

Using quality improvement to pursue equity: lessons from healthcare

Marco Aurelio¹

Katherine Brittin¹

Lorna Darknell¹

Auzewell Chitewe¹

Amar Shah^{1,2}

Author details can be found at the end of this article

Correspondence to:

Marco Aurelio;
m.aurelio@nhs.net

Abstract

Against a backdrop of stalling life expectancy, the COVID-19 pandemic highlighted the need to tackle inequities in healthcare. Quality improvement has become an increasingly recognised way of tackling complex problems in healthcare. This article presents a step-by-step approach for the use of quality improvement to pursue equity at an NHS provider in England. The Model for Improvement was used to set an aim, develop a theory of change and measures, and test change ideas through plan-do-study-act cycles. A five-step sequence of improvement was used to provide a structured approach to identifying and tackling problems. Projects were designed to use a time series testing strategy in which baseline data were collected, a change was introduced and data continued to be collected over time to assess improvement. The results of three teams that have demonstrated sustained improvements were analysed using statistical process control charts. The teams' achievements included a 27% increase in access to early intervention mental health services for ethnic minority groups; a 92% reduction in racist incidents on inpatient wards; and a reduction in the gap between cervical screening rates for different age groups from 8% to 3%. Quality improvement offers those closest to the delivery of care a way of systematically making improvements in equity. Further opportunities for the field include the use of experimental designs to test combinations of interventions and potential scalability of quality improvement methods across systems with multiple partners.

Key words: Equity; Quality of care; Quality improvement

Received: 15 December 2023; accepted following double-blind peer review: 26 February 2024

Introduction

Health inequalities can be defined as differences in health between groups that are unnecessary, avoidable, unfair and unjust (Whitehead, 1992). Such groups may be defined by geographical area, socioeconomic circumstances, or demographic characteristics such as ethnicity, age, gender or sexual orientation. For example, men residing in the most deprived areas of England live an average of 9.4 years less than those in the least deprived areas (The Health Foundation, 2022). Meanwhile, those of South Asian ethnicity have a higher risk of developing cardiovascular disease than other ethnicities in the UK (Razieh et al, 2022).

The COVID-19 pandemic both highlighted and exacerbated health inequities in England (Chaudhuri et al, 2021). The UK government has outlined a national approach to reducing geographic inequalities by shifting resources to 'forgotten' communities (UK Government, 2022), while NHS England (2023) has launched the Core20 Plus5 national approach to support integrated care systems to target health inequalities. As part of this approach, five key clinical areas have been identified: maternity; severe mental illness; chronic respiratory disease; early cancer diagnosis; and hypertension.

Quality improvement to pursue equity

While the rationale for addressing inequity is largely undisputed, the way to achieve this is less certain. Hirschhorn et al (2021) suggested that healthcare inequity should be approached in a wider quality management system that considers quality planning, quality assurance and quality improvement. There is clearly an important role for quality planning in addressing inequities. This approach involves forming a deep understanding of the needs of the population, scanning the available evidence and designing the structures and processes required to meet these needs (Shah, 2020). However, the strategic nature of planning processes to tackle inequalities at a high level may leave frontline healthcare

Distributed under Creative Commons CC BY-NC 4.0

OPEN ACCESS

How to cite this article:

Aurelio M, Brittin K, Darknell L, Chitewe A, Shah A. Using quality improvement to pursue equity: lessons from healthcare. *British Journal of Healthcare Management*. 2024. <https://doi.org/10.12968/bjhc.2023.0142>

practitioners feeling that they have little opportunity to influence inequities (Ford et al, 2021). The Royal College of Physicians highlighted that only 26% of clinicians felt equipped to tackle health inequalities in their practice (Birtles, 2023).

The authors believe that quality improvement can be used to identify and address inequities in healthcare. Quality improvement is a systematic method that can be used to address complex problems by involving people closest to the issue, developing and testing creative ideas through rapid cycles of testing and learning, and measuring improvement over time (Shah, 2020). Quality improvement has been used to tackle variation and improve outcomes in a range of areas, including asthma services (Aurelio et al, 2023), intensive care units (Tuma et al, 2023), inpatient mental health wards (Taylor-Watt et al, 2017) and human immunodeficiency virus services (Webster et al, 2012).

There have been some attempts to use quality improvement to improve equity (Siegel et al, 2012; Reichman et al, 2021; Lion et al, 2022). These studies describe an underlying set of principles for undertaking equity-based quality improvement work, rather than a systematic step-by-step approach, and there is a lack of literature in UK contexts. Overall, equity has remained notably absent from the practical application of quality improvement (Wyatt et al, 2016). Without a dedicated focus on equity, quality improvement work can become a one-size-fits-all intervention that may be ineffective for disadvantaged groups and lead to worsening inequalities (Weinick and Hasnain-Wynia, 2011).

This article outlines how quality improvement can be used to tackle health inequity based on the authors' experience of supporting teams in an NHS trust. It presents a case for using quality improvement as a method for practically addressing inequity, close to the point at which the inequity is experienced. The authors aim to demonstrate how organisations can use quality improvement to tackle inequity, key factors for success and areas of potential future exploration in this field.

Methods

East London NHS Foundation Trust (ELFT) provides mental health, community health, primary and specialist care services to around 1.9 million people in 120 different sites, spread across Tower Hamlets, City of London, Hackney and Newham in East London, and Luton and Bedfordshire. The population is highly diverse in terms of demographic, social and economic characteristics, with high levels of deprivation in some areas (ELFT, 2023). The trust has been using quality improvement since 2014 to tackle complex problems, including violence on inpatient wards, patient access and flow, joy in work and population health.

ELFT uses the Model for Improvement approach to quality improvement (Langley et al, 2009). All improvement work at the trust follows a standard five-step sequence of improvement:

1. Identification of the quality issue
2. Understanding the problem
3. Developing a strategy and change ideas
4. Testing
5. Implementation and sustaining the gains.

To the authors' knowledge, this is the first attempt to use the sequence of improvement to tackle inequity.

Step one: identify the equity gap

Initially, teams need to understand the target population experiencing the issue. This population group could be characterised by various factors, such as demographics, patterns of service use (eg number of acute visits, medications), geographical location and social factors (eg income level, housing status, employment status). Such data can be obtained via routinely collected data held in trust databases. Teams at ELFT disaggregated data via demographic characteristics, including age, gender, ethnicity, sexual orientation, postcode, employment and deprivation status. The data were examined to determine whether certain groups of people have poorer access to services, experience of care, or outcomes.

Teams used a reference group to compare the population of interest against (Wyatt et al, 2016). Reference groups could be the group with the best outcomes, or include risk-adjusted

approaches (Keppel et al, 2005). For example, an ELFT community mental health team in Tower Hamlets looked at the waiting times from first assessment by deprivation decile. This allowed them to identify a specific subgroup of their population living in the bottom 20%, which was overrepresented among those waiting the longest for an assessment. Meanwhile, a team from Newham, who provide secondary psychological support for conditions such as complex depression, anxiety, post-traumatic stress disorder and personality disorders used a pareto chart to help them identify referrals by ethnicity (Figure 1). This allowed them to identify if any groups were underrepresented.

Table 1 gives examples of populations and equity issues identified by teams as the focus of their quality improvement project.

Step two: understand the equity gap

To understand the identified issues, teams needed to explore systemic factors that contribute to it and the assets that they would work with. Common quality improvement tools such as process maps and fishbone diagrams were used to achieve this. Based on learning from helping teams to use quality improvement to support population health work (Shah et al, 2021), the trust also encouraged teams to undertake of a three-part data review to help them understand the inequities and lay a solid foundation for the quality improvement work (Wyatt et al, 2016). This method involves reviewing available service and public health data, seeking input from those working with and supporting the population, and learning from people with lived experience.

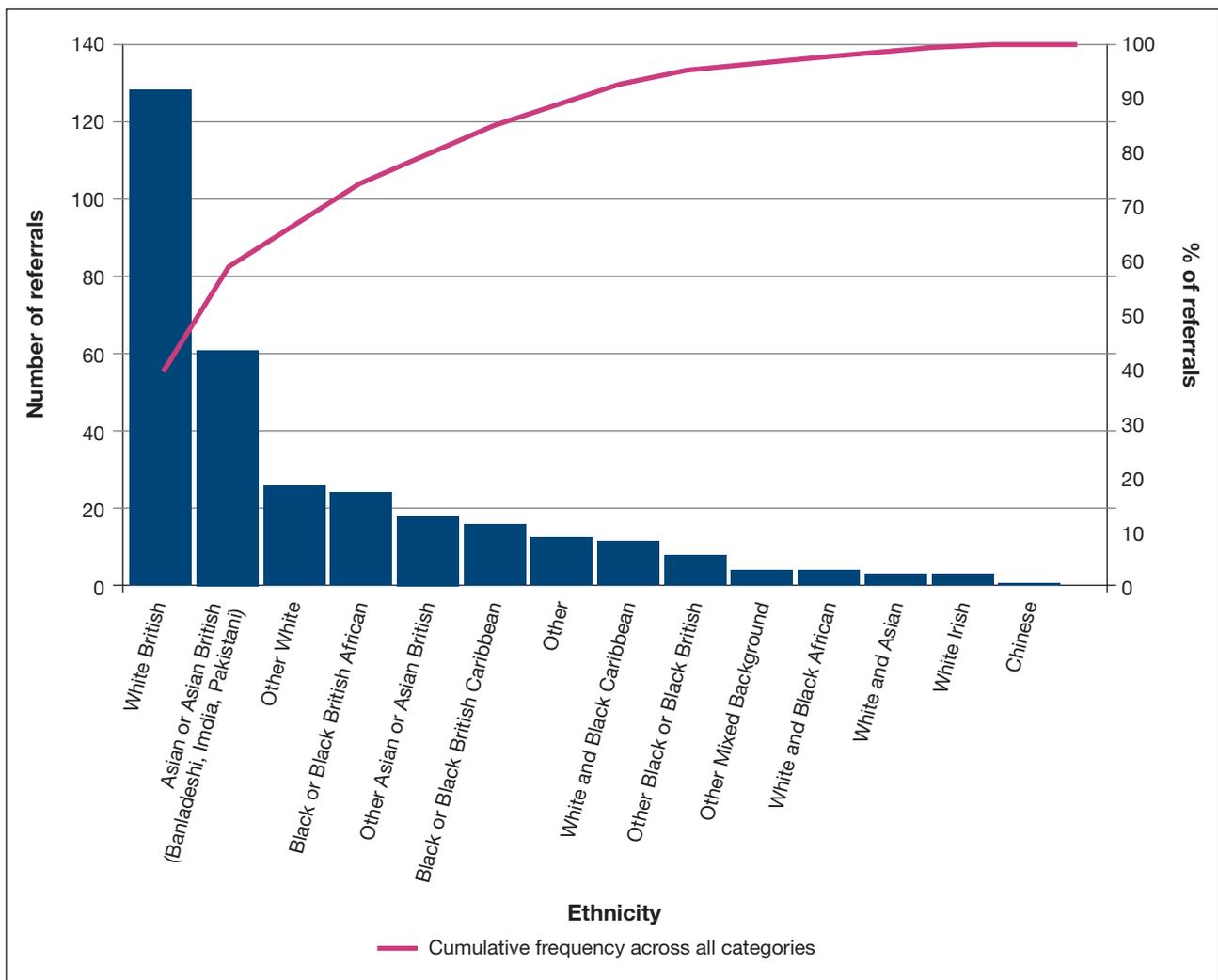


Figure 1. Pareto chart of referrals by ethnicity from a psychological therapy service in Newham.

© 2024 The authors

Table 1. Equity issues tackled using quality improvement at East London NHS Foundation Trust

Equity area	Population and equity gap being approached
Ethnicity/ race	<ul style="list-style-type: none"> • Access to early intervention services for Black, Asian and ethnic minority groups • Access to talking therapies services for Asian men aged over 40 years • Access to talking therapies for Black men aged 18–25 years • Recovery rate for Bangladeshi patients accessing talking therapies • Racism on an inpatient forensics ward
Sexuality	<ul style="list-style-type: none"> • Membership to the trust's LGBTQ+ network • Experience of young people who identify as LGBTQ+ on an adolescent mental health ward • Incidents against LGBTQ+ populations on an inpatient female mental health ward
Age	<ul style="list-style-type: none"> • Cervical screening rates in women aged 24–64 years
Gender	<ul style="list-style-type: none"> • Gender pay gap between female and male doctors • Access to sexual and reproductive health on an inpatient forensic ward • Access to perinatal health services for women with serious mental illness

LGBTQ+=lesbian, gay, bisexual, transgender, queer and others

The teams began by reviewing data that were already collected by their organisation, such as patient records, complaints, patient experience and service use data. Wider public health and census data were also consulted to identify differential patterns of care and outcomes for populations. The teams spoke to people who work with and support the population, such as staff, voluntary and community organisations, to understand the needs and perspectives of the population, identify barriers to care and develop solutions. Teams also reached out to people with lived experiences of inequity to understand the impact on their lives, identify the assets that the community already possessed and develop feasible solutions.

For example, the child and adolescent mental health services team in Luton are engaged in an ongoing effort to improve mental health outcomes for children and young people in the most deprived parts of the community. Luton Borough Council's (2021) mental health needs assessment for young people showed that the area had the highest rate of deprivation in the east of England. The team also looked at the annual school health education survey, which showed increases in self-reported low self-esteem, anxiety and dissatisfaction with life among children and young people in Luton (Luton Borough Council, 2021). The team then gathered information from 65 young people, four parents and 19 staff from local schools through a series of surveys, interviews and focus groups. This helped them to understand the key themes that were important to this population, which included having healthy resilient families, children and young people enjoying their communities, improved working between partner agencies and effective pathways to support children and young people in need.

Step three: develop a strategy and change ideas

With a greater understanding of the equity gap being tackled, the teams could form an aim statement to create a shared purpose and specify the quality standards, boundaries and timescale of the work (Langley et al, 2009). When using quality improvement to pursue equity, it is important to name both the inequity and the group experiencing it in the aim statement (Reichman et al, 2021). Examples of aims statements include:

- To achieve a 50% recovery rate for Bangladeshi patients accessing talking therapies by 31 March 2024
- To reduce the number of recorded incidents against LGBTQ+ patients on an inpatient ward by 50% by December 2023
- To increase referrals to talking therapies for young Black men aged 18–25 years from 1.5% to 1.8% by December 2023.

Driver diagrams, or theories of change, were then created to provide a one-page visual description of the key drivers and change ideas that were believed to help the teams achieve

their aims (Provost and Bennet, 2015). Drivers are categorised as primary or secondary, describing the key structures, processes and culture that need to be influenced to meet the aim (Provost and Bennet, 2015). This part of the process is particularly important for equity work, where the causes of problems are multifaceted (Whitehead and Dahlgren, 1991) and combinations of interventions across personal, relational, community and societal levels are needed (Richard et al, 2011; Paskett et al, 2016).

The teams drew on the work done to understand the equity gap and best practice interventions from the wider evidence base to help them formulate a driver diagram and change ideas. Teams were supported to create the driver diagrams through a facilitated exercise using the nominal group technique to help bring about effective group decision making (Gallagher et al, 1993). This gave team members an opportunity to generate ideas, making the process more democratic. All ideas were then clustered into groups to create the driver diagram. This process was usually completed over the course of one session, either in person or virtually, using collaborative tools such as Google jamboard or Microsoft whiteboard.

For example, the Newham talking therapies service identified that Black men aged 18–25 years were underrepresented in their service compared to the wider population. This corresponded with the wider literature that they reviewed, indicating that Black men are more likely to encounter mental health services in crisis or be admitted to inpatient care via the justice system rather than through primary psychological care (Henderson et al, 2015; Darko, 2021). Working with staff and service users, and using evidence from the research literature, the team developed a driver diagram (Figure 2) to show the set of activities that they believed would help to improve access for this group.

This team’s theory of change identified a range of different interventions, covering different parts of the system. For example, stigma has been reported as a barrier for young Black men in seeking mental health support (Watkins and Neighbors, 2007), so this was identified as a primary driver. Meanwhile, the change ideas focus on working with local leaders and using existing safe spaces (such as barbers), as these strategies have been effective in engaging with this community (Devonport et al, 2022; Ogborn et al, 2022).

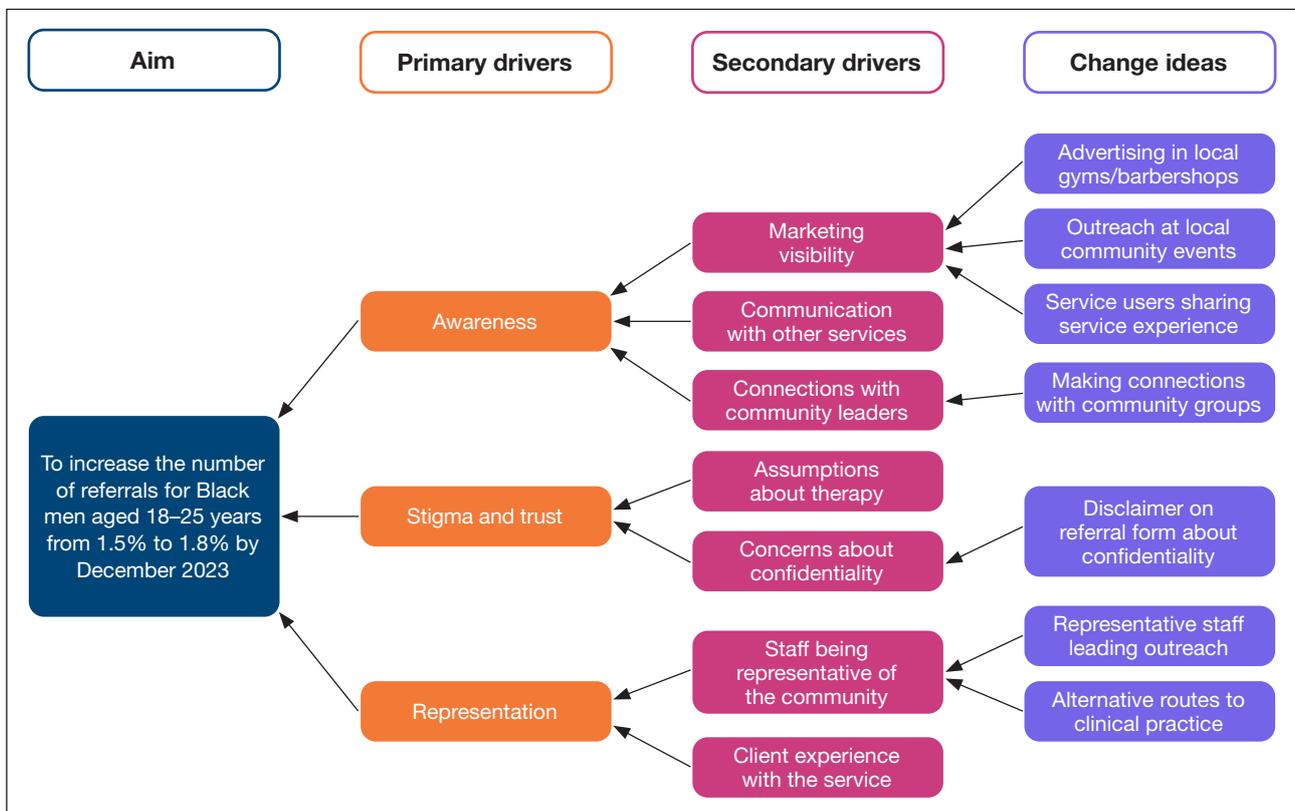


Figure 2. Driver diagram from a quality improvement project aiming to increase referrals for young Black men to the Newham talking therapies service.

© 2024 The authors

Several of the interventions suggested in **Figure 2** were aimed at structural change, such as staff being more representative of the community or tackling assumptions about therapy, which is important in tackling healthcare inequities (Green et al, 2010).

Once the driver diagram was formulated, the teams needed to develop a robust measurement plan to track where they were making improvements. These plans included outcome, process and balancing measures (Provost and Murray, 2022). Outcome measures are directly linked to the aim, providing an indication of whether progress is being made towards the overall goal of the work. Process measures are link to the parts of the system or interventions being influenced or worked on. Balancing measures are related to unexpected consequences, both positive and negative, that might occur as part of the work (Lloyd, 2017). The choice of measures used by the teams depended on the topic and focus of their specific quality improvement project. For example, a team that aimed to increase the number of referrals to a service that provides psychological support to women from ethnic minority backgrounds with extreme fear of childbirth (tokophobia) used the percentage of referrals that were for ethnic minority women as an outcome measure. The process measure was the tokophobia fear score for each individual patient using a standardised scale The balancing measure was the average waiting time from referral to first appointment.

Step four: test change ideas

Change ideas were tested using plan-do-study-act cycles. As the projects described here focused on equity, the teams found it helpful to consider if they were testing ideas that mattered most to the population, whether the interventions being tested could generate further inequalities and whether the intervention closed, increased or maintained the identified equity gap.

Where possible, the teams viewed data over time using statistical process control charts to help them understand the variations in their data using standard rules, so that they could take appropriate action. The basis of statistical process control charts is that the data have both common-cause and special-cause variation (Provost, 2011). These data were supplemented with simple qualitative data at the plan-do-study-act level to help the teams understand the impact of the intervention and/or the experience of the intervention from the target population's perspective (Shah, 2019). This allowed the teams to ensure that they were testing ideas that were important to those experiencing inequities.

For example, a team based at an inpatient female forensic ward in Hackney aimed to increase cervical screening rates of patients on the ward. Despite being offered screening tests, many of the women did not come forward. The team developed a short survey that asked women about their experiences with cervical screening. Feedback from this survey revealed that, for many, it reminded them of previous sexual trauma. The team decided to tackle this by holding therapeutic groups for the women to talk about their experiences.

Step five: implementation

The implementation stage should take place after testing has demonstrated that a change has led to a sustained improvement (Langley et al, 2009). Core activities for implementing work after testing include:

- Standardisation, using policies and procedures
- Documentation, to describe the new approach to standard work
- Training, to share learning about the changes made
- Measurement, to ensure that the changes are being carried out
- Resources, to maintain the change
- The social dimension of change, to support continued engagement and collective leadership of the change (Langley et al, 2009).

An example of an ELFT team that reached the implementation stage is an inpatient forensic ward team that aimed to reduce incidents of racism towards staff. They successfully tested and then implemented a 'safety cross' to publicly record incidents. A safety cross is a visual tool that was originally developed as part of ELFTs violence reduction project, and was shown to reduce incidents of violence and aggression in a ward environment (Taylor-Watt et al, 2017). It is used to record different types of aggression at different times of the day with coloured dots used to indicate different types of violence. The safety cross was standardised on the ward, with a standard definition of what constituted a racist

incident and a standard visual system to denote a racist incident (a grey dot). Both staff and service users were able to place a grey dot on the safety cross following an incident. The cross was displayed in the staff room, with service users presenting it at weekly meetings, as the team felt that this would empower service users and further emphasise the scale of the problem. These processes were clearly documented on the ward, added to the ward’s standard operating procedure and induction packs. New staff members and service users were trained in the use of the safety cross as part of their induction to the ward. The team continued to measure the use of the safety cross via their visual management board, with the number of racist incidents displayed on a statistical process control chart.

Results

At the time of writing (December 2023), five teams at ELFT have shown sustainable results over time with the use of quality improvement to tackle inequities. Three of these projects are presented as case studies.

Reducing racism on an inpatient forensic mental health ward

A team at East India ward, a forensic inpatient unit for people learning disabilities in Hackney, aimed to reduce incidents of racism experienced by staff and service users by 75%. A team comprising ward staff (nurses, managers, psychiatrists and allied health professionals) and service users was formed. First, a short survey of staff and service users was conducted, asking about their perceptions of the frequency, source and impact of racism on the ward for both staff and service users. The team worked together to produce a fishbone diagram (Figure 3) to articulate the potential causes of racism on the ward. They also held a facilitated session to come together and understand what some of the contributory factors towards racism on the ward might be.

A driver diagram was developed, including several change ideas that were tested using plan-do-study-act cycles. The first change idea was the development of a post-racist incident action plan, designed as a flow chart to highlight the key steps that should happen following

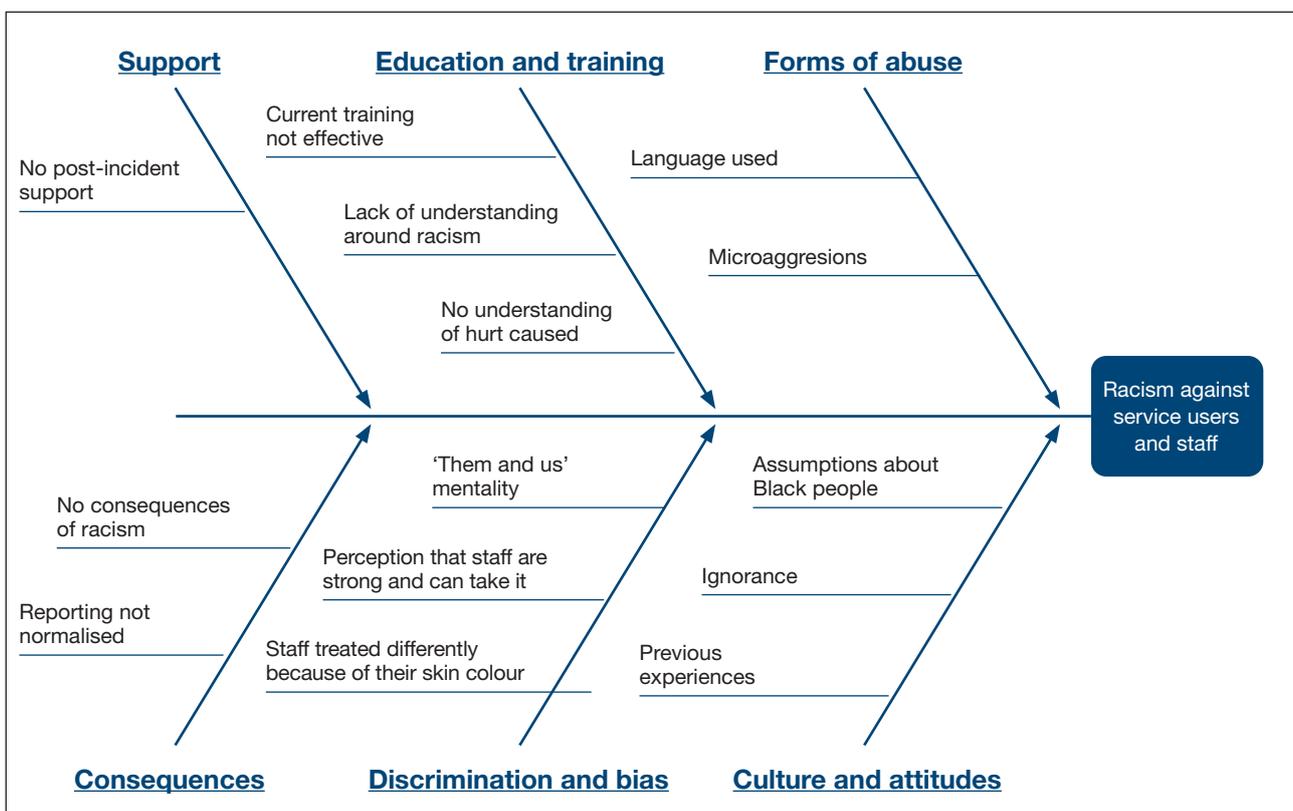


Figure 3. Fishbone diagram exploring causes of racism in a forensic inpatient ward in Hackney.

© 2024 The authors

a racist incident on the ward, with actions dependent on the source of racism. These steps included a crisis meeting between staff on the ward, with the affected individual/s being seen by senior management immediately after the incident. The second change idea tested was the use of a safety cross to record incidents of racial violence. Both staff and service users could mark incidents of violence on the cross, with it being reviewed several times a day at safety huddles. In this project, the safety cross was adapted to include a grey dot to signify a racist incident. The third change idea tested was the delivery of racial trauma and bias training, which was co-designed by staff and service users.

The outcome measure for the work was the number of incidents of racism reported each fortnight on the ward and was displayed over time on a control chart (Figure 4). The baseline period ran from 10 August 2020 to 21 September 2020. During the baseline period, there was an average of two incidents of racial aggression per fortnight. By the end of the project in January 2021, this figure had reduced to an average of 0.3 incidents per fortnight, representing an 85% reduction.

Improving access to an early intervention service among people of ethnic minority backgrounds

In Tower Hamlets, an early-intervention service for people aged 18–35 years with psychosis sought to increase access for ethnic minority individuals by 8%. A project team was formed by service staff and co-led by service users from the target population, with the team meeting every fortnight. To ensure effective co-production, a buddy system was established so that service users could connect with a staff member of a similar culture to offer contributions to the project team. To understand the problem, the team looked at their routinely collected service data. This highlighted that service users from ethnic minority backgrounds were less likely to access the service than those from a white background, a situation that had been identified in previous research (Schlieff et al, 2023).

The project team developed a driver diagram with a range of change ideas, two of which were tested using plan-do-study-act cycles. The first was to identify individuals from ethnic minority backgrounds who had been recently discharged from inpatient mental health wards and invite them to be seen by the service, as the team hypothesised that these individuals would be more likely to seek treatment following an inpatient stay. The second change idea tested was to develop a family therapy offer for the target population. This is also part of National Institute for Health and Care Excellence (2014) guidelines. The aim of this family therapy offering was to help service users and their families to understand the illness and its management to increase coping mechanisms (Edge et al, 2016).

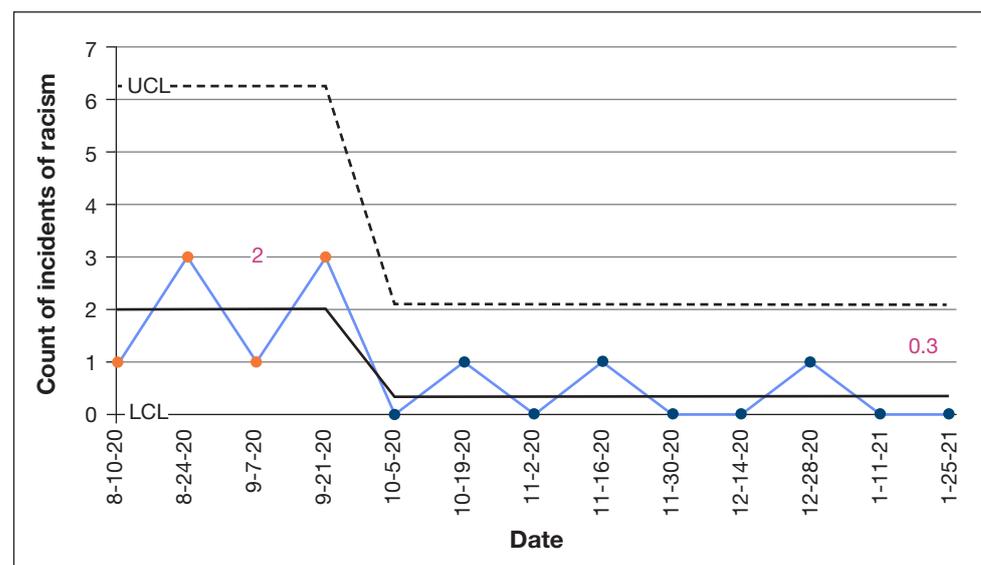


Figure 4. C-chart showing the number of racist incidents occurring per month on East India Ward, Hackney. LCL=lower confidence limit; UCL=upper confidence limit.

© 2024 The authors

The outcome measure for the project was the percentage of service users accessing the service who were from ethnic minority backgrounds, which was displayed on a P-chart (Figure 5), the appropriate statistical process control chart for classification data (Provost and Murray, 2022). The baseline period ran between January 2020 and June 2020, showing that on average 67% of people accessing the service were from ethnic minority backgrounds. By the end of the project, this had increased to an average of 85%.

Increasing cervical screening rates

A team from a GP service in Bedford worked to increase the percentage of eligible women accessing NHS cervical screening. Using data from the NHS England GP practice data dashboard (NHS Digital, 2023), the team identified that women aged 24–49 years were less likely to attend cervical screening than women aged 50–64 years in this area. The team, which included service users from the target population, developed a fishbone diagram to understand key causes of this gap, which included communication barriers, cultural stigma, lack of access to services and limited knowledge about the importance of screening. From this the team were able to develop a driver diagram, which included best practice from research and the National Institute for Health and Care Excellence guidelines, and identify several change ideas.

The first idea tested was to hold screening clinics in the evenings and at weekends to cater to different work patterns. The second change idea was to develop a set of educational materials, such as leaflets and visual aids, explaining what to expect during screening. These were translated into several languages to accommodate the diverse population group. Third, the team tested the use of personalised letters from GPs directly to patients to remind them of their appointments. The fourth idea was to tailor screening appointments to specific needs, such as by training staff to support service users with learning disabilities and offer a self-sampling screening programme where people could collect samples in their own home.

The team’s outcome measure was the percentage of eligible service users receiving cervical screening stratified by the two age groups of interest: 24–49 years and 50–64 years. Data were displayed on a line chart to compare the gap between the two groups (Figure 6). For women aged 24–49 years, 54% received screening at the beginning of the project, increasing to 68% by the end. For women aged 50–64, 62% received screening at the beginning of the project, increasing to 71% at the end. While screening rates for both groups increased, the gap between the two age groups reduced from 8% to 3%.

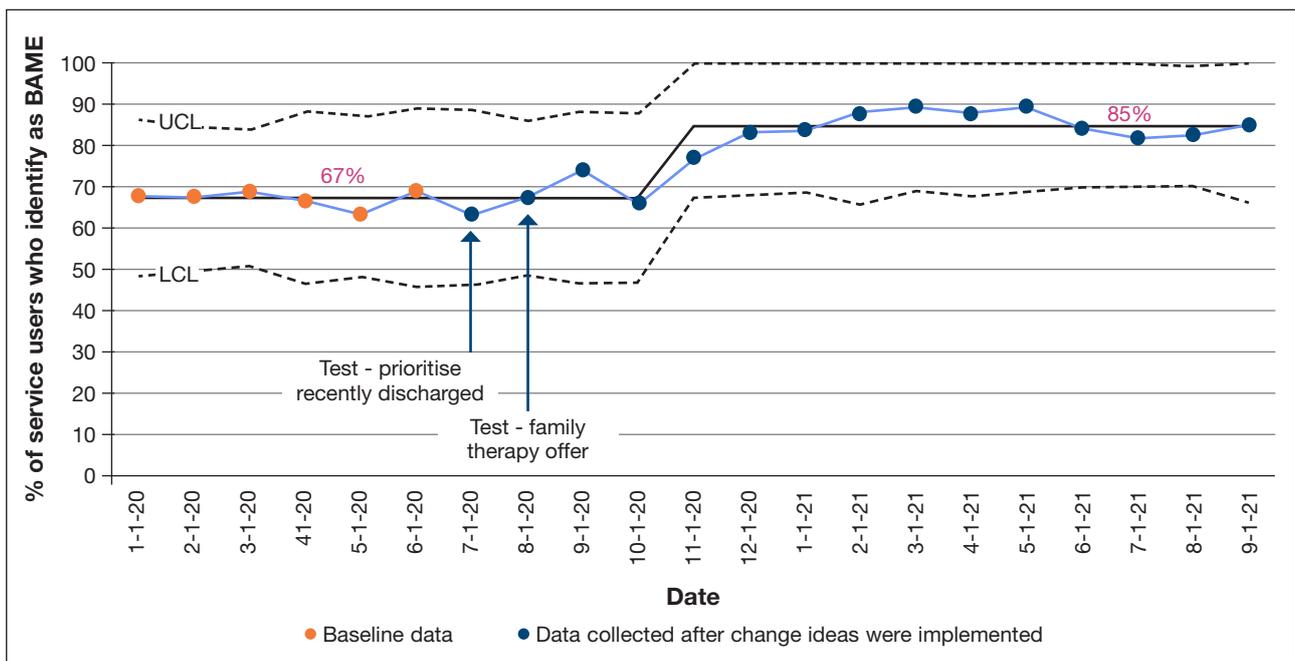


Figure 5. P-chart showing the percentage of service users accessing Tower Hamlets’ early intervention service who are of Black, Asian or minority ethnic (BAME) backgrounds. LCL=lower confidence limit; UCL=upper confidence limit.

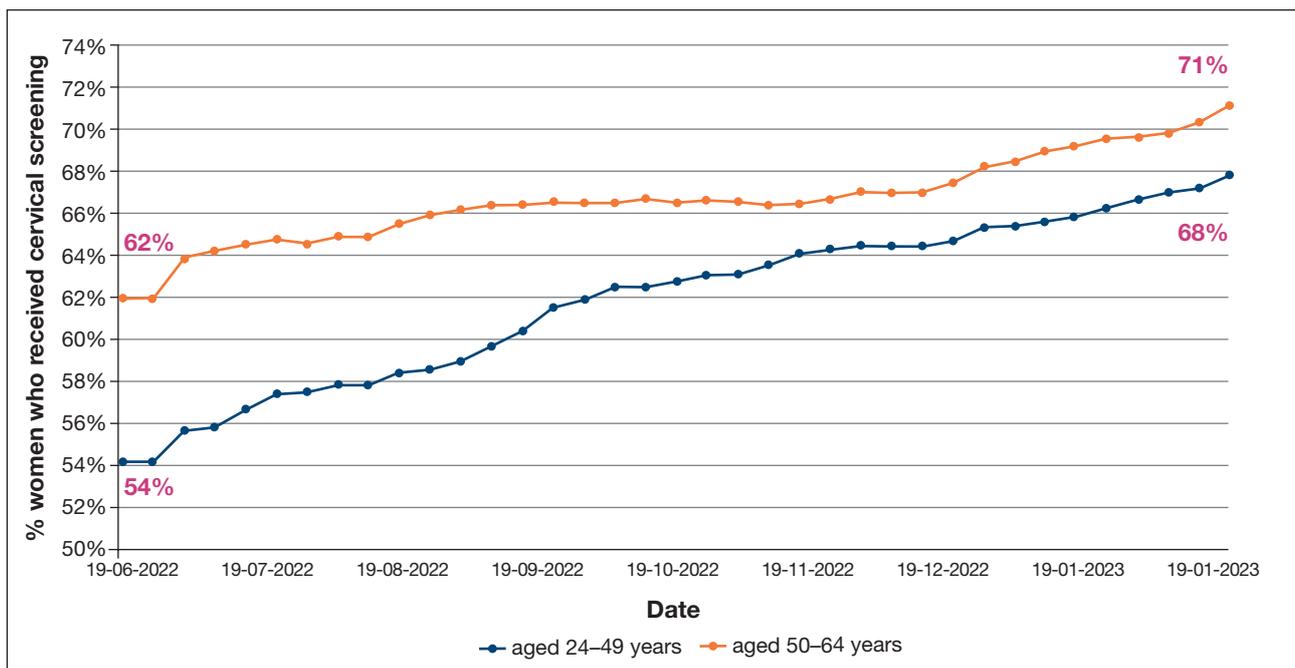


Figure 6. Line chart showing the percentage of service users receiving cervical screening at a GP practice in Bedford, by age group.

Discussion

From the authors' experience of supporting teams to use quality improvement to tackle inequity, several key learning points have emerged.

Teams need to work with communities that experience inequities to co-produce solutions (Delgado et al, 2021; Lion et al, 2022). Two of the case studies presented in this article provide examples of effective co-production in practice, which support previous evidence suggesting that engagement and coproduction with those from marginalised communities should be a prerequisite for equity work, and can lead to better outcomes (Cyril et al, 2015). The mental health forensic ward team described in this study noted that involving service users from early in the work was key to their success in reducing racist incidents by 92%.

Exploring available data early in the improvement process is also fundamental to identifying what the quality issue is and to support decision making throughout the work. The authors' experience indicates that initial data should come from multiple sources, with a data review that triangulates information from those experiencing the inequity, those delivering care and any pre-existing population or service data. Such an approach is commonly used to understand the needs and assets of a population, and can help to build a picture of who the improvement team seeks to work with and why the issue exists (Whittington et al, 2015; Ravaghi et al, 2023). Additionally, using data early on the improvement projects helped several teams to challenge their own assumptions around what they perceived to be equity issues. Several teams reported that they began the work with the intention of targeting a specific equity issue, but after analysing the data, they found that their initial area of focus was not actually the most important.

Analysing ongoing data over time can help to evaluate whether the changes tested have resulted in an improvement (Shah, 2019). Supporting teams to develop a measurement plan, including an outcome measure that is directly related to the experience of the service user, process measures related to the change ideas being tested and balancing measures to monitor unintended consequences, will ensure that improvements are evident, as well as providing important learning (Langley et al, 2009).

The use of data to compare outcomes, access and experiences between groups can also help teams to consider the gradient of health inequities. Focusing solely on those who are considered to have the poorest outcomes at the expense of all other groups may result in widening gaps elsewhere. Therefore, it is important to take a proportional, universal

approach (Rose, 1992). The use of a range of measures and ways of presenting data, as described in the case studies, can help teams to consider if they are impacting the whole population, as well as the most vulnerable groups (Frohlich and Potvin, 2008).

As in previous quality improvement work, the role of leadership was crucial in supporting teams to make improvements, both at senior leadership and microsystem level (Kaplan et al, 2012; Zamboni et al, 2020). At first, teams codesigning with staff and service users may find it challenging to discuss issues relating to equity, especially where historic injustices exist. Such injustices are well documented within the literature and can create significant barriers to access, outcomes and experiences for underserved communities (Bansal et al, 2022). This can impact authentic coproduction, making it challenging to know how to take meaningful action (Peek et al, 2020). Therefore, leaders must create a psychologically safe space for all team members, guaranteeing care, respect and inclusiveness, so they can safely explore the issues around inequity (Peek et al, 2020). Team members should be encouraged to reflect critically on their own mental models and assumptions about the world (Moll et al, 2020) and how this might impact the care they deliver (Butler et al, 2022). In the case of the inpatient ward tackling racism described in this article, the support of the chief nurse in acknowledging that racism was an issue made the team feel able to continue with their work.

As part of this, leaders may need to ask if the right people are in the room to take the issue forward – this should include those who are affected by the issue, and those who affect it. Leaders may need to help teams determine whether diversity is represented and to recognise that people may not have only one sociodemographic characteristic (O’Kane et al, 2021).

Bringing people together to share learning is an important facet of quality improvement work (Nembhard, 2009). Teams tackling equity issues at ELFT are part of a learning system, where they are brought together to learn, share stories of the work and problem solve together. Adopting such an approach is important, as improvement is a collective effort that requires the sharing of ideas towards common problems (Reed et al, 2018). This collective sharing can help teams to develop an increased sense of agency to change when observing other people exercising power to make changes (Hilton and Anderson, 2018).

In a short (unpublished) evaluation of the support offered to teams undertaking equity work at ELFT, community was felt to be important, with individuals suggesting that ‘connections with others, in and out of sessions and problem solving together’ and ‘linking with a team doing similar work’ were key enablers of the work. This is supported by other work at ELFT, which has also demonstrated the benefits of bringing teams together to share learning as part of a wider community (Stafford et al, 2020; Aurelio et al, 2022).

Implications for further research

Quality improvement offers a range of different designs for effective testing, including quasi-experimental approaches that allow teams to test combinations of interventions in intentionally designed multifactorial experiments (Speroff and O’Connor, 2004). Such approaches could be beneficial for organisations trying to tackle equity issues, where it is likely that a combination of interventions at multiple levels will be needed to make improvements (Trickett and Beehler, 2023).

As integrated care systems are now statutory in the English NHS, working in partnership across the system has become even more necessary. Integrated care systems have an explicit responsibility to address inequity. Given the multifactorial nature of the social determinants of health and wellbeing, healthcare services alone will not be able to solve these issues (Whitehead and Dahlgren, 1991); they must work in partnership with other key actors, including local government, schools and the voluntary, community and social enterprise sector, to address inequities (Delgado et al, 2021). Quality improvement can provide a helpful method and organising framework to bring a range of organisations together under a common aim.

Limitations

One key limitation of this study is that, as with most quality improvement work, the knowledge produced is largely local, so the authors cannot determine how generalisable the interventions described in the examples would be. If others wished to adopt the

Key points

- Quality improvement offers staff and service users a way of pursuing equity on the frontline of healthcare, using tools that have often already been established to tackle other issues.
- The use of quality improvement to pursue equity should focus on coproduction with those who experience the inequity and the use of data to both understand the issue and know if change has resulted in an improvement.
- Organisations should support teams by developing a sense of community among those pursuing equity and providing leadership support to create the conditions required for change.

interventions in their own settings, they would need to use quality improvement methods such as plan-do-study-act cycles to test them locally and adapt where required.

The use of plan-do-study-act cycles relies largely on self-reported information recording from staff. As a result, it is possible that some learning points not being recorded that may have been useful to other teams. This is a wider issue noted in the field of quality improvement (Taylor et al, 2014). It is also difficult to ascertain the exact dates on which the change ideas were first tested in the case studies described. Because of lack of data, it was only possible to annotate the control charts to help understand the impact of the change ideas in further detail in one of the case studies, based in the Tower Hamlets early intervention service.

It is worth noting that ELFT has been using quality improvement for 10 years, and has developed systems, structures, processes and capability organisation-wide that has allowed this to become the default approach to solving complex problems. As such, other organisations would need to consider their own capabilities and experience with quality improvement when determining how to use the methods described in this article. For example, many organisations do not have a large body of people trained in quality improvement, or in the advanced methods of coaching quality improvement to support work, as ELFT does (Frasquilho et al, 2023).

Conclusions

This article has described the application of quality improvement by those working at the point of care to pursue equity. A five-step approach was used to enable teams comprised of staff and service users at the point of care to pursue equity. This approach involves identifying the quality issues, developing a deep understanding of those issues, creating a strategy and change ideas, testing change ideas and delivering effective implementation. This work included highlighted the need to coproduce improvement work with the communities experiencing the inequity, and to use a range of data to assess whether an improvement has been achieved. It also emphasised the role of leadership in creating the conditions necessary for change and developing a sense of community among teams doing this work. Such an approach is scalable across the system and can provide a common method and language to achieve improvements in equity.

Author details

¹Quality Improvement Department, East London NHS Foundation Trust, London, UK

²National Clinical Director for Improvement, NHS England, London, UK

Conflicts of interest

The authors declare that there are no conflicts of interest. Amar Shah is a member of the *British Journal of Healthcare Management* editorial board, but had no involvement in the peer review process for this article.

Declaration of funding

Funding for the open access license for this article was provided by East London NHS Foundation Trust. No additional funding was provided for this article.

Data sharing statement

All data are available from the corresponding author on reasonable request.

References

- Aurelio M, Ballingall N, Chitewe A, Heaney C, Shah A. Using quality improvement to deliver a systematic organisational approach to enjoying work in healthcare. *British Journal of Healthcare Management*. 2022;28(11):292–304. <https://doi.org/10.12968/bjhc.2022.0072>
- Aurelio M, Araujo R, Zoetmann J, Moody J, Shah A. Using quality improvement to tackle the triple aim for children and young people with asthma: improving outcomes, experience and costs. *British Journal of Healthcare Management*. 2023;29(8):1–12. <https://doi.org/10.12968/bjhc.2022.0101>
- Bansal N, Karlsen S, Sashidharan SP et al. Understanding ethnic inequalities in mental healthcare in the UK: a meta-ethnography. *PLOS Med*. 2022;19(12):e1004139. <https://doi.org/10.1371/journal.pmed.1004139>
- Birtles A. Supporting clinicians to address health inequalities in practice. 2023. <https://www.rcplondon.ac.uk/projects/outputs/supporting-clinicians-address-health-inequalities-practice> (accessed 28 March 2024)
- Butler T, Gall A, Garvey G et al. A comprehensive review of optimal approaches to co-design in health with First Nations Australians. *Int J Environ Res Public Health*. 2022;19(23):16166. <https://doi.org/10.3390/ijerph192316166>
- Chaudhuri K, Chakrabarti A, Lima JM, Chandan JS, Bandyopadhyay S. The interaction of ethnicity and deprivation on COVID-19 mortality risk: a retrospective ecological study. *Sci Rep*. 2021;11(1). <https://doi.org/10.1038/s41598-021-91076-8>
- Cyril S, Smith BJ, Possamai-Inesedy A, Renzaho AMN. Exploring the role of community engagement in improving the health of disadvantaged populations: a systematic review. *Global Health Action*. 2015;8(1):29842. <https://doi.org/10.3402/gha.v8.29842>
- Darko J. How can general practice improve the mental health care experience of Black men in the UK? *Br J Gen Pract*. 2021;71(704):124–125. <https://doi.org/10.3399/bjgp21X715097>
- Delgado P, Binzer K, Shah A, Ekberg J, Arrieta J, Allwood D. Accelerating population health improvement. *BMJ*. 2021;373:n966. <https://doi.org/10.1136/bmj.n966>
- Devonport TJ, Ward G, Morrissey H et al. A systematic review of inequalities in the mental health experiences of Black African, Black Caribbean and Black-mixed UK populations: implications for action. *J Racial Ethn Health Disparities*. 2022;10(4):1669–1681. <https://doi.org/10.1007/s40615-022-01352-0>
- East London NHS Foundation Trust. Annual population health report 2023. 2023. <https://tinyurl.com/5dfrxdmx> (accessed 27 February 2024)
- Edge D, Degnan A, Cotterill S et al. Culturally-adapted family intervention (CaFI) for African-Caribbeans diagnosed with schizophrenia and their families: a feasibility study protocol of implementation and acceptability. *Pilot Feasibility Stud*. 2016;2(1):39. <https://doi.org/10.1186/s40814-016-0070-2>
- Ford J, Sowden S, Olivera J et al. Transforming health systems to reduce health inequalities. *Future Healthc J*. 2021;8(2):e204–e209. <https://doi.org/10.7861/fhj.2021-0018>
- Frasquilho F, Brittin K, Chitewe A et al. Building capacity and capability for quality improvement: developing an organisational approach. *British Journal of Healthcare Management*. 2023;29(6):1–14. <https://doi.org/10.12968/bjhc.2023.0003>
- Frohlich KL, Potvin L. Transcending the known in public health practice: the inequality paradox: the population approach and vulnerable populations. *Am J Public Health*. 2008;98(2):216–221. <https://doi.org/10.2105/AJPH.2007.114777>
- Gallagher M, Hares TIM, Spencer J, Bradshaw C, Webb IAN. The nominal group technique: a research tool for general practice? *Fam Pract*. 1993;10(1):76–81. <https://doi.org/10.1093/fampra/10.1.76>
- Green AR, Tan-McGrory A, Cervantes MC, Betancourt JR. Leveraging quality improvement to achieve equity in health care. *Jt Comm J Qual Patient Saf*. 2010;36(10):435–442. [https://doi.org/10.1016/S1553-7250\(10\)36065-X](https://doi.org/10.1016/S1553-7250(10)36065-X)
- Henderson RC, Williams P, Gabbidon J et al. Mistrust of mental health services: ethnicity, hospital admission and unfair treatment. *Epidemiol Psychiatr Sci*. 2015;24(3):258–265. <https://doi.org/10.1017/S2045796014000158>
- Hilton K, Anderson A. IHI psychology of change framework to advance and sustain improvement. 2018. <https://www.ihl.org/resources/white-papers/ihl-psychology-change-framework> (accessed 8 March 2024)

- Hirschhorn LR, Magge H, Kiflie A. Aiming beyond equality to reach equity: the promise and challenge of quality improvement. *BMJ*. 2021;374:n939. <https://doi.org/10.1136/bmj.n939>
- Kaplan HC, Provost LP, Froehle CM, Margolis PA. The Model for Understanding Success in Quality (MUSIQ): building a theory of context in healthcare quality improvement. *BMJ Qual Saf*. 2012;21(1):13–20. <https://doi.org/10.1136/bmjqs-2011-000010>
- Keppel K, Pamuk E, Lynch J et al. Methodological issues in measuring health disparities. *Vital Health Stat* 2. 2005;141(141):1–16
- Langley GJ, Moen RD, Nolan KM et al. The improvement guide: a practical approach to enhancing organizational performance. Hoboken (NJ): John Wiley and Sons; 2009
- Lion KC, Faro EZ, Coker TR. All quality improvement is health equity work: designing improvement to reduce disparities. *Pediatrics*. 2022;149(Supplement 3):e2020045948E. <https://doi.org/10.1542/peds.2020-045948E>
- Lloyd R. Quality health care: a guide to developing and using indicators. Burlington (MA): Jones and Bartlett Learning; 2017
- Luton Borough Council. Luton Young People's Mental Health Needs Assessment 2021. 2021. <https://democracy.luton.gov.uk/cm/5public/Document.ashx?czJKcaeAi5tUFL1DTL2UE4zNRBcoShgo=8THBocePQspwBvEcrtaoIh9ZE99rYgH7GsFbq76whQpFDJJr%2FjKIA%3D%3D&rUzWRP%2BZ3zd4E7lkn8Lyw%3D%3D=pwRE6AGJFLDNih225F5QMaQWCtPHwdhUfCZ%2FLUQzgA2uL5jNRG4jdQ%3D%3D&mCTIbCub> (accessed 27 February 2024)
- Moll S, Wyndham-West M, Mulvale G et al. Are you really doing 'codesign'? Critical reflections when working with vulnerable populations. *BMJ Open*. 2020;10(11):e038339. <https://doi.org/10.1136/bmjopen-2020-038339>
- National Institute for Health and Care Excellence. Psychosis and schizophrenia in adults: prevention and management. CG178. 2014. <https://www.nice.org.uk/guidance/cg178> (accessed 13 March 2024)
- Nembhard IM. Learning and improving in quality improvement collaboratives: which collaborative features do participants value most? *Health Serv Res*. 2009;44(2p1):359–378. <https://doi.org/10.1111/j.1475-6773.2008.00923.x>
- NHS Digital. General practice data dashboard. 2022. <https://digital.nhs.uk/data-and-information/data-tools-and-services/data-services/general-practice-data-hub> (accessed 29 February 2024)
- NHS England. Core20PLUS5 (adults) – an approach to reducing healthcare inequalities. 2023. <https://www.england.nhs.uk/about/equality/equality-hub/national-healthcare-inequalities-improvement-programme/core20plus5/> (accessed 27 February 2024)
- Ogborn G, Bowden-Howe C, Burd P, Kleijn M, Michelson D. Barbershops as a setting for supporting men's mental health during the COVID-19 pandemic: a qualitative study from the UK. *BJPsych Open*. 2022;8(4):e118. <https://doi.org/10.1192/bjo.2022.520>
- O'Kane M, Agrawal S, Binder L et al. An equity agenda for the field of health care quality improvement. *NAM Perspectives*. 2021. <https://doi.org/10.31478/202109b>
- Paskett E, Thompson B, Ammerman AS et al. Multilevel interventions to address health disparities show promise in improving population health. *Health Affairs (Project Hope)*. 2016;35(8):1429–1434. <https://doi.org/10.1377/hlthaff.2015.1360>
- Peek ME, Vela MB, Chin MH. Practical lessons for teaching about race and racism: successfully leading free, frank, and fearless discussions. *Acad Med*. 2020;95(12S):S139–S144. <https://doi.org/10.1097/ACM.0000000000003710>
- Provost L, Bennet B. What's your theory? *Qual Progr*. 2015;48(7):36–43
- Provost LP, Murray SK. The health care data guide: learning from data for improvement. 2nd edn. Hoboken (NJ): John Wiley and Sons; 2022
- Provost LP. Analytical studies: a framework for quality improvement design and analysis. *BMJ Qual Saf*. 2011;20(Suppl 1):i92–i96. <https://doi.org/10.1136/bmjqs.2011.051557>
- Ravaghi H, Guisset AL, Elfeky S et al. A scoping review of community health needs and assets assessment: concepts, rationale, tools and uses. *BMC Health Serv Res*. 2023;23(1):44. <https://doi.org/10.1186/s12913-022-08983-3>
- Razieh C, Zaccardi F, Miksza J et al. Differences in the risk of cardiovascular disease across ethnic groups: UK Biobank observational study. *Nutr Metabol Cardiovasc Dis*. 2022;32(11):2594–2602. <https://doi.org/10.1016/j.numecd.2022.08.002>
- Reed JE, Howe C, Doyle C, Bell D. Simple rules for evidence translation in complex systems: a qualitative study. *BMC Med*. 2018;16(1):92. <https://doi.org/10.1186/s12916-018-1076-9>
- Reichman V, Brachio SS, Madu CR, Montoya-Williams D, Peña M-M. Using rising tides to lift all boats: Equity-focused quality improvement as a tool to reduce neonatal health disparities. *Semin Fetal Neonatal Med*. 2021;26(1):101198. <https://doi.org/10.1016/j.siny.2021.101198>

- Richard L, Gauvin L, Raine K. Ecological models revisited: their uses and evolution in health promotion over two decades. *Annu Rev Public Health*. 2011;32(1):307–326. <https://doi.org/10.1146/annurev-publhealth-031210-101141>
- Rose G. *The strategy of preventative medicine*. Oxford: Oxford University Press; 1992
- Schlieff M, Rich N, Sheridan Rains L et al. Ethnic differences in receipt of psychological interventions in early intervention in psychosis services in England: a cross-sectional study. *medRxiv*. 2023;330:115529–03. <https://doi.org/10.1016/j.psychres.2023.115529>
- Shah A. Using data for improvement. *BMJ*. 2019;364:1189. <https://doi.org/10.1136/bmj.1189>
- Shah A. How to move beyond quality improvement projects. *BMJ*. 2020;370:m2319. <https://doi.org/10.1136/bmj.m2319>
- Shah A, Aurelio M, Frاسquilho F, Fradgley R. Quality improvement in practice—part three: achieving the triple aim through the systematic application of quality improvement. *British Journal of Healthcare Management*. 2021;27(10):1–10. <https://doi.org/10.12968/bjhc.2021.0041>
- Siegel B, Sears V, Bretsch JK et al. A quality improvement framework for equity in cardiovascular care: results of a national collaborative. *J Healthc Qual*. 2012;34(2):32–43. <https://doi.org/10.1111/j.1945-1474.2011.00196.x>
- Speroff T, O'Connor GT. Study designs for PDSA quality improvement research. *Qual Manage Health Care*. 2004;13(1):17–32. <https://doi.org/10.1097/00019514-200401000-00002>
- Stafford J, Aurelio M, Shah A. Improving access and flow within child and adolescent mental health services: a collaborative learning system approach. *BMJ Open Qual*. 2020;9(4):e000832. <https://doi.org/10.1136/bmjopen-2019-000832>
- Taylor MJ, McNicholas C, Nicolay C et al. Systematic review of the application of the plan-do-study-act method to improve quality in healthcare. *BMJ Qual Saf*. 2014;23(4):290–298. <https://doi.org/10.1136/bmjqs-2013-001862>
- Taylor-Watt J, Cruickshank A, Innes J, Brome B, Shah A. Reducing physical violence and developing a safety culture across wards in east London. *Br J Mental Health Nurs*. 2017;6(1):35–43. <https://doi.org/10.12968/bjmh.2017.6.1.35>
- The Health Foundation. Health expectancy and health life expectancy at birth by deprivation. 2022. <https://tinyurl.com/5bmex32r> (accessed 27 February 2024)
- Trickett EJ, Beehler S. The ecology of multilevel interventions to reduce social inequalities in health. *Am Behav Sci*. 2023;57(8):1227–1246. <https://doi.org/10.1177/000276421348734>
- Tuma P, Vieira Junior JM, Ribas E et al. A national implementation project to prevent healthcare-associated infections in intensive care units: a collaborative initiative using the Breakthrough Series model. *Open Forum Infect Dis*. 2023;10(4):ofad129. <https://doi.org/10.1093/ofid/ofad129>
- UK Government. Levelling up the United Kingdom. 2022. https://assets.publishing.service.gov.uk/media/61fd3ca28fa8f5388e9781c6/Levelling_up_the_UK_white_paper.pdf (accessed 8 March 2024)
- Watkins DC, Neighbors HW. An initial exploration of what ‘mental health’ means to young Black men. *J Mens Health Gend*. 2007;4(3):271–282. <https://doi.org/10.1016/j.jmhg.2007.06.006>
- Webster PD, Sibanyoni M, Malekutu D et al. Using quality improvement to accelerate highly active antiretroviral treatment coverage in South Africa. *BMJ Qual Saf*. 2012;21(4):315–324. <https://doi.org/10.1136/bmjqs-2011-000381>
- Weinick RM, Hasnain-Wynia R. Quality improvement efforts under health reform: how to ensure that they help reduce disparities—not increase them. *Health Affairs*. 2011;30(10):1837–1843. <https://doi.org/10.1377/hlthaff.2011.0617>
- Whitehead M, Dahlgren G. What can be done about inequalities in health? *Lancet*. 1991;338(8774):1059–1063. [https://doi.org/10.1016/0140-6736\(91\)91911-D](https://doi.org/10.1016/0140-6736(91)91911-D)
- Whitehead M. The concepts and principles of equity and health. *Int J Health Serv*. 1992;22(3):429–445. <https://doi.org/10.2190/986L-LHQ6-2VTE-YRRN>
- Whittington JW, Nolan K, Lewis N, Torres T. Pursuing the triple aim: the first 7 years. *Milbank Q*. 2015;93(2):263–300. <https://doi.org/10.1111/1468-0009.12122>
- Wyatt R, Laderman M, Botwinick L, Mate K, Whittington J. Achieving health equity: a guide for health care organizations. 2016. <https://www.ihl.org/resources/white-papers/achieving-health-equity-guide-health-care-organizations> (accessed 29 February 2024)
- Zamboni K, Baker U, Tyagi M et al. How and under what circumstances do quality improvement collaboratives lead to better outcomes? A systematic review. *Implementation Sci*. 2020;15(1):1–20. <https://doi.org/10.1186/s13012-020-0978-z>