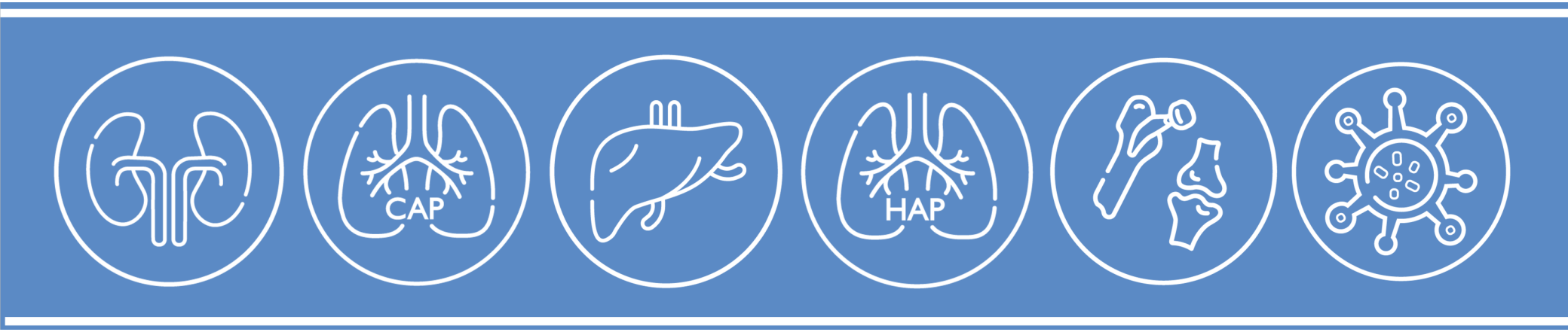
# IMPROVING UNWARRANTED CLINICAL VARIATION IN GREATER MANCHESTER

ADVANCING QUALITY
Reducing unwarranted clinical variation
Improving patient outcomes




## INTEGRATED CARE SYSTEM REPORT

PRODUCED BY THE ADVANCING QUALITY PROGRAMME
FOR NORTH WEST MEMBER ORGANISATIONS

aqua
Shape Change Inspire Quality Transform Care

ADVANCING QUALITY | Reducing unwarranted clinical variation | Improving patient outcomes

aqua Shape Change Inspire Quality Transform Care

# AQ IMPACT & HIGHLIGHTS

## Why participate?

AQ is a data-driven improvement programme. Our analysis and reporting shows you where you are doing well and where you could do even better. Our specialist analysts and improvement team support you to translate improvement plans into action, and we can proudly demonstrate improvements to patient care.

### 700,000 patient pathways

AQ data is uniquely validated, giving a clearer picture. We've collected data on over 700,000 patient pathways since 2008.

### Clinical leadership and engagement

AQ focus areas are supported by our specialist clinical leads. Our network connects clinical teams and helps them to work together.

### 21 trusts, 37 sites, 78 teams

AQ's improvement community comprises 200 + clinicians and improvers, sharing successes and tackling common challenges.

### Improving patient care and experience

Evidence-based benefits of AQ include reduced bed days for acute kidney injury patients and reduced unwarranted variation in hip & knee replacement. AQ participation also correlates with lower risk-adjusted mortality for sepsis.

## What we've done 2022/23

AQ was shortlisted for the 'Driving Change through Data and Analytics' Award at the 2023 HSJ Digital Awards for our data-based improvement methodology.

We have worked with Dr Dan Wootton (AQ **hospital acquired pneumonia** clinical lead) and the University of Liverpool, exploring the impact of HAP and generating statistics on incidence in England.

An example of AQ's other research projects includes a publication in the **British Medical Journal** authored by our **community acquired pneumonia** clinical lead, Dr Bis Chakrabarti.

2022/23 saw a welcome return to face-to-face events, with our **sepsis**, **acute kidney injury** and **hip & knee replacement** collaboratives bringing people together to share good practice, discuss common challenges and support one another. The events attracted well known guest speakers, including Dr Ron Daniels from the UK Sepsis Trust.

Our round table events provided a forum for clinical leaders to share experiences, bringing clinical insight to AQ data and enabling the development of improvement plans.

## Coming up 2023/24

Our clinical measure sets define what good care looks like for our six focus areas. To keep them relevant and ensure we continue to drive improvements in patient care and experience, we convene **Clinical Expert Groups**. This year, we'll review our measures for **sepsis**, with other focus areas to follow.

We continue to build our digital capacity, allowing teams easy access to input data, and programme and learning e-resources to help build capability.

We have a busy year of events ahead, including round tables and collaboratives for all six of our clinical focus areas. Follow us on 𝕏 (Twitter) at **@Aqua_NHS** to see what we're doing when. We welcome ideas for key topics and sharing improvement stories.

We're launching monthly drop in sessions to provide on-the-spot improvement support and we'll continue to showcase teams' work in case studies via the **Aqua website.**

We're continuing to use our data in research to provide unique insights into NHS care, such as the impact of high-quality care on length of stay for patients with **acute kidney injury**.

# What AQ can tell you

Advancing Quality (AQ) is a quality improvement programme operating across north west England and is part of the Advancing Quality Alliance (Aqua). We collect data about acute kidney injury (AKI), decompensated liver disease (DLD), community and hospital acquired pneumonia, sepsis and elective hip and knee replacement. Our validated, enriched dataset is the bedrock of our improvement work and allows us to produce insights not available from standard NHS data.

AQ offers the North West regular, detailed, QI-focussed analysis and support and this report provides an overview for Greater Manchester in 2022.

## 2022 headline opportunities

### ICS participation and engagement

Trusts in Greater Manchester (GM) have a great track record of addressing unwarranted clinical variation through Aqua's AQ programme, with good engagement from clinical leaders. Teams are using data to identify where unwarranted variation exists and are working with us to implement, capture and share the results of improvements. Bolton significantly increased its participation in AQ, expanding to 3 clinical focus areas. Participation continued in the Northern Care Alliance sites and at North Manchester General Hospital throughout infrastructure changes with their associated challenges. Fairfield General continued to drive and maintain improvements to care for patients with sepsis via their steering group, an approach outlined in our Implementation Framework as a useful model for adoption by all participating providers.

### Reducing unwarranted variation

Despite the levels of engagement and participation, there has been a decline in performance across the clinical focus areas since 2020 and increased variation that requires a renewed focus on improvement. Of particular concern is AKI, where just 1 in 5 patients in GM received optimal care that met all of the agreed standards. GM Trusts showed continuous improvement in AKI management between 2015-2020, but since the onset of the global COVID-19 pandemic overall performance has declined and was lowest in the North West region for four of the seven AKI clinical measures. Other areas of focus for GM include hospital acquired pneumonia, where in 2022 fewer than half (45%) of HAP patients had chest X-rays and only two thirds (64%) of these were reviewed within 24 hours.

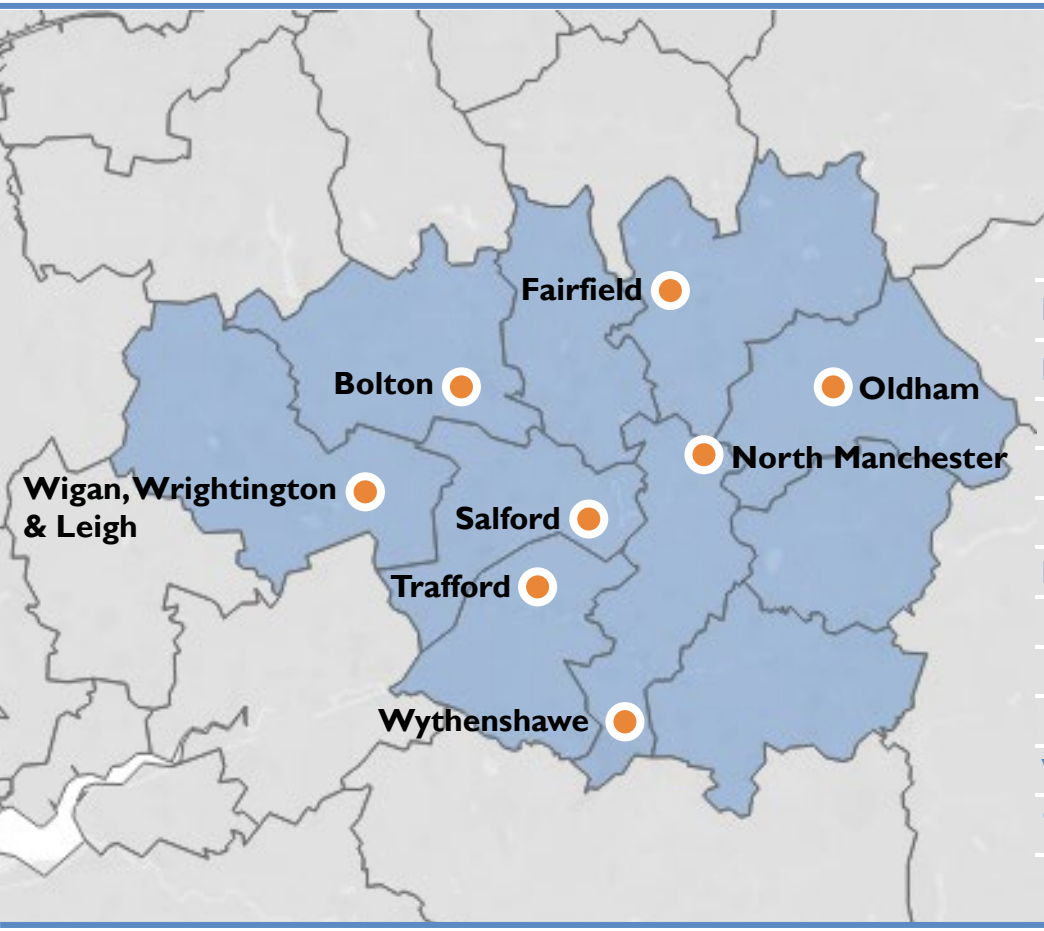
### How Advancing Quality can help

As the UK's longest running unwarranted clinical variation programme, AQ offers providers across the North West and beyond significant opportunities to improve patient care. This includes engaging and equipping clinicians to use data to measure care quality and reliability, along with a QI based approach to deliver improved outcomes. Being part of the large network also enables clinical teams to capture and share best practice, as well as learning from other organisations. There remain significant opportunities for GM Trusts to increase levels of participation, drive more focused improvement activities and to work with the team at Aqua to develop new clinical focus areas in 2023-24.

**Find out more >>**

*Condition-specific analysis, visualisations and insights*

# PARTICIPATING ORGANISATIONS ACROSS AQ CLINICAL FOCUS AREAS IN GREATER MANCHESTER 2022



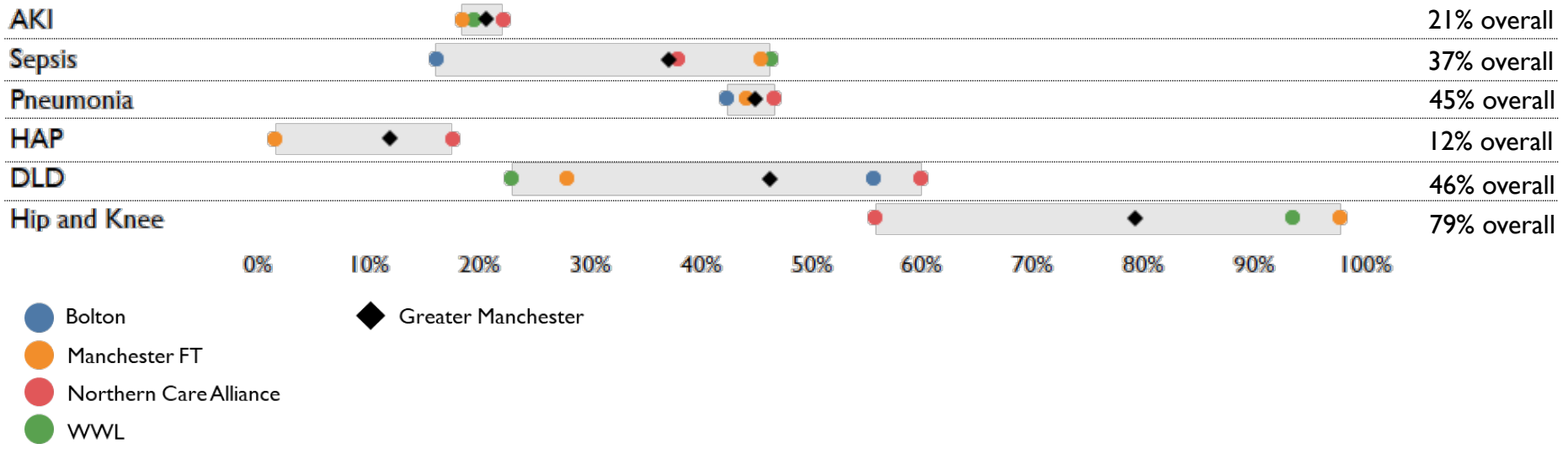

| | AKI | CAP | DLD | HAP | Hip & knee | Sepsis | Total |
|---|---|---|---|---|---|---|---|
| Bolton | | 191 | 153 | | | 137 | 481 |
| Manchester FT | 65 | 154 | 79 | 128 | 493 | 188 | 1107 |
| *North Manchester General* | *65* | *154* | *79* | *128* | | *188* | *614* |
| *Trafford General* | | | | | *453* | | *453* |
| *Wythenshawe* | | | | | *40* | | *40* |
| Northern Care Alliance | 167 | 362 | 247 | 239 | 552 | 656 | 2223 |
| *Fairfield General* | *62* | *109* | *83* | *86* | *514* | *285* | *1139* |
| *Royal Oldham* | *105* | *253* | *164* | *153* | | *371* | *1046* |
| *Salford Royal* | | | | | *38* | | *38* |
| WWL | 92 | | 144 | | 273 | 80 | 589 |
| *Total* | 324 | 707 | 623 | 367 | 1318 | 1061 | 4400 |

In 2022 all four of the Greater Manchester care organisations collected data in order to address unwarranted clinical variation in care delivered to their patients. Over the 12 months these Trusts collected and validated a rich dataset detailing the treatment delivered to 4,400 patients.

The table shows the number of validated cases per AQ clinical focus area submitted by each Greater Manchester Trust in 2022. Where a Trust has no figures, they did not participate in that focus area in 2022. The map shows participation at site level.

# UNWARRANTED CLINICAL VARIATION IN GREATER MANCHESTER

*This chart shows variation in 'perfect care' (patients who received all the AQ measures they were eligible for) between Greater Manchester trusts. Coloured dots represent individual trusts and the black diamond shows Greater Manchester overall.*




2022 INSIGHTS

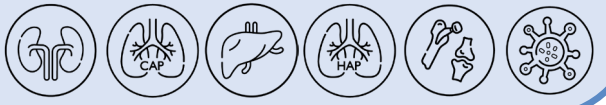
## Headline

The care delivered for hip and knee replacements was best overall; most Trusts met all standards for 95% of patients. However, levels of variation were wide indicating opportunities to improve. We are working with our clinical experts to consider how to measure the impact of huge increases in waits for these patients.

## Headline

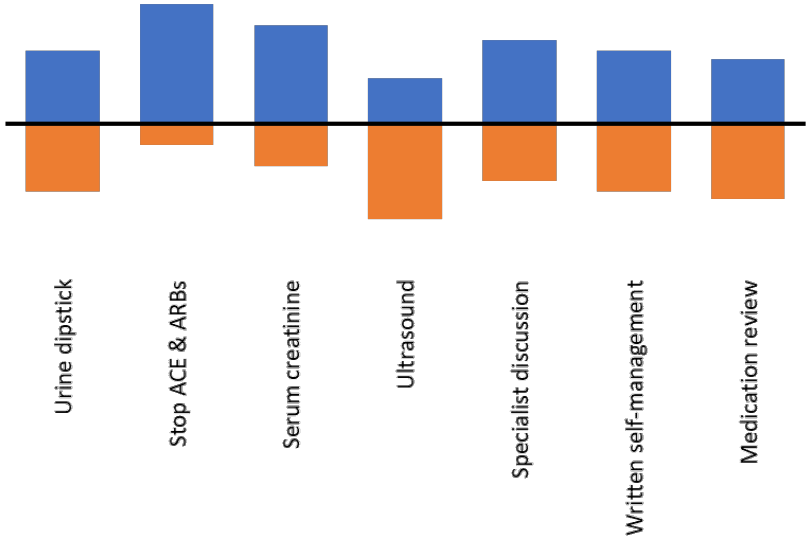
The most significant opportunity for improvement is in the treatment of patients with hospital acquired pneumonia; fewer than 1 in 5 patients are currently meeting agreed care standards.

*See the following pages for detailed information about performance in each of our clinical focus areas.*

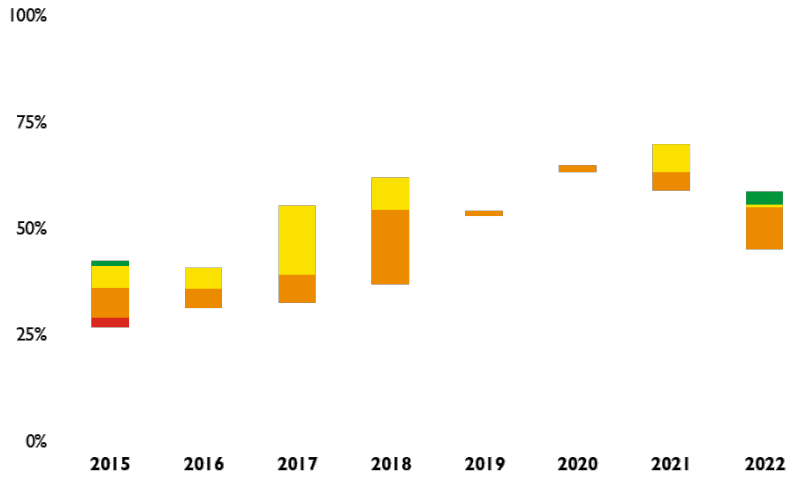


# Acute Kidney Injury in Greater Manchester

## The AQ measures in 2022




## Trends in AKI Composite Process Score 2015-22




## 2022 Findings

In 2022, AQ validated acute kidney injury (AKI) patients in Greater Manchester (GM; n=324) spent an average of 11 days in hospital, lower than the average length of stay for the other ICSs in the North West region. Around 15% of people admitted died in hospital and 22% were readmitted as an emergency within 30 days.

The data for AKI show that GM Trusts showed continuous improvement in their treatment of patients with AKI between 2015-2020, but since the onset of the global COVID-19 pandemic performance has declined and there has been a widening in levels of variation between Trusts.

There is scope for increased participation in this focus area; this will help facilitate shared learning and a team approach to driving and sustaining change across the system.

## 2022 Insights

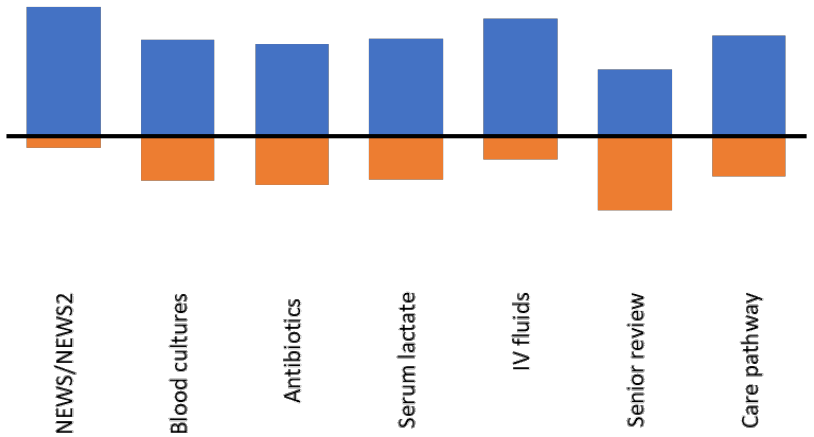
Overall, just 1 in 5 AKI patients in GM received care that met all of the agreed standards. There are significant opportunities to improve and GM performance was worst in the North West region for four of the seven measures.

The standard which was most often failed was ultrasound scanning of the urinary tract for patients with AKI stage 3 within 24 hours of their first AKI alert. NICE guidelines recommend ultrasound scanning as it is known to help determine the cause of AKI and the optimal treatment pathway. Less than 1 in 3 eligible patients received this standard, compared to almost 1 in 2 in neighbouring Cheshire and Merseyside. Likely causes include national shortfalls in numbers of sonographers and demand on diagnostic ultrasound services due to the elective backlog.

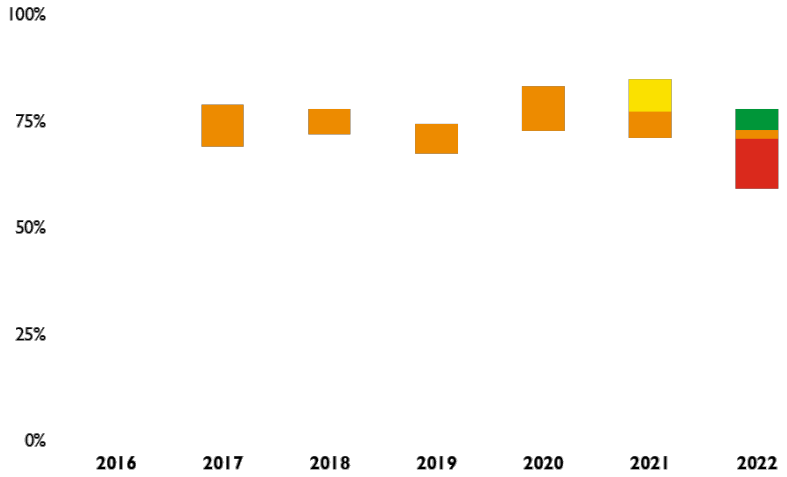
**21% received perfect care**

# Sepsis in Greater Manchester

## The AQ measures in 2022




## Trends in Sepsis Composite Process Score 2015-22




## 2022 Findings

In 2022, AQ validated sepsis patients in Greater Manchester (GM; n=1064) spent an average of 8 days in hospital; similar to other ICSs in the North West region. For patients admitted with a confirmed sepsis diagnosis, 21% died in hospital and 20% were readmitted as an emergency within 30 days.

The trends show some increases in unwarranted clinical variation between Trusts in 2022, however participation rates for previous years might be a factor in this calculation. There has been a decline in the composite process score, which indicates the number of care standard measures being achieved across the cohort. This suggests the system should re-focus efforts into improving the care delivered to sepsis patients across all of the measures.

Fairfield General have maintained improvements in care delivery for sepsis patients via their established sepsis steering group, involving staff across the pathway in improvement work. This team approach is a useful model for other Trusts to adopt.

## 2022 Insights

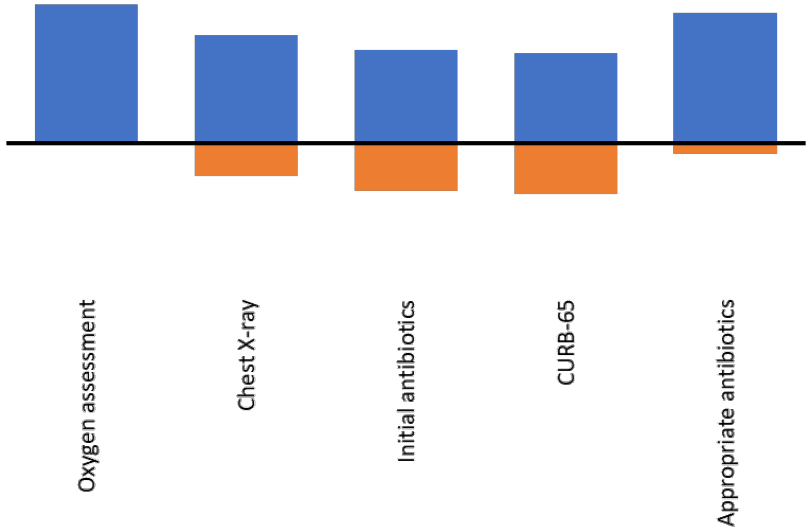
Around 37% of patients received care that met all standards and 92% recorded an early warning score within an hour of arrival. The ICS has good participation for sepsis but there is still scope for further sites to participate; this would help address the challenge of unwarranted clinical variation across the system.

For those GM Trusts that do participate, the performance across standards is generally better than the other ICSs in the North West region. The exception to this is senior review or assessment by the critical care team within 2 hours of a sepsis diagnosis. Less than half of GM sepsis patients receive this care standard. A review by a senior clinician improves the recognition of sepsis and helps initiate treatment plans which can lead to a reduction in mortality. These patients may benefit from close monitoring and/or organ support in a critical care environment.

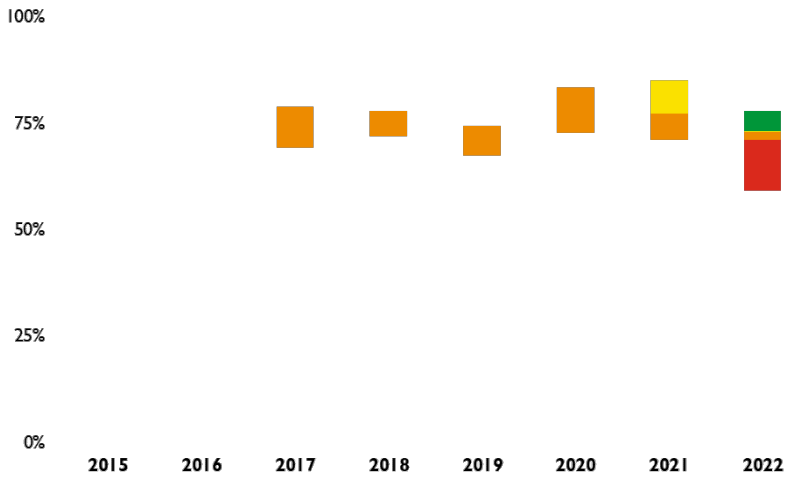
**37% received perfect care**

# Community Acquired Pneumonia in Greater Manchester

## The AQ measures in 2022




## Trends in CAP Composite Process Score 2015-22




## 2022 Findings

In 2022, AQ validated community acquired pneumonia patients in Greater Manchester (GM; n=707) spent an average of 5 days in hospital, which was similar to the average across the region.

Overall, 12% of these pneumonia patients died in hospital and 18% were readmitted as an emergency within 30 days, so there remains a significant opportunity to improve outcomes.

As with other clinical focus areas, there was a widening of performance against the measures for patients with pneumonia across GM hospital Trusts in 2022. The system would benefit from working with the Aqua team to focus on reducing this unwarranted clinical variation.

## 2022 Insights

The Trusts in GM benchmark well against the other systems in the North West for the community acquired pneumonia measures.

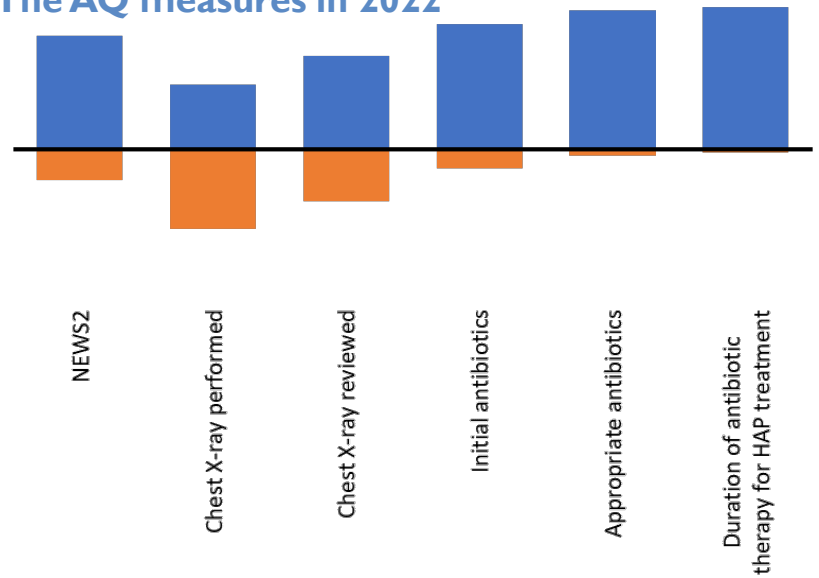
Every year between 0.5% and 1% of adults in the UK will have community acquired pneumonia. It is diagnosed in 5–12% of adults who present to GPs with symptoms of lower respiratory tract infection, and 22–42% of these are admitted to hospital, where the mortality rate is between 5% and 14%.

The biggest opportunity for improvement is the recording of CURB-65 scores. Pneumonia patients should have a documented CURB-65 score after arrival at hospital, either in their A&E, assessment unit or post-take ward records. NICE guidelines recommend use of the CURB-65 score as a method of assessing the severity of pneumonia to aid clinical decisions on where patients should be managed and their treatment regime. One site has incorporated CURB-65 criteria into the clerking documents, which has improved compliance.

**45% received perfect care**

# Hospital Acquired Pneumonia in Greater Manchester

## The AQ measures in 2022




## Measure performance vs other ICSs


## 2022 Findings

In 2022, AQ validated hospital acquired pneumonia (HAP) patients in Greater Manchester (GM; n=367) spent an average of 21 days in hospital and 20% died in hospital. For this group of patients, 23% were readmitted as an emergency within 30 days which is higher than for other ICSs in the region.

HAP develops after at least 48 hours of admission to hospital and is not incubating at the time of admission. When managed in hospital the diagnosis is usually confirmed by chest X-ray. There is very limited data on HAP incidence but estimates suggest 1.5% of hospital inpatients have HAP, with two thirds being outside critical care. HAP is estimated to increase hospital stay by around 8 days and has a reported mortality rate of between 30–70% (NICE, 2014).

The AQ measure set for HAP aims to encourage prompt recognition, diagnosis and treatment of these patients.

Some improvement initiatives are in place, for example focussing on prevention, particularly mouth care, to reduce incidence.

## 2022 Insights

The GM Trusts performed less well than Trusts from elsewhere across the AQ programme, particularly for the delivery and review of chest X-rays.

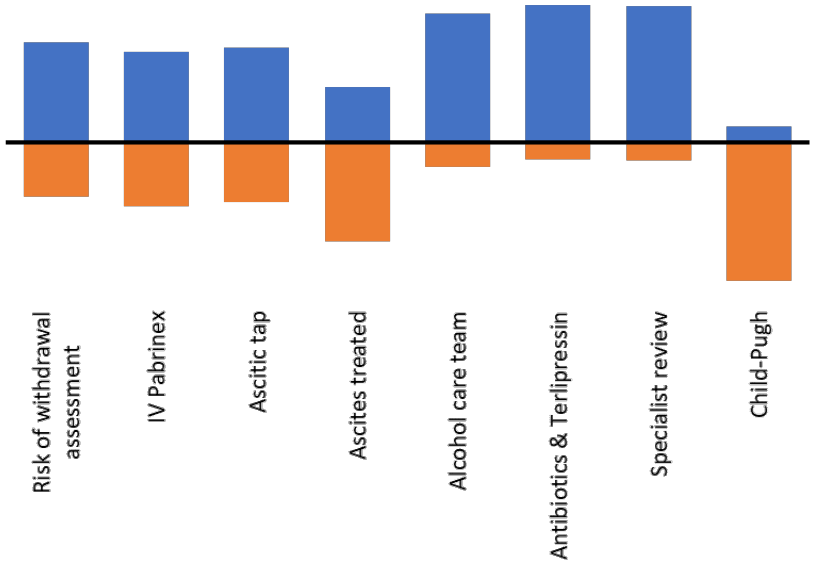
NICE pneumonia guidelines recommend that the diagnosis of HAP is confirmed by chest X-ray. AQ standards also recommend that X-rays should be reviewed by a member of the clinical team within 24 hours of completion to support accurate and early diagnosis, and appropriate management.

In GM in 2022 fewer than half (45%) of HAP patients had chest X-rays and only two thirds (64%) of these were reviewed.

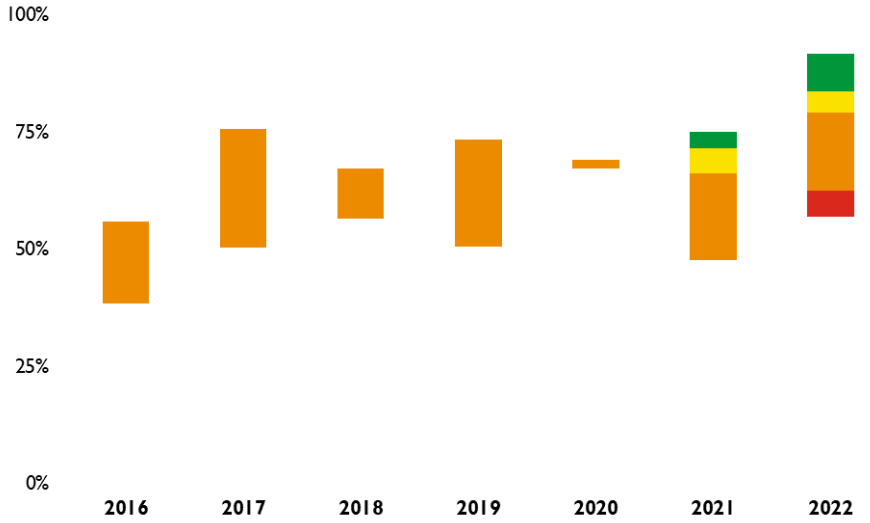
**12% received perfect care**

# Decompensated Liver Disease in Greater Manchester

## The AQ measures in 2022




## Trends in DLD Composite Process Score 2015-22




## 2022 Findings

In 2022, AQ validated decompensated liver disease (DLD) patients in Greater Manchester (GM; n=624) spent an average of 6 days in hospital. 16% died in hospital, which as a crude rate was higher than for other ICSs in the region. Overall 30% of DLD patients were readmitted as an emergency within 30 days, which again was higher than rates elsewhere.

Only 4 sites across GM participate in AQ's DLD clinical focus area and so it is difficult to consider levels of unwarranted clinical variation within the region. Wythenshawe Hospital have recently started collecting data for DLD, but there is scope for increased participation across the system.

2022 has seen some good improvement initiatives, particularly in timely referral to alcohol care teams and specialist review, but the measure set and outcomes data indicate that there are still significant opportunities to improve.

## 2022 Insights

When considered against performance elsewhere in the region and the numbers of patients involved, the most significant opportunities for improvement are in the risk of alcohol withdrawal assessment and recording of a Child-Pugh score.

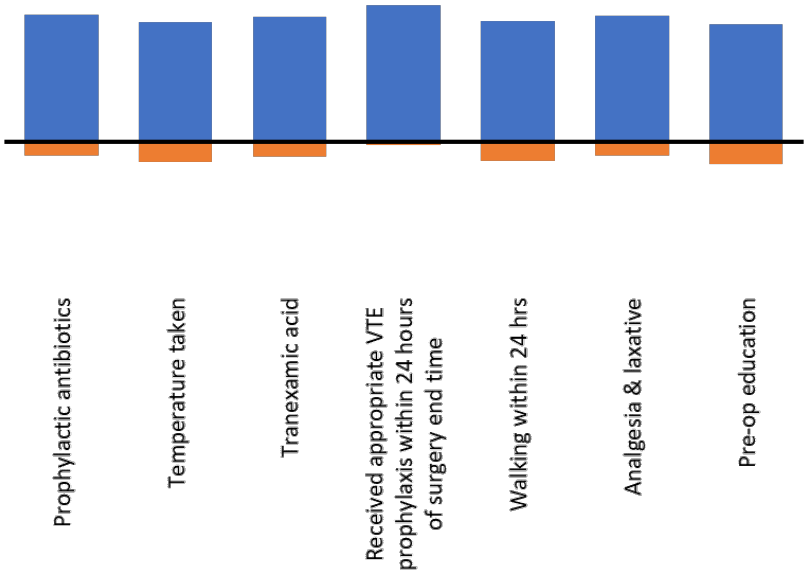
A risk of alcohol withdrawal assessment should be done within 8 hours of hospital arrival if the patient has consumed alcohol within the last 6 months. Withdrawal symptoms can change quickly and aggressively; while some people may only be affected by minor effects of alcoholism, others may face extreme pain. Only 65% of GM DLD patients were recorded as having this assessment.

Patients should also have a documented Child-Pugh score within 24 hours of arrival. This provides a forecast of the increasing severity of patients' liver disease and expected survival rate. Only 1 in 10 GM DLD patients had a score recorded within 24 hours.

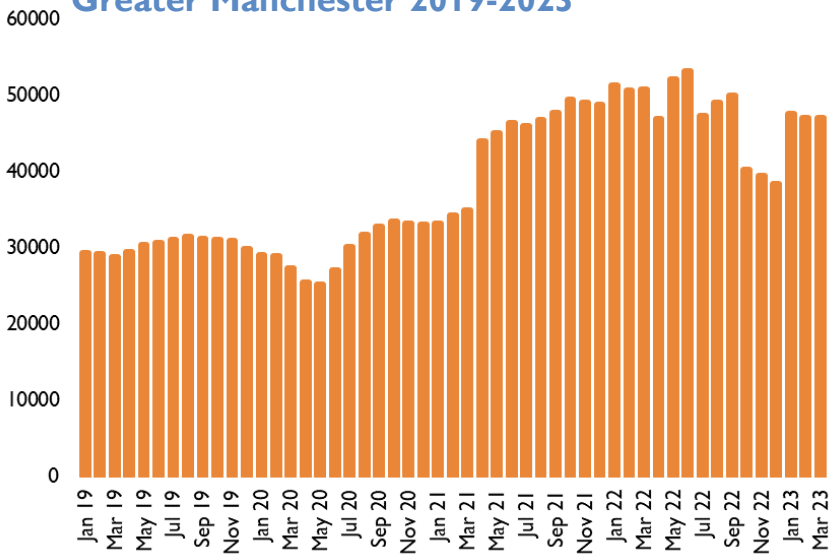
**46% received perfect care**

# Hip & Knee Replacement in Greater Manchester

## The AQ measures in 2022




## Trends in Trauma and Orthopaedic waiting list – Greater Manchester 2019-2023




## 2022 Findings

In 2022, AQ validated elective hip and knee replacement patients in Greater Manchester (GM; n=1318) spent an average of 2 days in hospital. 8% were readmitted as an emergency within 30 days.

Performance across the AQ standards was consistently high for Trusts in GM and across the rest of the North West, but these data only reflect the experience of those being treated and miss the experience of those waiting.

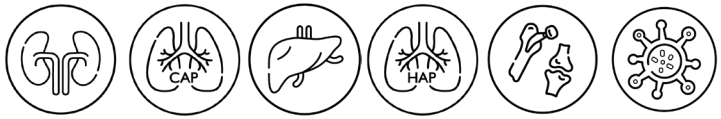
In GM the number of people on the trauma and orthopaedics waiting list has increased by 18k since 2019. The AQ team have been working with clinical leaders and improvement teams across the North West to explore how shared decision making approaches might inform work to improve the experience of waiting for hip and knee replacements.

## 2022 Insights

Despite generally good performance overall, 1 in 5 patients are still not receiving all the agreed standards and so there remains opportunity to improve.

In 2024, the elective hip & knee measure set will be reviewed to ensure that the programme is assessing relevant aspects of care delivery, and to better capture the patient's experience. Teams are looking to work with AQ to explore the best approaches to pre-operative education, for managing patient expectations and reducing readmission.

**79% received perfect care**




# How we're working with you to reduce unwarranted clinical variation

## Tackling unwarranted variation

AQ is the UK's longest running clinical continuous improvement programme. Across more than a decade, we've built our network of improvers and established a proven approach to tackling unwarranted variation. Our data shows significant improvement opportunities for your Trusts, including:

- Timely drug administration
- Use of severity risk tools
- Implementation of care pathways
- Senior and specialist review

## Trust reports

Alongside regular monthly reports on performance and patient outcomes, each of your participating Trust sites has received their own 2022 Annual Report including a detailed breakdown of performance, highlighted improvement opportunities and bespoke recommendations:

- Bolton
- North Manchester General
- Trafford General
- Wythenshawe
- Fairfield General
- Royal Oldham
- Salford Royal
- Wrightington, Wigan and Leigh

## Driving continuous improvement across Greater Manchester

AQ provides opportunities for providers to work together through shared learning events and monthly workshops. The programme has stayed relevant by evolving with evidence, aligning to policy developments and by developing and retiring clinical focus areas. We want to explore how we can use our approach to help you deliver on your system level priorities to reduce unwarranted clinical variation.

## Contact us

advancing.quality@aqua.nhs.uk

aqua.nhs.uk/solutions/aq-programme/

@AQProgrammeNHS

**3rd Floor, Crossgate House,**
**Cross Street, Sale, M33 7FT**

ADVANCING QUALITY
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Improving patient outcomes

aqua
Shape Change Inspire Quality Transform Care

NHS

# Supporting Organisations and Systems to implement Getting it Right First Time (GIRFT)

Aqua can support your system, collaborative or organisation to use an improvement approach to implement your GIRFT opportunities.

Building clinical and lived experience consensus on what good care looks like, and how to measure.

Using data to explore unwarranted clinical variation to identify opportunities to improve.

## Reducing Unwarranted Clinical Variation to Improve the Reliability, Quality and Experience of Care

Using QI approaches combined with building governance, clinical leadership & data literacy to drive improvement.

Collaborate and network to share good practice and drive system-wide improvement.

Aqua's flagship unwarranted variation programme is the longest running improvement programme within the NHS, with measurable impact on thequality and reliability of care.

We can support you with our expertise in clinical and lived experience engagement, data analysis, and insight and practical application of Quality Improvement in clinical settings, capturing and sharing learning.


@Aqua_NHS  Advancing Quality Alliance

3rd Floor, Crossgate House, Cross Street, Sale, M33 7FT
Call: 0161 206 8938
Email: enquiries@aqua.nhs.uk
www.aqua.nhs.uk

**Contact us to find out how we can help:**
**enquiries@aqua.nhs.uk**

# Advancing Quality Programme Offer

## Gain Consensus on Care Standards

### AQ Offer

- Support & coaching to engage with relevant stakeholders
- Access to AQ's Clinical Expert Group
- Access to clinical expertise across the AQ regional network
- Access to the AQ web-based data collection tool Patient Intelligence & Quality System (PIQS)
- Support setting up Clinical Focus Areas (CFA) & internal AQ steering groups
- Peer support from other AQ participants

### AQ Products

- AQ implementation framework
- 1 page summary of each CFA
- Onboarding video explaining how we use data, monthly reports & FAQ's
- Group PIQS presentation & demo
- Bespoke skills assessment tool
- Tool to map existing data against AQ measures

### Actions for members

- Executive level sponsorship
- Capacity to input data in a timely way and quality assure with AQ team
- Capacity for AQ group to routinely meet, ideally monthly

## Identify Unwarranted Variation

### AQ Offer

- Data quality & analytics support
- Utilisation of PIQS to input clinical pathway data
- National benchmarking and sharing of good practice
- Cross-organisational, data driven identification of areas for improvement
- Independent data audit that can be used as part of governance processes
- Consistent methodological approach

### AQ Products

- Monthly reports generated from regional AQ member data
- Standardised CFA presentations including analysis of data & recommendations
- On demand reports via PIQS
- AQ Annual Report
- 1 page monthly report

### Actions for members

- Collate and share previous audit data to identify possible areas for improvement
- Access to and introductions to relevant staff along each pathway

## Improve Quality of Care

### AQ Offer

- Quality improvement insights from the AQ regional network
- Coaching support for teams to develop capability
- Access to collaborative QI training
- Support to mobilise and collaborate with internal teams
- Support to develop evidence to demonstrate quality
- Standardisation of clinical practice

### AQ Products

- Access to QI resources and tools such as presentations, videos and latest research
- Templates to embed AQ improvement systems of reporting within existing governance structures

### Actions for members

- Feedback on quality improvement work
- Drive development of internal governance which allow for quality improvement to occur & be reported
- Continue to embed pathway improvements

## Learn and Share Best Practice

### AQ Offer

- Support to capture & spread high quality, reliable clinical interventions
- Access to large scale regional events for each CFA
- Support to identify & develop case studies
- Support to share data in an accessible way
- Opportunities to share best practice at AQ collaborative events
- Opportunities to access support drop-in sessions

### AQ Products

- Access to case study templates & examples
- Access to presenter guidance & support
- Access to AQ poster presentation templates & examples

### Actions for members

- Capacity & interest in translating improvements to case studies
- Attendance at our events
- Interest in accessing our material for learning