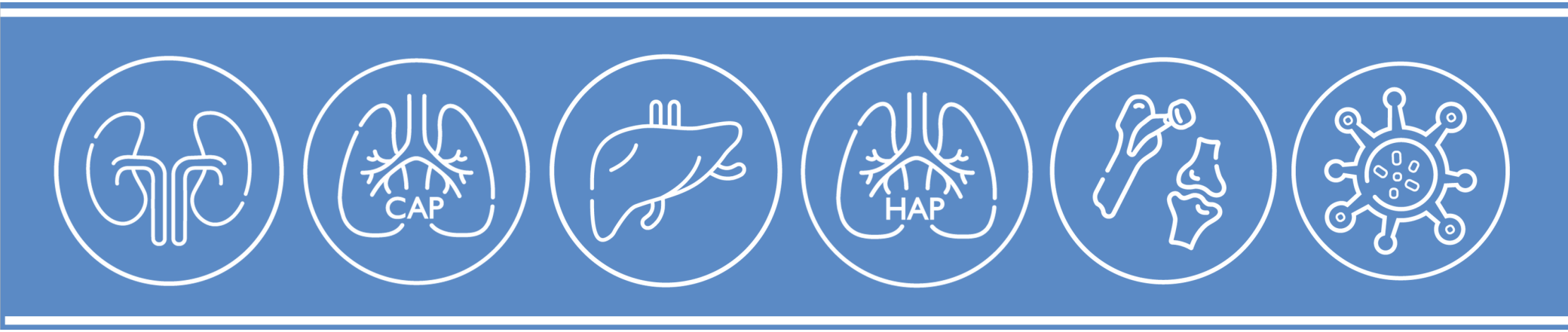
IMPROVING UNWARRANTED CLINICAL VARIATION IN CHESHIRE & MERSEYSIDE

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

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 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 Cheshire & Merseyside in 2022.

2022 headline opportunities

ICS participation and engagement

Providers across Cheshire and Merseyside (C&M) are actively participating in the AQ programme with great engagement from clinical leaders. Teams are using data to identify where unwarranted variation exists and are working with us to implement, capture and share improvements. In 2022 we were excited to work with the team at Liverpool University Hospitals and the University of Liverpool to explore insights from our newly established hospital acquired pneumonia (HAP) dataset. This valuable research provided unique insights for policy makers to better understand the national burden of HAP. Mid Cheshire Hospitals and Southport & Ormskirk Hospital continued to drive improvements to care for patients with sepsis and AKI via their steering groups and implementation of systems for improvement.

Reducing unwarranted clinical variation

AQ's historic data show a strong track record in C&M for tackling and reducing unwarranted variation and developing highly reliable care with evidence of continuous improvement. However, pressures on providers to recover from the impact of the pandemic are significant and the impact of the NHS response is evident in worsened performance rates and widening variation between hospital Trusts. For example, the proportion of patients in each Trust receiving appropriate care for DLD varied from below 10% to above 50%.

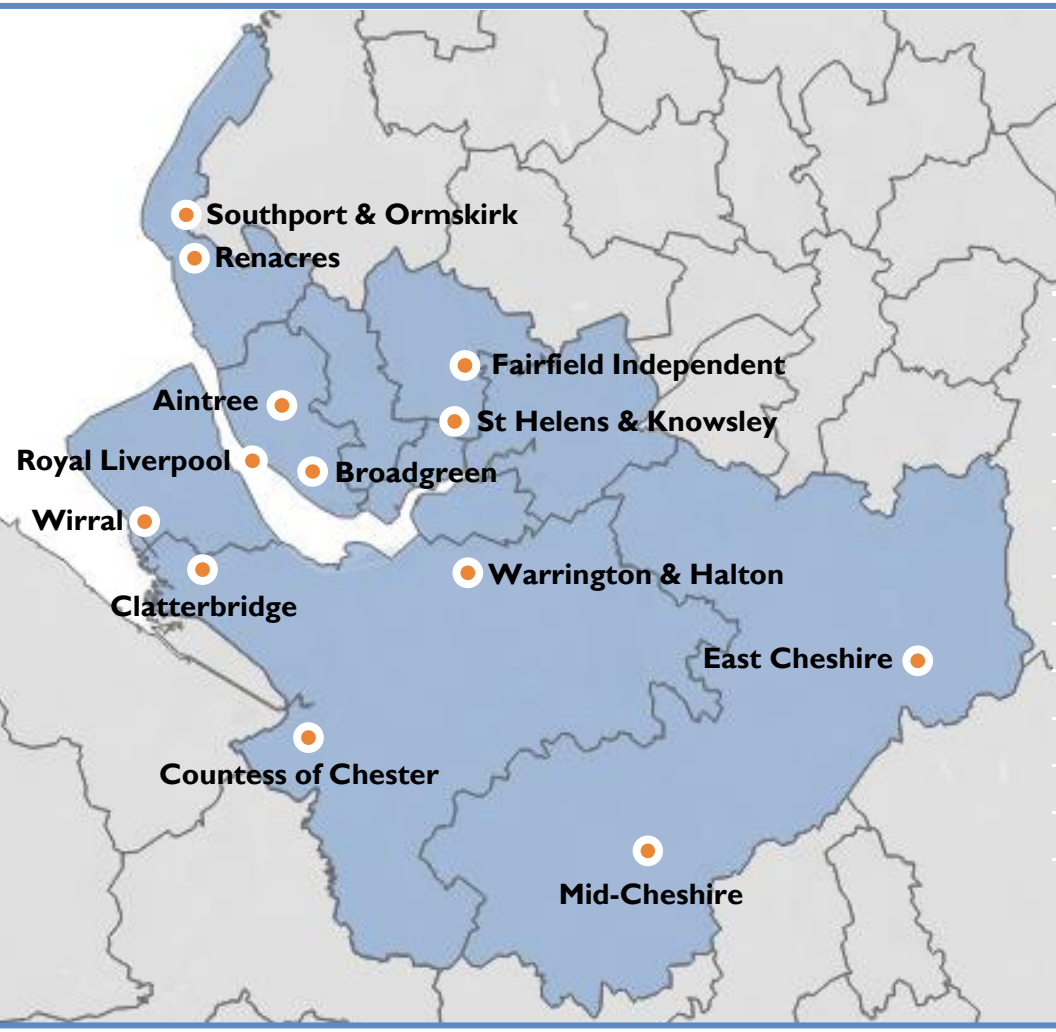
How Advancing Quality can help

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 C&M 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 CHESHIRE & MERSEYSIDE 2022

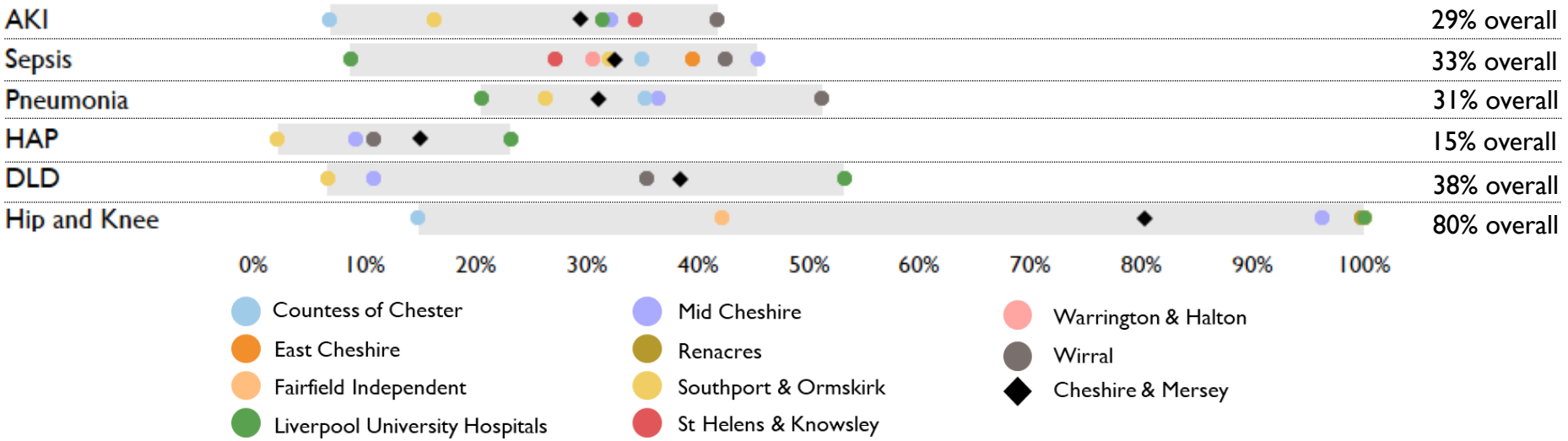


	AKI	CAP	DLD	HAP	Hip & knee	Sepsis	Total
Countess of Chester	248	218			162	468	1096
East Cheshire						192	192
Fairfield Independent					197		197
Liverpool University Hospitals	226	356	233	510	292	412	2029
Aintree	*109*	*206*	*128*	*199*	*1*	*211*	*854*
Royal Liverpool & Broadgreen	*117*	*150*	*105*	*311*	*291*	*201*	*1175*
Mid-Cheshire	180	217	101	172	237	174	1081
Renacres					397		397
Southport & Ormskirk	153	327	15	183	47	287	1012
St Helens & Knowsley	425					147	572
Warrington & Halton						144	144
Wirral	376	160	62	194		634	1426
Total	1608	1278	411	1059	1332	2458	8146

In 2022, nine of the 12 acute and specialist Trusts and two independent providers in Cheshire & Merseyside collected data in order to address unwarranted clinical variation in care delivered to their patients. This resulted in a validated, rich dataset detailing the treatment delivered to more than 8,000 patients. The table shows the number of validated cases by AQ clinical focus area; where a provider has no figures, they did not participate in that focus area in 2022. Three Trusts are participating in all clinical focus areas and this ICS has the greatest participation of the three in the North West region. The map shows participation at site level.

UNWARRANTED CLINICAL VARIATION IN CHESHIRE & MERSEYSIDE

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

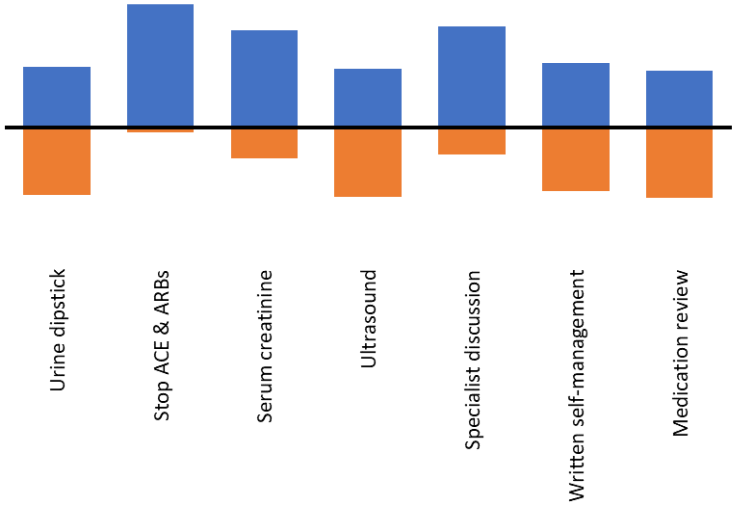
Headline

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.

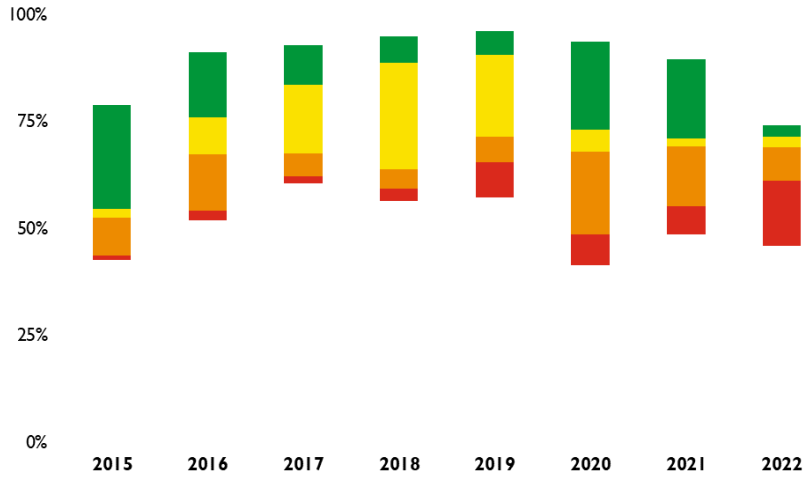
See the following pages for detailed information about Cheshire and Merseyside hospital performance in each of our clinical focus areas

Acute Kidney Injury in Cheshire and Merseyside

The AQ AKI measures in 2022



Trends in AKI Composite Process Score 2015-22



2022 Findings

Outcomes for AQ validated AKI patients in Cheshire & Merseyside (C&M; n=1613) were worse than for other ICSs in the North West. Patients spent an average of 15 days in hospital, 32% died in hospital and 23% were readmitted as an emergency within 30 days.

There were steady increases in the composite process score (CPS) between 2015-2019. Since 2020 the overall CPS has dropped and shown wider levels of variation. This indicates that the safety and reliability of care for AKI patients in C&M has reduced since the pandemic and there is more variation between Trusts.

Trusts driving change through a dedicated group involving staff from across the pathway have seen the most improvement, and this approach is being adopted by other C&M teams.

2022 Insights

The Trusts in C&M have the highest rates in the North West for stopping ACE inhibitors and ARBs within 24 hours of the first AKI alert, at 96%.

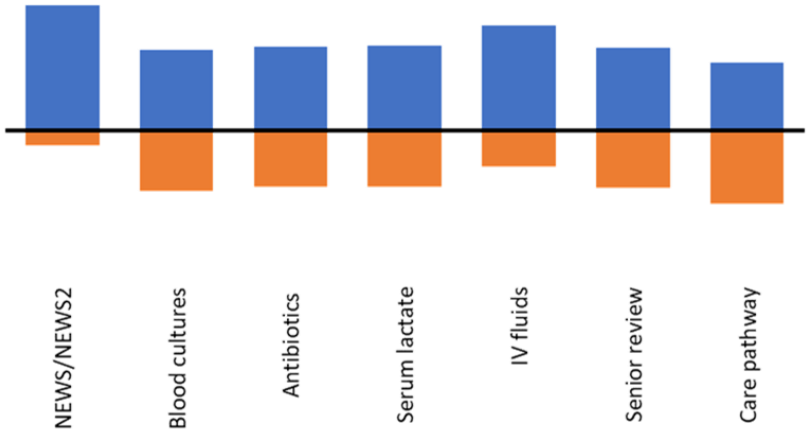
The most significant opportunity for improvement is for the less than half of patients receiving an ultrasound scan of urinary tract within 24 hours of the first AKI alert. NICE guidelines recommend scanning as it is known to help determine the cause of AKI and the optimal treatment pathway. Likely causes of poor compliance include national shortfalls in numbers of sonographers and demand on diagnostic ultrasound services due to the elective backlog. C&M has the highest levels in the North West for this measure.

With almost 1 in 4 AKI patients being readmitted, Trusts should focus improvement efforts on equipping patients with self management information (55%) and medication reviews (58%).

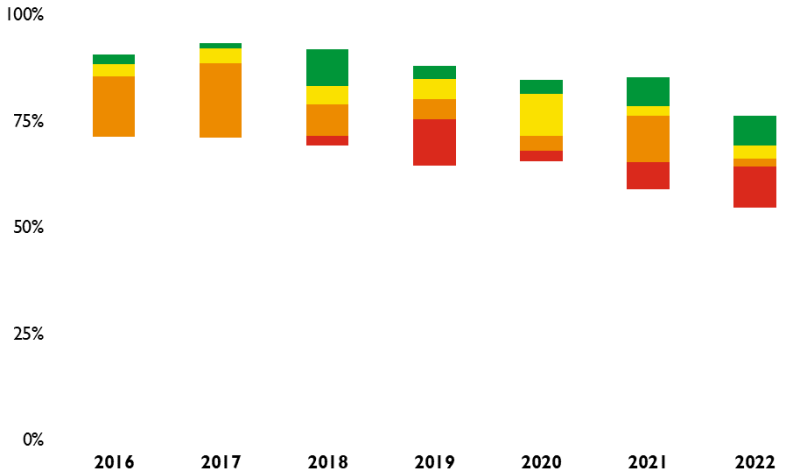
29% received perfect care

Sepsis in Cheshire and Merseyside

The AQ Sepsis measures in 2022



Trends in Sepsis Composite Process Score 2015-22



2022 Findings

AQ validated sepsis patients in Cheshire & Merseyside (C&M; n=2461) spent an average of 8 days in hospital. 21% died in hospital and 20% were readmitted as an emergency within 30 days.

The trends show that while there have been no increases in unwarranted clinical variation between Trusts in recent years, there has been a decline in the overall composite process score (CPS), which reflects the numbers of measures being achieved. This suggests the system should re-focus efforts into improving the care delivered to sepsis patients across all of the measures.

Several Trusts have put in place initiatives to improve care for sepsis patients, including work to improve documentation and coding, dedicated steering groups and using AQ data to identify barriers to change. Work should continue with support from the AQ team to address the challenges posed by changes to national guidance.

2022 Insights

1 in 3 patients received care that met all standards and 94% recorded an early warning score within an hour of arrival; the ICS has excellent participation for sepsis and a strong track record of working across Trusts to deliver improvement.

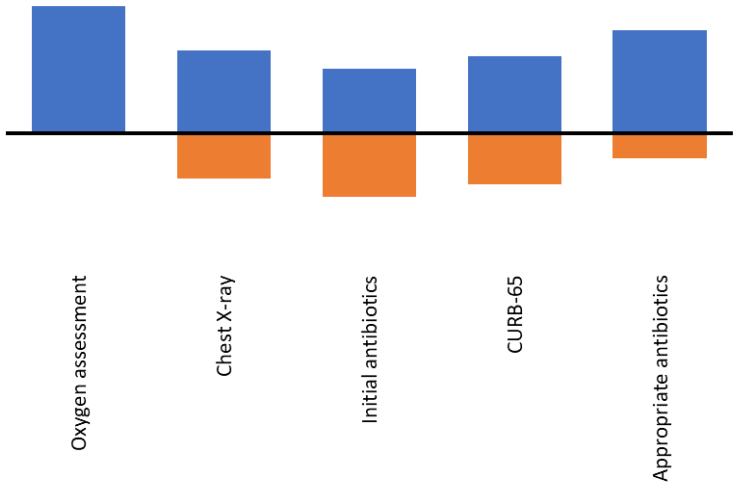
There remain significant opportunities to improve sepsis care; the C&M system falls behind Trusts in the Greater Manchester system for most of the sepsis measures in 2022. For example, in adequate administration of intravenous fluids, an intervention to restore organ perfusion, the ICS has lower rates than the other ICSs in the region.

A focus on improving the proportion of patients receiving a senior review (63%) and being put on a care pathway (50%) could deliver better outcomes for patients.

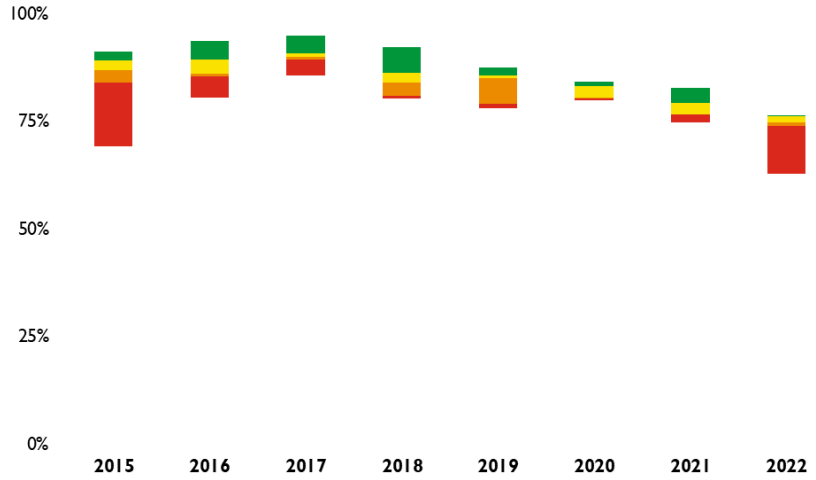
33% received perfect care

Community Acquired Pneumonia in Cheshire and Merseyside

The AQ CAP measures in 2022



Trends in CAP Composite Process Score 2015-22



2022 Findings

Community acquired pneumonia (CAP) patients in Cheshire & Merseyside (C&M; n=1281) spent an average of 5 days in hospital. 14% died in hospital, more than other ICSs in the region and 16% were readmitted as an emergency within 30 days.

Around half of the records of care coded as pneumonia are excluded through AQ's validation process. This provides a robust comparative dataset for Trust and regional benchmarking.

Between 2015-2017, C&M saw increases in the overall composite process score and a narrowing in levels of variation between Trusts. However since then performance has worsened, indicating a deterioration in care standards for these patients. 2022 saw a widening in unwarranted variation that the system should address.

The implementation of virtual wards for pneumonia patients across C&M should have a positive effect on length of stay and readmission rates. Liverpool's work to improve the documentation and coding process as well as diagnostic accuracy could be a useful approach for other Trusts.

2022 Insights

Along with other systems in the North West, C&M had strong performance for oxygen assessment in pneumonia patients.

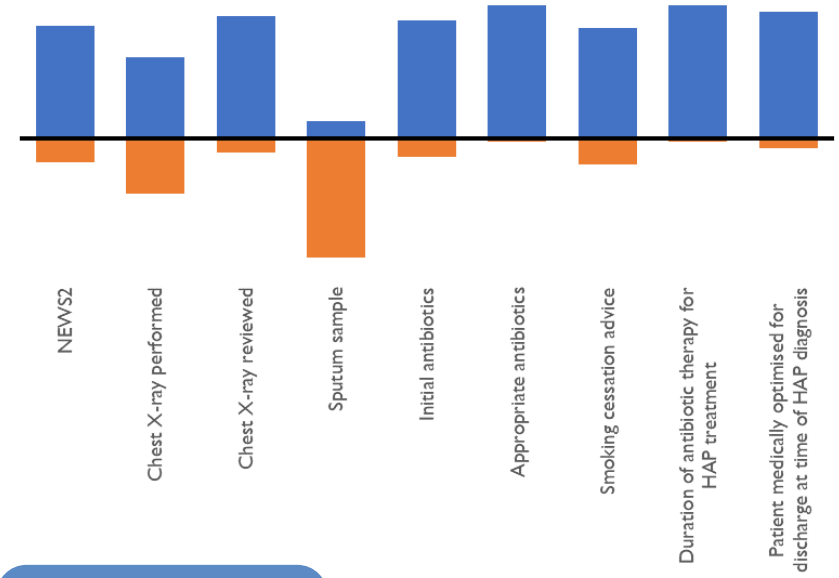
The lowest performing measure for C&M was for receipt of initial antibiotics within 4 hours of hospital arrival, which is a NICE recommendation. Only half of C&M patients received this in time, the lowest rate of the 3 ICSs in the North West.

The system was also the lowest (80%) for prescribing the most appropriate antibiotic selection for the specific bacteria causing the pneumonia. Improvement work could focus on opportunities to review optimising the delivery of appropriate anti-biotics to CAP patients.

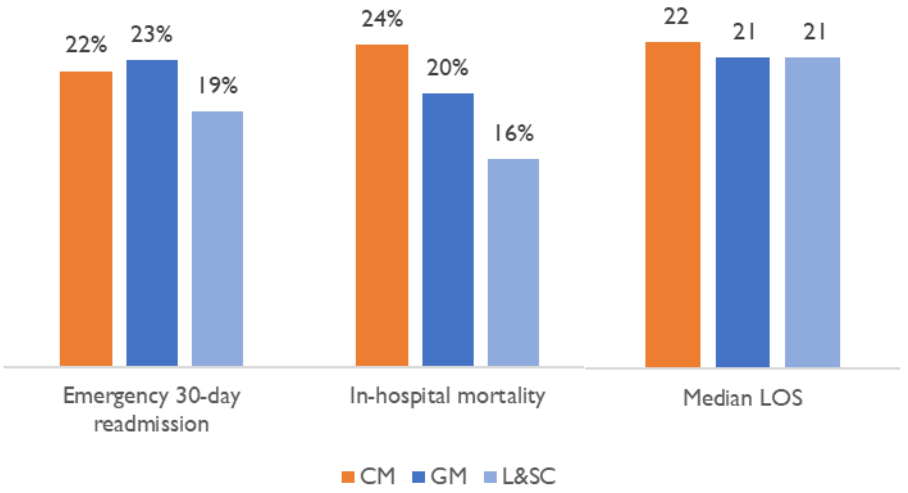
31% received perfect care

Hospital Acquired Pneumonia in Cheshire and Merseyside

The AQ HAP measures in 2022



Trends in HAP Composite Process Score 2015-22



2022 Findings

There is very limited data on hospital acquired pneumonia (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.

AQ hospital acquired pneumonia patients in Cheshire & Merseyside (C&M; n=1060) had a longer length of stay (median of 22 days) and higher in-hospital mortality (24%) than the other systems in the North West. The emergency readmission rate within 30 days of 22% was similar to elsewhere.

HAP is a new clinical focus area so it is not currently meaningful to look at trends in overall performance or reductions in levels of unwarranted clinical variation. Some improvement initiatives are in place, for example focussing on prevention, particularly mouth care, to reduce incidence.

2022 Insights

C&M Trusts are actively involved in this new clinical focus area and our clinical lead Dan Wootton is based at LUFT. In 2022 this work was recognised by a funded collaborative project with the University of Liverpool, using AQ data to estimate the burden of HAP and convening stakeholders to agree on evidence gaps and next steps to drive HAP policy.

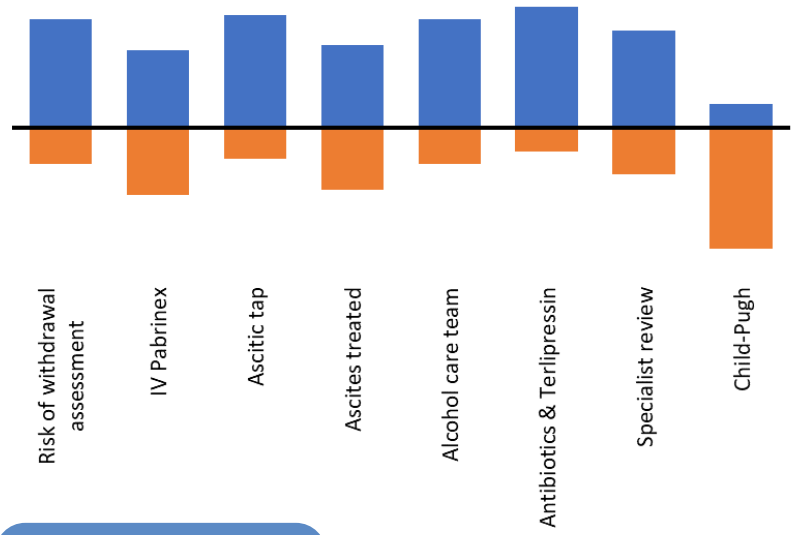
The most significant opportunity for improvement is to increase the proportion of patients having a sputum sample taken within 24 hours in line with current NICE guidance, as this currently only happens for 13% of patients.

Of the circa one thousand patients treated for HAP in C&M's participating Trusts, only 13% received all of the agreed care standards.

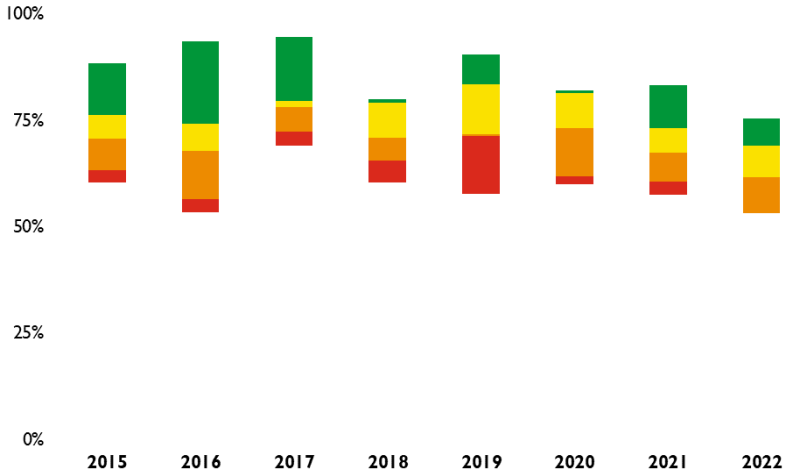
15% received perfect care

Decompensated Liver Disease in Cheshire and Merseyside

The AQ DLD measures in 2022



Trends in DLD Composite Process Score 2015-22



2022 Findings

Validated AQ data for decompensated liver disease (DLD) patients in Cheshire & Merseyside (C&M; n = 411) were not outliers for patient outcomes. DLD patients spent an average of 7 days in hospital, 14% died in hospital and 26% were readmitted as an emergency within 30 days. Decompensated cirrhosis (irreversible liver damage) is the third biggest cause of death in those of working age and average life expectancy is 1-3 years.

Only three Trusts in C&M participate in this focus area. DLD accounts for 1856 admissions per year in C&M and accounts for 19,358 bed days. It is a condition that disproportionately impacts people from the most deprived communities. Since 2019 the performance of C&M Trusts in delivering good care to these patients has worsened.

The recent development of a competency framework for alcohol care teams (PROACT) across C&M is a positive step to help standardise care and ensure patients are placed on the right pathway. Investment in dedicated improvement groups for DLD management would further drive improvement.

2022 Insights

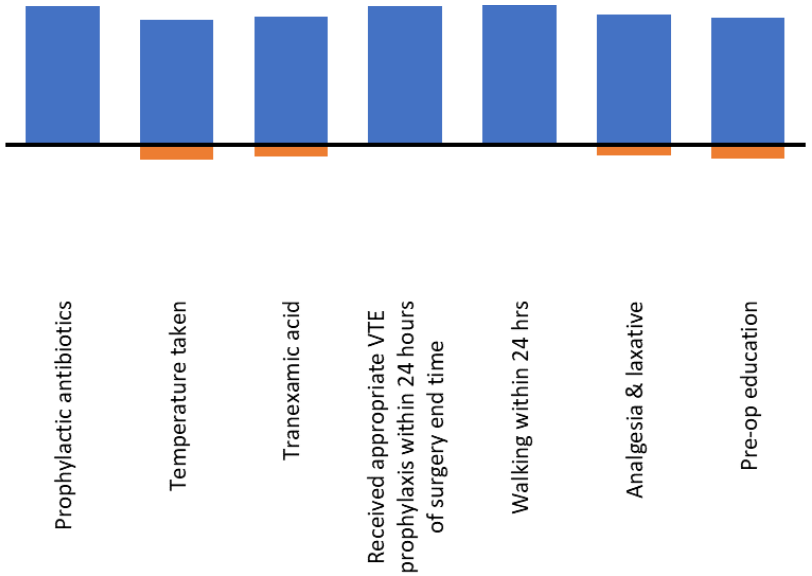
Across the measures for DLD the C&M Trusts generally performed better as an ICS than GM or L&SC. The highest performance was for treatment of suspected variceal bleed with antibiotics and terlipressin within 24 hours of hospital arrival, which was delivered to 84% of patients.

The most significant opportunity for improvement is for the 84% of patients who did not have a Child-Pugh score documented within 24 hours of hospital arrival. The Child-Pugh score is a system for assessing the prognosis - including the required strength of treatment and necessity of liver transplant - of chronic liver disease, primarily cirrhosis. It provides a forecast of the increasing severity of patients' liver disease and expected survival rate. Given 1 in 4 Cheshire and Merseyside patients are readmitted within 30 days, this might warrant further attention.

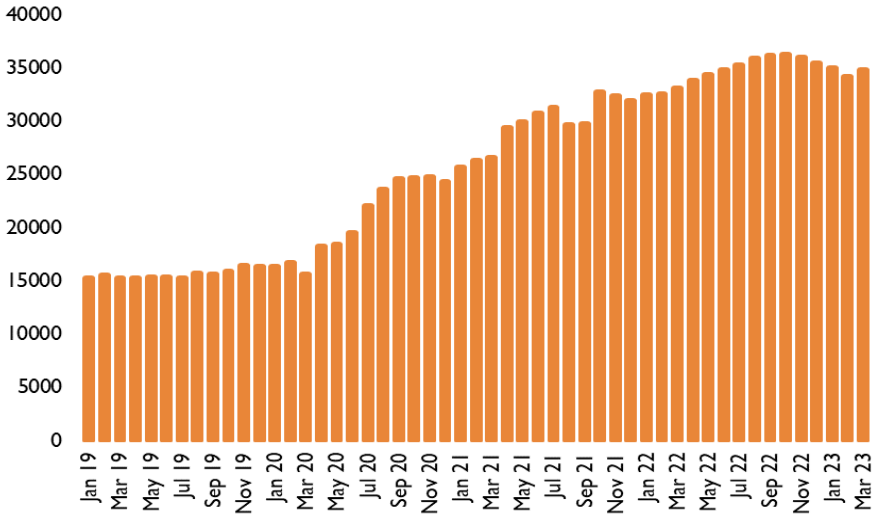
38% received perfect care

Hip & Knee Replacement in Cheshire and Merseyside

The AQ H&K measures in 2022



Trends in Trauma and Orthopaedic waiting list - Cheshire and Merseyside 2019-2023



2022 Findings

Validated AQ data shows that elective hip and knee replacement patients in Cheshire & Merseyside (C&M; n=1332) spent an average of 2 days in hospital, similar to the other ICSs, but had the lowest readmission rate (4%).

Performance across the AQ standards was consistently high for providers in C&M and across the rest of the North West, but these data only reflect care for those being treated and miss the experience of those waiting for their procedure.

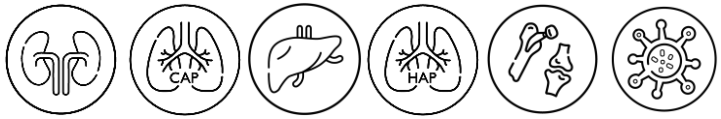
In C&M, the number of people on the trauma and orthopaedics waiting list has more than doubled since 2019. The AQ team have been working with clinical leaders and improvement teams across the North West to explore how shared decision making approaches might inform work to improve the experience of waiting for hip and knee replacements.

2022 Insights

Performance for antibiotics, VTE and mobilisation are at 100% for C&M. 1 in 5 patients are still not receiving all the agreed care 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, 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.

80% 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:

- Countess of Chester
- East Cheshire
- Aintree
- Royal Liverpool
- Mid Cheshire
- Southport & Ormskirk
- St Helens & Knowsley
- Warrington & Halton
- Wirral

Driving continuous improvement across Cheshire & Merseyside

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

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ADVANCING QUALITY
Reducing unwarranted clinical variation
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