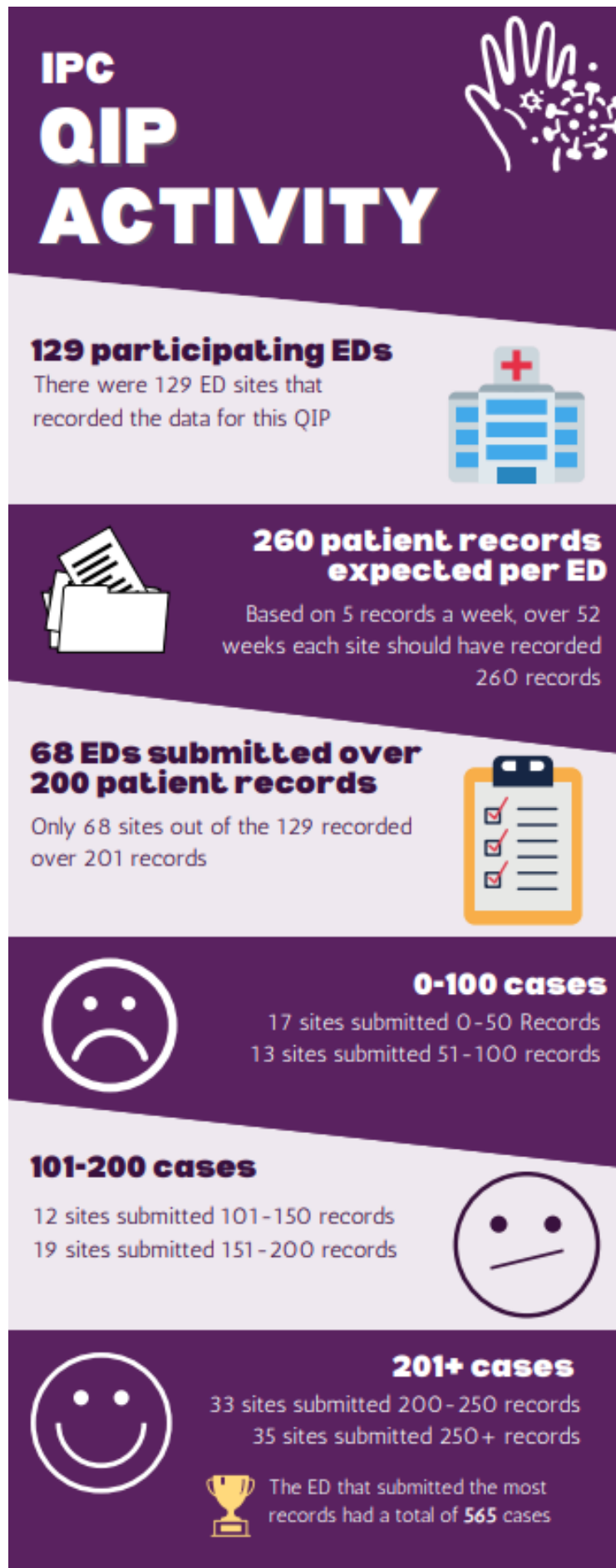
Country	Number of participating EDs		Number of cases*	
	2021/22	2020/21	2021/22	2020/21
National total	129	154	24128	17500
England	122	145	23477	16615
Scotland	1	2	24	283
Wales	4	4	349	412
Northern Ireland	2	3	278	190
Isle of Man / Channel Islands	0	0		0

*analysis includes complete cases only

Appendix 2 – Summary of 20/21 results vs 21/22

<p>Standard 1 - % of Patients screened on arrival (For all 3 specified conditions). Patients should have documented evidence of infection screening on arrival</p> <ul style="list-style-type: none"> • <i>For symptoms of COVID-19</i> • <i>For other infectious diseases requiring isolation</i> • <i>For conditions considered to make them extremely vulnerable (and who will have been shielding themselves at home).</i> 	<p>20/21 Mean Performance 24.2%</p>
	<p>21/22 Mean Performance 25.1%</p>
<ul style="list-style-type: none"> • Across all domains performance has remained stable with no significant improvement from 20/21 nor across 21/22. • Performance for the % of patients screened for the individual conditions are as follows: <ul style="list-style-type: none"> ○ Patients screened on arrival for COVID 2020/21: 65.7% 2021/22: 64.8% ○ Patients screened on arrival for Infectious diseases 2020/21: 40.8% 2021/22: 37.9% ○ Patients screened on arrival for vulnerable conditions 2020/21: 42.1% 2021/22: 42.5% 	
<p>Standard 2 - % of Patients with an Identified Vulnerability isolated in a Side-Room Patients with documented vulnerability should be isolated in a side-room following triage without evidence of additional movements.</p>	<p>20/21 Mean Performance 37.1%</p>
	<p>21/22 Mean Performance 23.6%</p>
<ul style="list-style-type: none"> • Throughout 21/22 average weekly performance has remained relatively stable and has generally been below 30%. This is an overall reduction compared to overall performance seen in 20/21. • In addition to this the average time to movement into a side room has significantly increased from 18 minutes in 20/21 to 61 minutes in 21/22. • More detailed analysis for standard 2 did show that in 2021/22 70% of patients with recorded move times were moved within 30 minutes of their arrival time. 	
<p>Standard 3 - % of Patients identified as potentially or confirmed as infectious moved to an appropriate area Patients who are documented as potentially infectious should be isolated in a side-room following triage without evidence of additional movements.</p>	<p>20/21 Mean Performance 85.6%</p>
	<p>21/22 Mean Performance 79.8%</p>
<ul style="list-style-type: none"> • Nationally overall average performance for this standard has generally hovered around 80% across the last year, although there has been more variation in performance since June. Overall performance is slightly decreased compared to 20/21. • Average time to movement into a side room has significantly increased from 46 minutes in 20/21 to 83 minutes in 21/22. • More detailed analysis for standard 3 did show that in 2021/22 65% of patients with recorded move times were moved within 30 minutes of their arrival time 	

Appendix 3 – Data returns from each centre



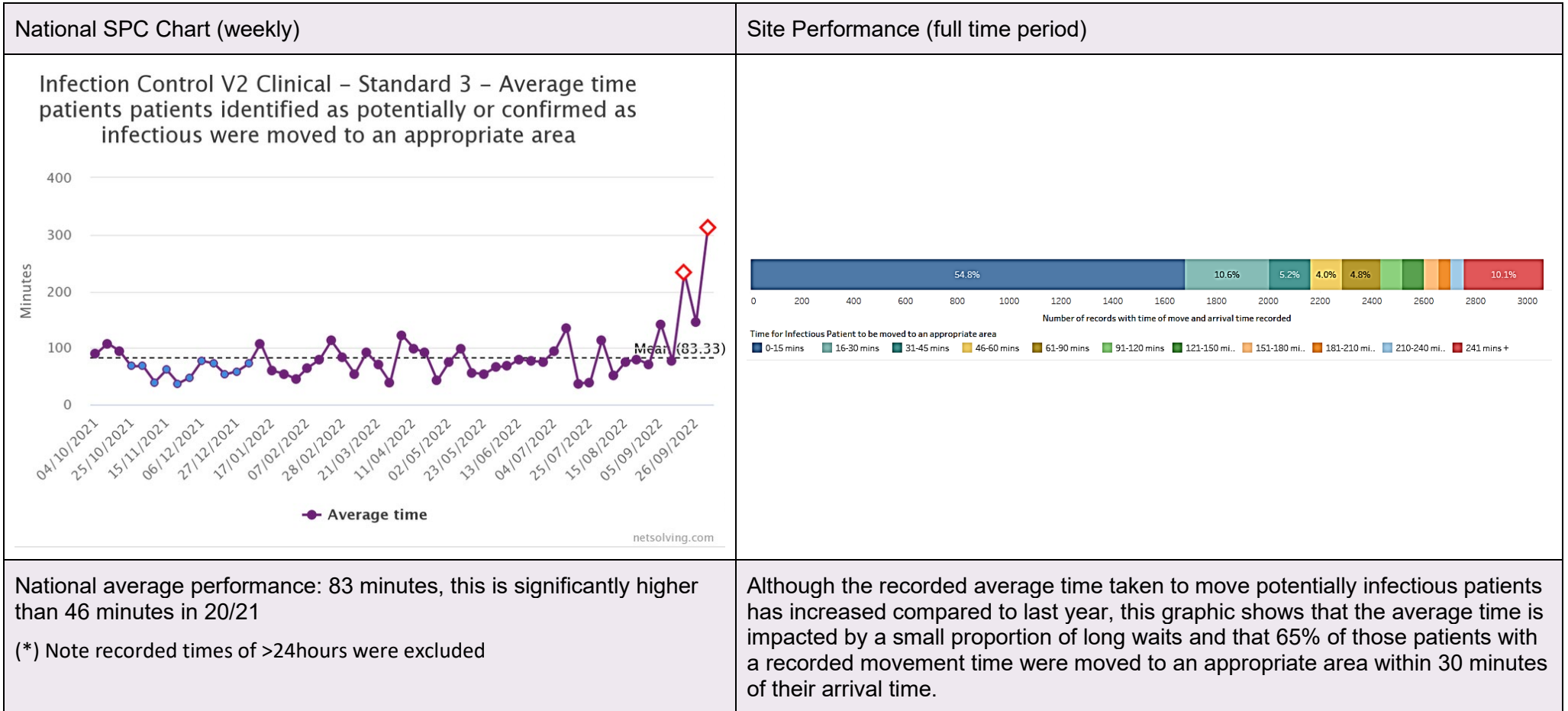
Appendix 4 – Standard 1 – no screening undertaken for any of the three categories

National SPC Chart (weekly)	Site Performance (full time period)
<p>Infection Control V2 Clinical – Patient Screening on arrival breakdown – None</p> <p>(For the time period: 1980 records conforming to standard; from a total of 24159 eligible.)</p> <p>Percentage</p> <p>Upper Control Limit: 15.84</p> <p>Mean (8.09)</p> <p>Lower Control Limit: 0.35</p> <p>None</p> <p>netsolving.com</p>	<p>% of Patients with no Screening Recorded on Arrival for any Conditions (by site) (low rates desired)</p> <p>0.0% 5.0% 10.0% 15.0% 20.0% 25.0% 30.0% 35.0% 40.0% 45.0% 50.0% 55.0% 60.0% 65.0% 70.0% 75.0% 80.0% 85.0% 90.0% 95.0% 100.0%</p> <p>% of Patients with No Screening Recorded</p> <p>Lower Quartile Range: <0.4%</p> <p>Inter-Quartile Range: 0.4% - 9.6%</p> <p>Upper Quartile Range: >9.6%</p>
<p>For this measure low rates are desired</p> <p>National average performance: 8.1%% which is lower than 20.5% in 20/21</p> <p>This reduction is good, it indicates that more people are undergoing screening.</p>	<p>The median performance for this standard was 3%.</p> <p>The Lower Quartile was 0.4% and the upper quartile was 9.6%.</p> <p>This means that over 75% of sites had evidence of recording some type of screening for the vast majority of their patients.</p>

Appendix 5 – Standard 2 – Average time taken to isolate patient with identified vulnerability in a side room

National SPC Chart (weekly)	Site Performance (full time period)
<p>Infection Control V2 Clinical – Standard 2 – Average time patients with identified vulnerability isolated in a side room</p> <p>Minutes</p> <p>Mean (61.05)</p> <p>— Average time</p> <p>netsolving.com</p>	<p>Number of Records For those patients with isolation times recorded</p> <p>Time for Patients with an Identified Vulnerability to be Isolated in a Side Room.</p> <ul style="list-style-type: none"> 0-15 mins 16-30 mins 31-45 mins 46-60 mins 61-90 mins 91-120 mins 121-150 mi.. 151-180 mi.. 181-240 mi.. 241 mins +
<p>49 out of 129 sites recorded 1-4 patients with an isolation time and 21 sites did not record any isolation times</p> <p>1732 of 2225 eligible cases had both the time of isolation and of arrival recorded. This allowed us to calculate the time to isolation.</p> <p>National average performance: 61 minutes, significantly higher than 18 minutes in 20/21</p> <p>Our data is derived from a relatively small number of returns. Only 23.6% of vulnerable people are recorded as being isolated in side rooms.</p> <p>(* Note recorded times of >24hours were excluded.)</p>	<p>Although the recorded average time taken to isolate vulnerable patients has increased compared to last year, this graphic shows that the average is impacted by a small proportion of long waits and that nearly 70% of those patients with a recorded isolation time were moved to a side room within 30 minutes of their arrival time. However as mentioned above a large majority of the patients identified as vulnerable were either not moved or have no evidence of being moved into a side-room.</p>

Appendix 6 – Standard 3 – Average time to move potential or confirmed infectious patient to an appropriate area.



Appendix 7 - 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.

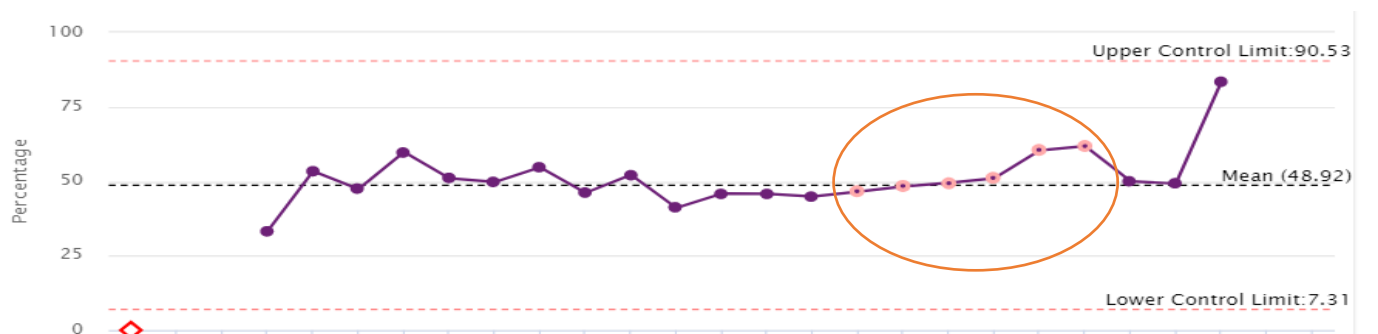
As well as seeing your actual data plotted each week you will see a black dotted average line, this is the **mean**. The SPC chart will point out if your data has a run of points above (or below) the mean by changing the dots to white. If your data is consistently improving (or deteriorating), the dots 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

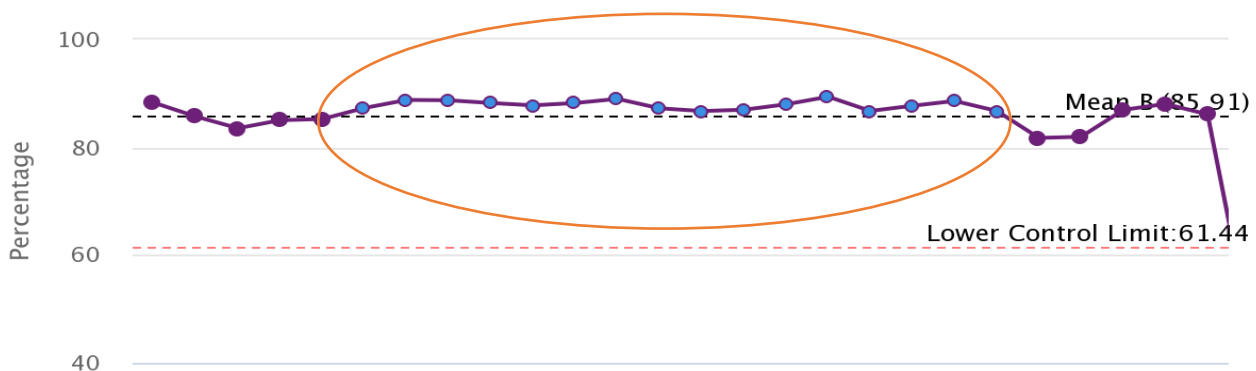
1. Performance is improving (or deteriorating)

A consistent run of data points going up or down will 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

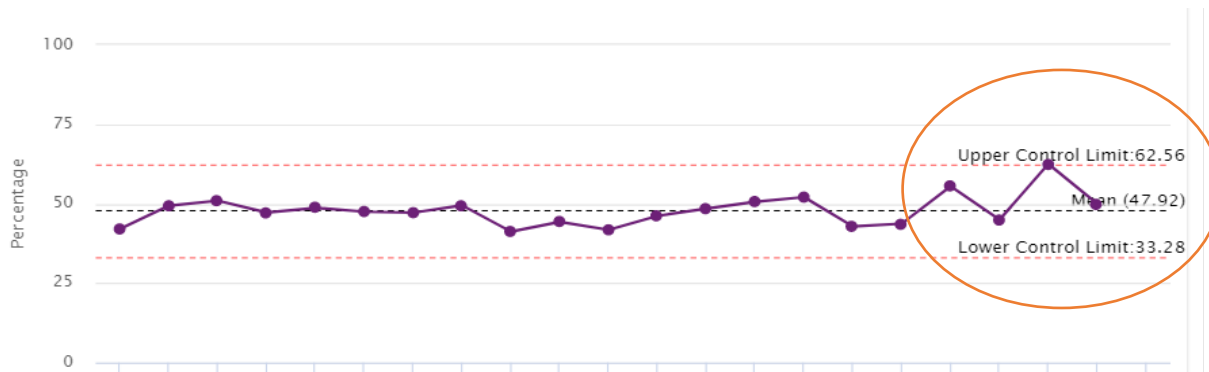
A consistent run of data that is above or below the mean will be highlighted with **blue dots** so they are easy to spot. If your data has been quite variable, this is a good sign that the process is becoming more reliable.



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.

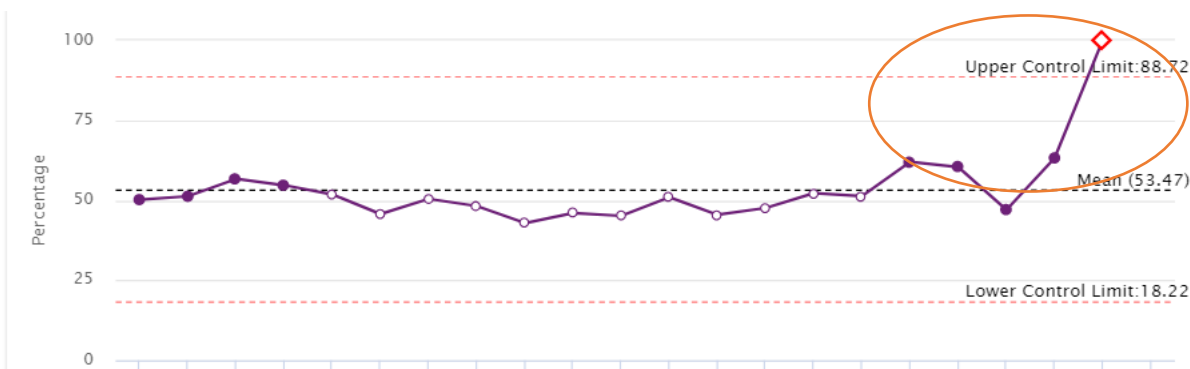
In the below example, the process is performing consistently at around 50%. The control limits show us that most of the time we would expect the process to be between 33% - 62%. If the standard for this process was 50%, then the process is well designed. If, however, the standard was 75% then the chart 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.



Appendix 9 – Understanding your IQR visualisation

Inter-Quartile Range Visualisations:

Although this report is focussing on the overall national picture it was felt that it would be useful to show the range of performances for the individual sites involved in this Quality Improvement Programme.

These IQR visualisations provide a benchmarked view of how all sites compare to each other across the full time period. It is coloured to show the quartile range for the sites. The bottom 25% of sites performance has been coloured red, the top 25% performing sites are green, with the remaining sites orange, (which means they performed within the inter-quartile range).

It is hoped these new views will help generate discussion within the individual sites QIP Team as it means that they will be able to benchmark their performance against all other sites

Appendix 10: Template to submit your QI initiatives for sharing at QIP study days, conferences and within the QI leads network

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



Appendix 11 – Useful resources

Quality Improvement

Link to RCEM QI resource page - <https://rcem.ac.uk/quality-improvement-resources/>

Link to RCEM curriculum - https://rcem.ac.uk/wp-content/uploads/2022/04/Generic_QIAT_How_to_Guide_v3.pdf

Link to NES Turas Improvement Zone - <https://learn.nes.nhs.scot/741/quality-improvement-zone>

Link to Making Data Count- <https://www.england.nhs.uk/wp-content/uploads/2019/12/making-data-count-getting-started-2019.pdf>

Link to Sonia Sparkles - <https://qi.elft.nhs.uk/tag/sonia-sparkles/> and <https://soniasparkles.com/improvement/>

IPC

SCT - Link to Scottish Gov site - <https://www.nss.nhs.scot/browse/antimicrobial-resistance-and-healthcare-associated-infection>

WLS - Wales <https://phw.nhs.wales/services-and-teams/harp/healthcare-associated-infections-hcai/>

NI - <https://www.publichealth.hscni.net/directorate-public-health/health-protection/healthcare-associated-infections>

NI - <https://www.nisra.gov.uk/statistics/cause-death/healthcare-associated-infection>

ENG - Link to National Infection prevention and control manual for England <https://www.england.nhs.uk/wp-content/uploads/2022/04/C1636-national-ipc-manual-for-england-v2.pdf>

Link to RCEM IPC standards - https://rcem.ac.uk/wp-content/uploads/2021/10/RCEM_BPC_Guideline_COVID_IPC_090620.pdf

Appendix 12 – Stakeholder

Below is a table of stakeholders that we believe would be interested in this QIP topic and are in a position that they can help support improvement within EDs. If you have any others that you think should be included please contact us at quality@rcem.ac.uk.

Stakeholder
Antimicrobial Resistance & Healthcare Associated Infection Scotland
Northern Ireland Statistics and Research Agency
Public Health Agency, Northern Ireland
Public Health Wales
UK Health Security Agency (UKSHA)
FutureNHS – AMR IPC workstream

