

# CASE STUDY: SAVING LIVES USING THE ADVANCING QUALITY PROGRAMME - SUPPORTED BY CLARITY INFORMATICS' QUALITY IMPROVEMENT SERVICE

**Advancing Quality (AQ) is a proven approach to reducing variation and improving clinical outcomes for patients in the North West of England. The programme was launched in 2008, with five conditions highly relevant to the North West population, and with a strong clinical consensus around an evidence-base for better patient outcomes.**

Two years later, Advancing Quality became the flagship programme of the Advancing Quality Alliance (AQuA) and has been supported by Clarity Informatics' Quality Improvement Service (QIS) since 2010.

Although the care provided to each patient is tailored to meet their own individual needs, clinicians from across the region have agreed that a number of key processes should happen. If these are carried out at the same time and in the same way for every patient, then all patients will receive the best possible care. These Clinical Process Measures are the basis of Advancing Quality and the aim for all participating provider organisations is to ensure that all patients receive the appropriate interventions where clinically appropriate.

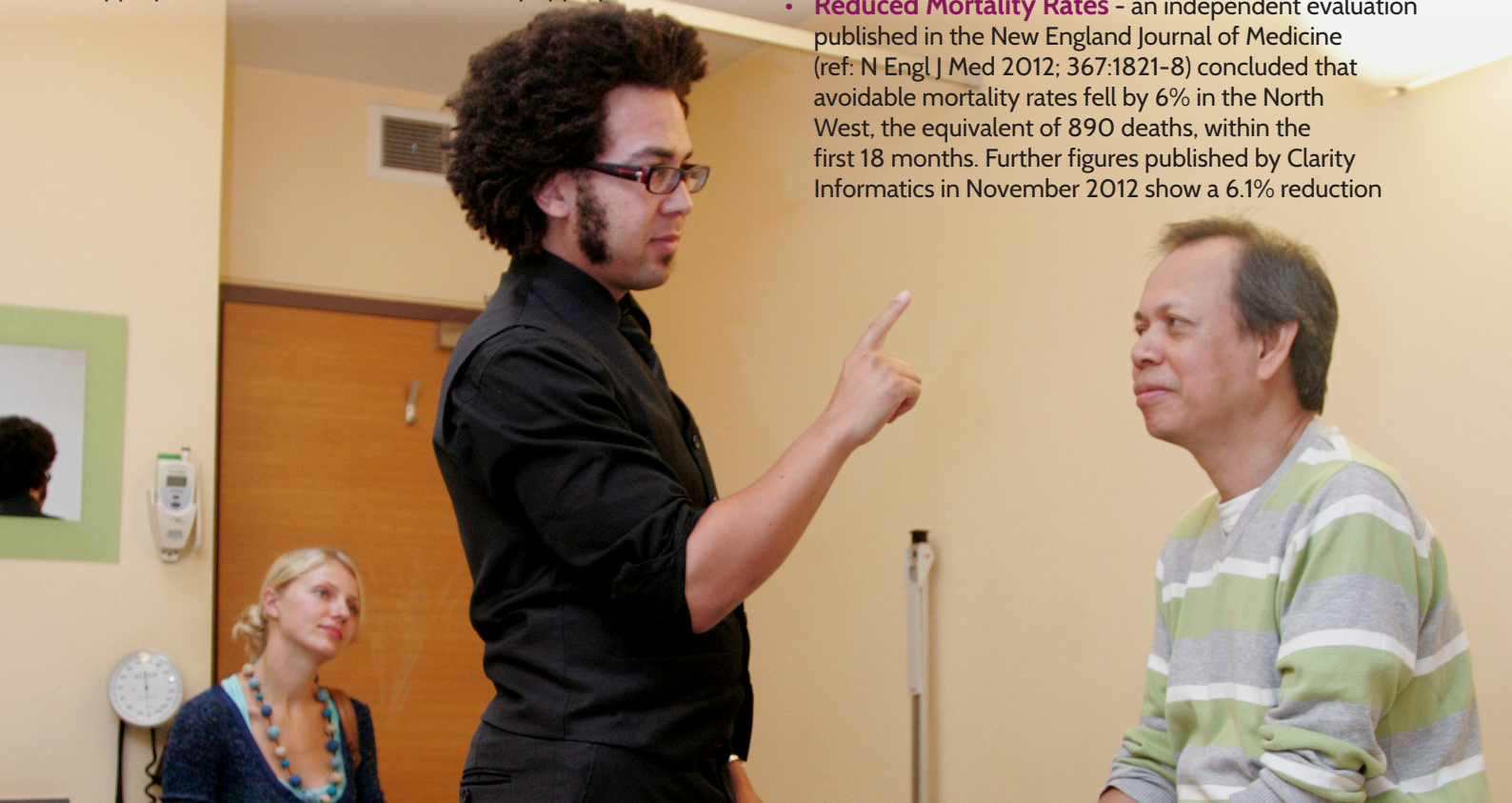
With a strong ethos of transparency and shared learning, AQ benchmarks clinical quality and helps hospitals work together by using standardised data collections. It has resulted in the full clinical and administrative teams becoming involved in the patient journey and thousands more patients receiving the right care at the right time and in the right place. AQ is funded by all North West Clinical Commissioning Groups (previously all NW Primary Care Trusts) and is 'live' in 34 acute and mental health provider trusts.

To use a compelling quote from the project's champion who originally worked on the AQ project and former Chief Executive of the NHS Confederation Mike Farrar: *"My only regret is that this programme did not become national."*

Since its launch in 2008, more than 300,000 patients have benefitted from the introduction of Advancing Quality, equating to approximately 7.5 per cent of all adult inpatient admissions to the region's hospitals each year.

## Key Outcomes

- **Reduced Mortality Rates** - an independent evaluation published in the New England Journal of Medicine (ref: N Engl J Med 2012; 367:1821-8) concluded that avoidable mortality rates fell by 6% in the North West, the equivalent of 890 deaths, within the first 18 months. Further figures published by Clarity Informatics in November 2012 show a 6.1% reduction



in crude mortality in hospitals using QIS since 2010. A statistically significant reduction can be demonstrated in age-standardised mortality over the period of this programme. In acute myocardial infarction this equates to a reduction of 3.7%, in pneumonia this equates to a reduction of 2.9%.

- **Reduced Admissions/Shorter Stays** - a statistically significant reduction in re-admissions can also be demonstrated of 5.5% in patients suffering heart failure and there is evidence of reduction in length of stay for patients undergoing hip and knee replacement surgery over the period of the programme.
- **Higher Return on Investment** - research suggests AQ offers a 8 fold return on investment using NICE standards for the return expected from any clinical intervention, i.e. for every £1 invested, patients get £8 back in health benefits. An additional evaluation paper published in Health Economics (Health Econ. (2013) DOI: 10.1002/hec) also indicates around 22,802 bed days were saved during the first 18 months at an approximate value of £4.4m. If this has been replicated over the subsequent years of the programme to date, the savings will be in the region of £15m.
- **Reduced Regional Variation** - adopting clear definitions with simple processes for data collection and analysis has standardised clinical practice, making services comparative and reducing variation across the region. The fact that it is clinically-led with robust data collection mechanisms in place and independently assured every year means that the data produced is trusted by clinicians and shared across the clinical community as a credible source.
- **Improved Clinical Services** - it is a programme with multi-layer incentives and the transparency of the data, which is publicly reported each year. This drives clinicians and teams to improve, not only for their own personal development, but also for their organisation's reputation. The programme of collaboratives enables the sharing of best clinical practice across the North West to promote truly patient-centred care e.g. the benefits of adopting an antibiotic policy prescribing all first dose medication for pneumonia patients as 'STAT' resulting in patients getting better quicker, as presented by a pharmacist from St Helens and Knowsley NHS Trust.
- **Greater Collaboration** - AQ encourages collaborations between commissioners, providers and clinicians through the programme's governance structure and, after historically having been funded by all North West PCTs, all 34 North West Clinical Commissioning Groups (CCGs) have agreed to continue financing the programme.

## Clinician Feedback

Professor Daniel Keenan, Consultant Cardiothoracic Surgeon; National Clinical Advisor to the Care Quality Commission says: *"At the beginning of the programme we created cardiac surgical groups and designed our own measures around those already in place. We worked with them to make them a bit more specific for us and created our first set of measures, which comprise 4 or 5 simple tasks that are routinely done in our every day work. This is now part of our routine systems. Data is presented to us every quarter which we are able to review and analyse. It all helps us to put together more "aspirational" measures, such as post-operative wound infection, and blood transfusion. We will also be looking at patient experience and outcome measures. AQ and QIS help us to provide an enhanced quality of care for our patients."*

Dr Scot Garg, Consultant Cardiologist at East Lancashire NHS Trust and Advancing Quality clinical lead for acute myocardial infarction (AMI) has been working in this role since early 2012 and involved in the project since May 2011. He explains: *"Advancing Quality aims to - and succeeds in - improving patient care for AMI and other areas. All of the individual measures are known and proven to improve outcomes, but putting them all together in a framework ensures that clinicians don't do something dramatically different and follow treatments that will improve the quality of patient's care. We already have NICE, but Advancing Quality incorporates seven or eight measures that help simplify care, whilst maximising quality."*

## Background

Advancing Quality was launched in 2008 and is 'live' in all 32 NHS acute and mental health provider trusts in the North West, along with two private providers. The programme sits under [AQuA](#), which is a membership body in the North West of England aiming to improve the quality of healthcare. [Clarity Informatics](#) is an internationally-renowned centre of excellence in the application of evidence-based health informatics.

Five years ago, there was no systematic way of defining high quality in the North West. The region had a widely recognised set of problems where outcomes were improving, but there was a higher mortality rate than the national average and the gap was not closing.

Data produced by the North West healthcare system was not comparative so it could not be trusted to benchmark and was not being shared. Clinicians were also unable to identify patients within their own organisation e.g. patients with ambiguous symptoms were not always under the care of the relevant specialist and therefore not on the correct pathway.

It was agreed that designing local stand-alone quality campaigns and incentives would be confusing and sub-optimal for health system and public, and there was a strong will across the clinical and management community to implement region-wide quality improvement programme.



Under stewardship of the North West Strategic Health Authority, Advancing Quality launched in 2008 in five conditions highly relevant to NW population and with strong clinical consensus around an evidence-base for better patient outcomes. The programme translated from the US Health Quality Incentive Demonstration (HQID), which already achieved significant benefits.

## Key Aims

The aim of Advancing Quality is to save lives, reduce variation in care across the North West, and reduce readmissions and complications while raising the bar on outcomes in the major diseases.

## Key Stages of Setup

AQ launched in 2008 after gaining executive level 'buy in' from all participating organisations. Key clinicians were identified in each organisation to lead the programme in each condition. It was agreed that the data collection must be feasible and affordable using data already collected electronically wherever possible. IT systems were set up to (a) allow clinicians to identify patients quickly and (b) enable data to be extracted, anonymised and aggregated to identify achievements/failures for clinical teams and management to develop better pathways.

Full clinical and administrative teams became involved in the patient journey. The region's NHS trusts adopted a collaborative approach where AQ teams meet regularly with NW peers to share best practice and seek advice/support on specific measures e.g. if a trust is struggling with smoking cessation advice, they can identify from data the teams achieving highest results and ask for advice.

Clinical leaders were encouraged to own and lead the development and definition of the measures while engaging with the clinical community. The principles for working together are embedded and leaders across the healthcare system can speak about quality and quality improvements as a common voice.

Advancing Quality was originally 'live' in five clinical conditions; Acute Myocardial Infarction (AMI) i.e heart attacks, Coronary Artery Bypass Graft (CABG) surgery, heart failure, pneumonia and hip and knee replacement surgery. The early success of the programme resulted in an expansion into stroke (2010) and two mental health conditions, dementia and First Episode Psychosis (FEP), in 2011.

The clinical quality measures are broadly consistent with the measures used in the US Joint Commission accreditation process and aligned with NICE Quality Standards wherever possible. The AQ measures are now part of the Commissioning for Quality and Innovation (CQUIN) framework enabling commissioners to reward excellence through achievement of quality improvement goals.

## How it Works

The data for each patient is recorded as part of the normal clinical record, and Advancing Quality scores how well providers are delivering against these key quality of care measures. The expectation is that each measure should be delivered to every eligible patient to ensure they receive the highest standard of care in hospital. Each percentage score shows how successfully the doctors, nurses and other clinical staff are delivering to the agreed quality standards for their patients.

The programme also takes into account the patient's personal view of whether there has been any improvement in their quality of life following treatment or surgery (known as Patient Reported Outcome Measures) as well as their personal opinion about their overall experience in hospital and the care they received. The results are publicly reported via [www.advancingqualitynw.nhs.uk](http://www.advancingqualitynw.nhs.uk) once they have been assured by independent auditors.

Each focus area has a clinical lead who leads bi-annual collaboratives with all AQ teams. In 2012, 1,010 clinicians, nurses and administration teams from 32 NHS trusts attended 24 collaboratives to share training techniques, best practice ideas, the latest results and how to improve care across the region. Steps taken to re-engineer care include trusts protecting beds for stroke patients ensuring they are admitted to a stroke unit within four hours, subsequently resulting in them receiving other measures on time, and introducing prompt cards that list the measures for clinical teams to ensure patients receive the right care.

Blackpool, Fylde and Wyre NHS Hospitals Foundation Trust created a pneumonia e-Learning package to ensure all doctors were complying with documentation of the AQ measures. It is now part of the induction process for new doctors and consultants. Since AQ launched, the appropriate care score for Blackpool's pneumonia patients (i.e. did the patient receive perfect care) has increased from 42% to 85%.

## Resources

AQ was historically funded by all NW PCTs each committing 0.1% of their annual allocations. Since April 2013, Clinical Commissioning Groups have continued to fund Advancing Quality.

## Key Challenges

- **Clinical ownership** – clinical "buy-in" has been an essential component of this service. This has been achieved by establishing clinical leads for each focus area and by having regular clinical collaborative meetings. Measures have also been reviewed and developed as a result of clinical involvement which has fostered the sense of ownership

- **Technical barriers** – multiple technical issues have been resolved in order to collate, process and report on the clinical measures. This is testament to the dedication of the technical teams in both organisations and at NHS trusts
- **Diverse working practices** – information has been shared using regular reports to trusts. In addition to this clinical teams have shared best practice at collaborative meetings. This has improved quality scoring and reduced variation in performance across trusts over the period of this programme

## Key Learning

Closer working relationships between previously diverse groups of professionals have afforded huge benefits. The engagement of coders, data clerks, clinicians, managers and allied health professionals has driven quality and reduced barriers to change.

Reliable high quality data has enabled clinical discussions to be on a firm footing and gives confidence to all stakeholders.

## Sustainability

AQ triggered local IT developments making it easier to identify patients and improve communication between departments e.g. heart failure nurses now know when a potential patient has been admitted to a different ward and do daily visits to ensure that they are on the correct care pathway as quickly as possible. It has also led to better education e.g. A&E staff treating a patient admitted with pneumonia know to get timely CURB 65 documents, and oxygen saturation tests done before their transfer to ward. Furthermore, clinical documentation has improved making transfers smoother as better documentation follows the

patient when transferred between organisations – e.g. hyper acute stroke pathway. AQ has also standardised clinical practice and adopting a collaborative approach means trusts are now working together to improve outcomes for patients. The open and transparent approach to data collection, sharing and reporting, provides evidence for the public and patients that their best interests are at the core of commissioning decisions and the publicly reported data enables patients to make informed decisions about their care

## Next Steps

This approach has been replicated in the south east (the Kent Surrey and Sussex Academic Health Science Network's Enhancing Quality and Recovery programme) and AQ is now extending into 'whole system' measure-sets with an emphasis on ensuring the same care is provided to all patients regardless of the setting in which that care takes place. Pilot work to test the concept of a measure-set, encompassing both primary and secondary care is underway in COPD. The plan is to roll out into diabetes and alcohol-related liver disease in 2014/15. These projects are innovative and ground breaking in the UK and should provide important benchmarks for future clinical quality improvement.

## Supporting Material

The following resources are available as an appendix to this case study:

- Appendix 1 - AQ programme case studies
- Appendix 2 - AQ business plan
- [www.clarity.co.uk](http://www.clarity.co.uk)
- [www.advancingqualitynw.nhs.uk](http://www.advancingqualitynw.nhs.uk)
- [www.enhancingqualitycollaborative.nhs.uk](http://www.enhancingqualitycollaborative.nhs.uk)

## Safety, Quality & Value

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For more information contact:

Dr Gerry Morrow  
Clinical Lead Quality Improvement Service  
[Gerry.Morrow@clarity.co.uk](mailto:Gerry.Morrow@clarity.co.uk)  
0191 287 5800

Jane Harper  
AQ Project Manager  
[Advancing.Quality@nhs.net](mailto:Advancing.Quality@nhs.net)  
0161 743 2088