



British Thoracic Society
Quality Improvement Programme For Tobacco Dependency Treatment
Cohort 1 Evaluation
Facilitators: Dr Robyn Fletcher and Professor Sanjay Agrawal

Executive summary

Background

Consecutive BTS National Audits on the Management of Tobacco Dependency in Acute Care Trusts have highlighted shortfalls in the treatment of tobacco dependence for inpatients (1) (2). In light of this limited progress and the considerable opportunity, BTS launched a new on-line Quality Improvement (QI) programme, with a focus on delivering improvement to inpatient tobacco dependency treatment services within acute trusts.

Programme overview

The programme took a facilitated practical approach encouraging teams to undertake their own local QI projects. The programme included pre-session materials, webinars, coaching sessions and individual team support. The programme ran from August 2022 to August 2023.

Recruitment

All UK acute hospitals with tobacco dependency treatment services were eligible to apply with no prior QI knowledge required. 25 teams were invited to participate.

Participant feedback

Positive feedback was received on various aspects of the programme such as the use of examples while teaching, the use and simplification of tools and QI frameworks, and the practical step-by-step approach in running a QI project. The most useful parts of the programme were reported to be the coaching and peer to peer support.

Programme effectiveness

Teams completed pre and post programme questionnaires. The findings included increases in team knowledge and confidence using QI methodology to improve their pathways. Teams also reported enhanced project management skills, as well as greater knowledge regarding situational issues in their pathways.

Teams were provided with access to LifeQI (3), an online QI platform to aid the organisation, running and reporting of their QI projects. LifeQI was used in some form by most participating teams but the level of usage was variable.

The utilisation of QI tools and methodology was monitored with the vast majority of teams creating a SMART aim, a driver diagram and making some progress with Plan,

Do, Study, Act (PDSA) cycles. Feedback also identified attitudes to using QI methodology to improve tobacco dependency pathways improved after completion of the programme.

Final project updates were received from the majority of teams (80%) and the programme dropout rate was low (8%). Team improvements achieved included:

- A 60% absolute increase in the number of inpatients screened for smoking status.
- A 68% absolute increase in referrals to tobacco dependency services.
- A 48% absolute increase in nicotine replacement therapy (NRT) prescribed on discharge from hospital.
- A greater than 5 times rise in community engagement in stop smoking services.

Environmental sustainability

This programme was delivered remotely, and all resources were sent to teams as electronic copies only. The online nature of the programme was a conscious decision from an environmental sustainability perspective and also to encourage participation from teams across the UK. It is estimated that the remote delivery of this programme saved around 10,500 miles of travel.

Patient involvement

Patient involvement is an important part of quality improvement. At the end of this programme, some teams had begun to involve patients in their QI programmes. There is need for this area to develop further to include meaningful patient involvement at all stages of quality improvement projects.

Conclusions

This programme set out to deliver a new national Quality Improvement programme to support Acute Trusts to develop high-quality tobacco dependency treatment services for inpatients and improve existing services. The on-line nature of the programme was designed to make the programme affordable, accessible, flexible and environmentally sustainable.

The uptake and use of QI tools and methodologies was good. Feedback identified attitudes to using QI methodology to improve tobacco dependency pathways increased after completion of the programme, which may suggest future behaviour change and a move to using QI methodology. Teams' QI projects were based around four main themes and improvements were seen across each of these areas, indicating the objectives of this new BTS online QI programme have been met. A celebration event was held in October 2023. Teams have been encouraged to celebrate their successes and share their work both locally and more widely.

Background

Consecutive BTS National Audits on the Management of Tobacco Dependency in Acute Care Trusts have highlighted shortfalls in the treatment of tobacco dependence for inpatients (2) (1). National audit results have demonstrated little progress was made and opportunities were missed to improve the health of inpatient smokers and to prevent premature mortality between 2016 and 2021. It was also identified that more progress was needed in order for the NHS to meet its commitment to help all hospitalised patients quit smoking by 2023/4 (4).

In light of this limited progress and the considerable opportunity in acute hospitals to treat tobacco dependency, BTS supported a new QI programme focused on tobacco dependency. This programme was created to enable teams to work towards meeting the national improvement objectives as stated during the most recent 2021 BTS National Tobacco Dependency (previously titled Smoking Cessation) Audit. These were set out in the 2021 audit report to improve the medical management of tobacco dependent smokers.

Methodology

Timeline

The programme took place over a one-year period from August 2022 to August 2023. This included the planning, delivery and evaluation phases of the project. BTS worked with sites directly from January 2023- June 2023. The programme timeline is set out in Figure 1.

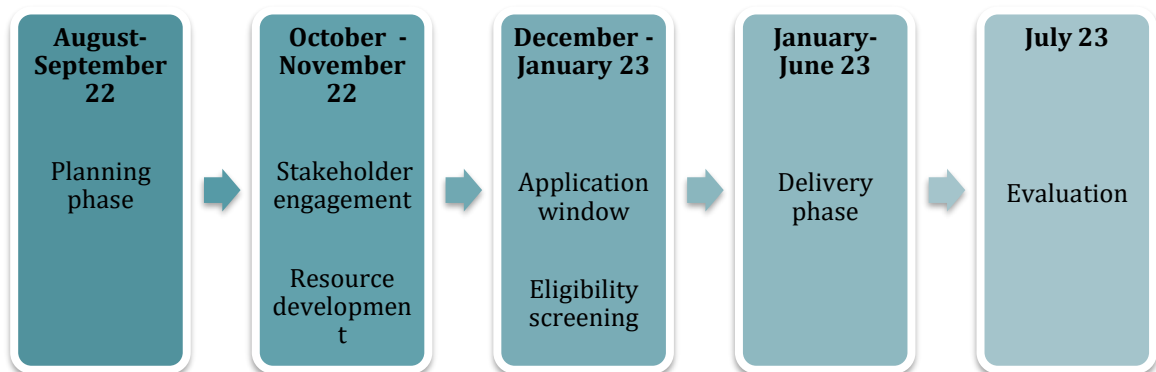


Figure 1: Programme timeline

Programme aims

1. To deliver an online QI programme focused on improving the outcomes of the NHS tobacco dependency services for hospital inpatients and to evaluate its effectiveness
2. To assess the feasibility of a high quality, sustainable online QI programme

Programme overview

The BTS QI programme was designed to provide a facilitated practical programme to encourage teams to undertake their own local projects. The QI programme was delivered entirely online and free of charge to participating teams. The programme included pre-session materials, webinars, group coaching sessions and individual team support via email and online meetings.

The programme was delivered to sites over a 6-month period through a series of 11 webinars. Teams were provided with optional reading and multimedia resources prior to the sessions. Live webinars built on topics introduced in pre-session materials and included practical examples. The webinars also provided an opportunity for teams to ask questions to hosts, guest speakers, and other participants.

A post session email was sent out following each webinar with slides, comprehensive notes, and additional resources. Teams were also required to complete a series of self-directed activities in addition to webinar participation throughout the course of the programme.

Each team's progress was reviewed halfway through the programme by group presentations. This provided opportunities for peer-to-peer learning. Coaching sessions with programme facilitators were held during the latter half of the programme to help teams work through barriers within their project and identify next steps.

Through the course of the programme, teams undertook their own quality improvement projects. Teams identified an area for improvement within their own tobacco dependency treatment pathways, formulated change ideas, collected data, implemented changes and reviewed the outcomes along with providing feedback on their experiences. Teams were provided with access to an online data collection and quality improvement platform called LifeQI, to facilitate and aid the organisation of their QI projects (3). A detailed overview of the programme is set out in Figure 2.

Activity	Date	Topics
Week 1		
Pre session materials 1	w/c 16/1	<ul style="list-style-type: none"> Quality improvement introduction
Pre session self-directed activity 1	w/c 16/1	<ul style="list-style-type: none"> Initial data gathering form Life QI login testing Pre programme questionnaire
Webinar 1	18/1/23	<ul style="list-style-type: none"> Long Term Plan QI definitions and overview Tobacco dependency treatment pathway The model for improvement MFI Baseline data Brief introduction to Life QI
Week 2		
Pre session materials 2	w/c 23/1	<ul style="list-style-type: none"> Deming lens of profound knowledge Systems Process mapping
Pre session self-directed activity 2	w/c 23/1	<ul style="list-style-type: none"> Local data collection Life QI login testing
Webinar 2	26/1/23	<ul style="list-style-type: none"> Deming lens of profound knowledge What is a system Process mapping including tea exercise Problem solving- 5 whys Example QI project
Week 3		
Pre session materials 3	w/c 30/1	<ul style="list-style-type: none"> SMART aims Driver Diagrams
Pre session self-directed activity 3	w/c 30/1	<ul style="list-style-type: none"> Process map local pathway Local baseline data collection in LifeQI
Webinar 3	1/2/23	<ul style="list-style-type: none"> SMART aims Model for improvement question 1 Driver Diagrams
LifeQI training	31/1/23	<ul style="list-style-type: none"> Session 1
Week 4		
Pre session self-directed activity 4	w/c 6/2	<ul style="list-style-type: none"> Set up life QI project (6 steps) Formulate aim
Webinar 4	9/2/23	<ul style="list-style-type: none"> SMART aims Model for improvement question 2 Measures and data collection Using LifeQI
LifeQI training	7/2/23	<ul style="list-style-type: none"> Session 2
Week 5		
Pre session materials 5	w/c 27/2	<ul style="list-style-type: none"> PDSA cycles
Pre session self-directed activity 5	w/c 27/2	<ul style="list-style-type: none"> Driver diagrams
Webinar 5	1/3/23	<ul style="list-style-type: none"> PDSA cycles Team working
Week 6		
Webinar 6	22/3/23	<ul style="list-style-type: none"> Team progress updates Example QI project
Week 7		
Webinar 7	28/3/23	<ul style="list-style-type: none"> Team progress updates
Coaching	w/c 27/3	<ul style="list-style-type: none"> Coaching sessions
Week 8		
Webinar 8	18/4/23	<ul style="list-style-type: none"> Project themes Next steps Barriers/Enablers Peer to peer exchange
Coaching	w/c 17/4	<ul style="list-style-type: none"> Coaching sessions
Week 9		
Pre session materials 9	w/c 8/5	<ul style="list-style-type: none"> Stakeholders Motivation
Webinar 9	10/5/23	<ul style="list-style-type: none"> Change management Peer to peer exchange
Coaching	w/c 8/5, 15/5, 22/5	<ul style="list-style-type: none"> Coaching sessions
Week 10		
Webinar 10	13/6/23	<ul style="list-style-type: none"> Example QI project NHS Dashboard Stakeholders
Pre session materials 11	w/c 19/6	<ul style="list-style-type: none"> Scale and spread Patient involvement Sustainability
Webinar 11	20/6/23	<ul style="list-style-type: none"> Spread in QI Sustaining change Patient involvement Next steps
End of programme activities	20/6/23	<ul style="list-style-type: none"> QI project poster Post programme questionnaire
October 2023		
Celebration event	11/10/23	<ul style="list-style-type: none"> Check in with all teams Celebrate success

Figure 2: Programme overview

Resources

An NHS England (NHSE) Fellow was recruited to design, deliver and evaluate the QI programme on a 0.5 WTE basis for a period of 1 year. Supervision for this project was provided by the National Specialty Adviser for Tobacco Dependency at NHSE. Support was provided from the BTS Clinical Programmes team within BTS Head Office and oversight provided by the BTS Quality Improvement Committee. The direct costs of the LifeQI platform subscription were covered by NHS England.

Reach

Recruitment

Recruitment to the programme was open to all UK acute hospitals with tobacco dependency treatment services. No prior QI knowledge was required, although recommended resources were available to sites with less experience. Understanding their organisation's tobacco dependency treatment pathway was highlighted as important, in order to identify areas for improvement.

Programme Requirements:

- Teams of a minimum of 4 people (a minimum of 2 to attend each session).
- Teams should be multi-disciplinary with an interest in delivering the Tobacco Dependency Treatment Programme e.g. doctors, pharmacists, tobacco dependency advisors, nurses, allied health professions and operational/service/project managers.
- Teams should have agreement from their Trust to take part.
- The Trust needs to be collecting baseline data or have the ability to do so.

Applications from teams without a functioning tobacco dependency treatment service were excluded from this programme and signposted to other more relevant resources.

The programme was advertised through NHSE Meetings, BTS social media, the BTS website, and at the 2022 BTS Winter Meeting. A total of 39 applications were received for the programme. These were reviewed against a list of criteria by the two programme facilitators. The initial plan was to only accept a maximum of 10-15 teams, but due to the number of high-quality applications this number was raised to 25. The main reasons for applications being unsuitable were no current service and data limitations.

Application review criteria:

- Complete application
- MDT team identified
- Baseline data collection or plan of how they will do so
- Tobacco dependency service in place and running
- Initial improvement ideas
- Familiarity with their pathway
- Acute settings only
- Established service
- Staff recruitment into service completed

25 teams were accepted onto the programme. 24 of these were based in England and 1 in Northern Ireland. The locations of the teams can be seen in Figure 3.



Figure 3: Map of participating teams

Teams were required to be multidisciplinary when participating in the programme. Participants job roles for team members included:

- Administration and business support
- Business intelligence
- Clinicians- mainly respiratory and junior doctors
- Communications
- Data scientists
- Health improvement/ healthy lifestyles managers
- Health inequalities managers
- Nurses
- Pharmacists
- Project managers
- Public health consultants
- Respiratory operations managers
- Tobacco dependency advisors and managers

Over the 6-month period of programme delivery 11 live webinars were hosted via Zoom. Online attendance would range from 40 to 120 participants, although some teams would attend in person together via a single computer. Therefore the actual number of participants attending each webinar is likely to be higher than the number of users who joined the calls.

Coaching sessions were held from March to June 2023. A total of 5 group coaching sessions were held with 12 teams, in addition to 11 individual team coaching sessions. Of the 25 teams, 18 teams attended at least one coaching session with some teams attending more than one session.

Programme Implementation

Programme delivery

From January to June 2023, 11 webinars were delivered on the dates set out in the initial programme advertisement. Planned programme content for each week was outlined before programme delivery and was updated through the course of the programme based on progress, feedback and the perception of team understanding. These changes included more time dedicated to peer-to-peer feedback and support. Additional focus was given to data, PDSA cycles, and implementing change as these areas were seen to be the most challenging for teams. The final programme overview of how the content was delivered is set out in Figure 2.

Where certain barriers were within a team's ability to change (such as awareness of the service, understanding the importance of the issue and links with others), teams were able to identify and acknowledge these barriers to undertake mitigation planning. Some teams were able to include these as change ideas.

Teams were then asked about common enablers for their projects. These can be seen as a word cloud in Figure 5. Common enablers include clinical staff input, multidisciplinary teams, senior buy-in, partnership working, timely feedback and healthy competition.



Figure 5: Enablers to the QI programme

Barriers and enablers were used by teams to direct their change ideas, and to decide where external forces could be used to strengthen or weaken their projects. It should be noted that opposing forces could affect a team's chance for a successful execution of their change idea.

The barriers and enablers identified in Figures 4 and 5 should be considered when designing other QI projects involving eligibility criteria, suggested job roles amongst participating teams, and different ways of working. Doing so will increase the likelihood of successful projects and successful programme completion amongst teams.

Teams were also questioned on their motivation for participating in this QI programme, which can be seen in Figure 6. Motivating factors include improving patient experience, improving patient outcomes and reducing pressure on hospitals. Knowledge of these factors can be employed as levers to gain buy-in and support from others in future QI projects.

Motivating factors
Long-term cost savings
Improved patient experience
Alignment with NHS Long Term Health Plan
Better Patient Outcomes – recovery and post-ops
Reduced readmissions
Better outcomes for pregnancy and unborn child
Aligned with organisational values
Tobacco dependency is a trust priority
Helping patients to stop smoking will hopefully reduce impact and strain on healthcare services as well as improving individual patient health
To meet the NHS smoke free 2030 target

Figure 6: Motivating factors to participate in the QI programme

Effectiveness

Reaction

Upon programme completion, teams were asked for their feedback. This was collected during the final webinar via email, video calls and through an anonymous feedback form.

Positive feedback was received on various aspects such as: drawing upon examples while teaching, using and simplifying tools and QI frameworks, and the practical step-by-step approach in running a QI project. Guest speakers were praised along with the clear and relevant programme content. Teams appreciated the opportunity to provide feedback at various points.

The programme’s ability to bring structure to the process of implementing and monitoring change ideas was also valued, along with the motivational boost gained from using charts to demonstrate the positive impact of change ideas.

When teams were asked about the most useful part of the programme, coaching was the most common answer. Teams found coaching helpful in prioritising their projects and particularly valued the group element. The opportunity to utilise peer to peer support and group sharing were also highly valued by teams.

Feedback was also sought on areas for improvement for the programme, especially regarding additional support. Some suggestions included buddying up with other teams and creating a team discussion forum. It was also suggested that additional support could be provided around PDSA cycle ideas, potentially via one-to-one support. However the most commonly requested improvement was for an increase in coaching sessions and for these to begin earlier in the process. It should be noted that the number of sessions offered was limited by facilitator capacity. However, there were a number of slots offered which were not taken up by teams. Some work to identify the best times for coaching sessions may be beneficial for future programmes.

A common theme with teams was the need to balance trust level pressures on delivering improvements in key performance indicators (KPI) and smaller ward level QI projects. Discussions on how small measurable improvements could ultimately help with trust level KPIs, were received positively by teams, although required reinforcement.

At the end of the programme, questionnaires were sent to all teams. Of the 20 teams who responded, all said they would recommend this programme.

Learning

Teams were asked to complete pre and post programme questionnaires, to help gauge skill uptake and confidence. One completed questionnaire was requested per team. 92% (23/25) of sites completed the pre-programme questionnaire, while 80% (20/25) of sites completed the post-programme questionnaire.

In the pre-programme questionnaire, teams were asked if they had previously utilised a QI approach on their inpatient tobacco dependency pathways- 56% stated no. However, when teams were asked to self-rate their QI knowledge and confidence before and after participation in the programme, there was remarkable improvement across all participants. For self-rated knowledge, there was an increase from an average of 5.6/10 to 7.9/10, while confidence rose from 5.8/10 to 8/10. While teams were certain of their understanding of their tobacco dependency treatment pathway (8/10 pre-programme to 9.2/10 post programme), teams increased their understanding of pathway issues due to their participation (6.9/10 to 8.6/10). Further details on pre and post questionnaire findings can be found in Appendix 1.

Participant feedback also identified additional non-QI learning from the programme, such as project management skills and other useful work tools that can be used in other areas.

In summary, teams reported an increase in their knowledge and confidence in using QI methodology to improve their inpatient tobacco dependency treatment pathways, as a result of this programme. Teams also reported enhanced project management skills and greater knowledge regarding situational issues within their local pathways.

Behaviours

Teams were provided with access to LifeQI, an online QI platform for the duration of the programme. The platform was offered to teams to support the organisations in the running and reporting of their QI projects. Training on the platform was provided by LifeQI in the form of two live webinars and the recordings were made available.

Overall LifeQI was used in some form by most participating teams but the level of usage was variable. The platform was utilised well by some teams but not all by others, and so it is important to note that progress on LifeQI only partially mirrors a team's progress overall.

Feedback from teams upon completion of the programme suggests that their confidence in using the LifeQI platform had increased but remained relatively low; usefulness of the platform was reported as moderate. Despite training being offered, some teams still struggled with the platform and this may explain why some teams did not maximise their use of this service. In future programmes additional training may be required. The most useful aspect of the platform was reported to be the ability to create driver diagrams.

The programme facilitators had anticipated teams using the LifeQI message board function to communicate with one another, however uptake was very limited. Instead, teams mainly communicated with each other in the webinar live chat, during group coaching sessions, during peer-to-peer exchange, or via email through programme facilitators.

The uptake and use of QI tools and methodologies by participating teams was recorded both within and outside of LifeQI. The vast majority of teams created a SMART aim, a driver diagram and made some progress in either the initial planning or full completion of a PDSA cycle. Feedback also identified attitudes to using QI methodology to improve tobacco dependency pathways improved after completion of the programme. This may suggest future behaviour change and a move to using

QI methodology. Further details on the use and effectiveness of the LifeQI platform and QI tools can be found in Appendix 2.

Results

25 teams were selected to participate in the programme and undertake a QI project in their own hospital or trust. Project progress and outcomes were captured through LifeQI, coaching sessions and a final project update. Teams were encouraged to create a poster to disseminate their work as their final project. 21 teams submitted a final project progress update at the end of the programme.

Teams mainly focused on 4 project areas:

1. Smoking screening status
2. Referrals into the tobacco dependency treatment service
3. NRT provision
4. Transfer of care to the community

Smoking screening status QI projects

The most commonly targeted area for improvement was smoking status screening. Project aims were focused on increasing screening upon admission, with some teams also considering accuracy and timeliness.

The change ideas implemented by teams were as follows:

- Very Brief Advice (VBA) training
- Daily attendance at board rounds
- Weekly e-mails to ward managers with lists of patients where no smoking status was recorded
- Creation of a health promotion ward lead for the project ward, with responsibility for enforcing smoking screening status
- Delivering a presentation to staff which included: the benefits of quitting, the inpatient pathway, the importance of the nursing specialist assessment being the start of the patient's journey, the referral process
- Visual display of the patient pathway on the ward with a reminder to screen patients and how to do so
- Raising awareness of importance of clinicians asking patients about smoking at existing meetings for nurses and doctors
- An electronic tool (clinical indicators) for non-admitting wards to be able to visualise which patients have/have not been screened. This sits alongside other nursing assessments (e.g. VTE or venous thromboembolism) on the clinical indicators page used to identify outstanding assessments
- Modifications to electronic patient record to make the process easier

Many teams saw their project exceed expectations, with a significant rise in screening within their project wards and their trust overall. Further data can be found below:

Screening improvements:

- 15% absolute increase in screening compliance (65% to 85%)
- 38% absolute increase in screening on the project ward (30% to 68%)
- 9% absolute increase in screening across the Trust (46% to 55%) with rates seen to be increasing slowly on a monthly basis. Screening on admission wards increasing (50% to 60%) and (25% to 75%)
- 45% absolute increase in nursing screening assessments on project ward
- Rises in trust wide compliance across different sites (97% to 99%), (69% to 72%) and (46% to 51%)
- 60% absolute increase in screening (15% to 75%)

A number of teams reported steady, yet consistent growth in screening for smoking status and variation of this increased performance across wards and hospital sites. Other benefits secondary to screening improvements included better provision of NRT, very brief advice, and a rise in appropriate referrals to community services for continuing quit attempts.

Referrals into the tobacco dependency treatment service QI projects

Referrals into local tobacco dependency services were another popular focus with 7 teams choosing to concentrate on this element of their pathway. The motivation for this topic amongst a number of teams was their lack of electronic systems to record smoking status, meaning referrals were done manually.

For this topic, project aims were focused on increasing referrals to tobacco dependency treatment services from wards and from midwives along with increasing the number of inpatient smokers seen by tobacco dependency teams.

The change ideas used by teams were as follows:

- Creation of a virtual booking clinic on the electronic patient record for midwives to book pregnant smokers into, thus providing all necessary metrics to the smoking cessation/tobacco dependency team in a quick efficient way
- Ward posters with a flow chart for the ward staff to refer to
- Self-referral poster for the patients on the wards with a QR code so the patient could scan the code and be in charge of their own journey and posters were made multilingual
- Attending ward rounds to identify smokers and refer into the service
- Building a network of smoking cessation/tobacco dependency champions

- Posters in doctors' offices and patient toilets promoting the service
- Changing the referral process to remove 'opt outs' and removing the need for separate referral form after the initial smoking assessment
- Education and training sessions on wards
- Creation of a mandatory smoking status section in the VTE assessment form and a prompt in this to form to prescribe NRT (Nicotine Replacement Therapy) and refer to TDT (Tobacco Dependency Teams)
- Embedding smoking cessation/tobacco dependency in ward accreditation work through our Pathway to Excellence programme. As part of the accreditation ward staff are now asked if they know how to refer to the service
- Process by which the ward clerk emails the team about identified smokers

Improvements seen by teams include a 25% absolute increase in patients engaging with tobacco dependency services and a 10% absolute increase in referrals to the local stop smoking service. There was also a rise in referrals from various staff groups including doctors, nurses and pharmacists, especially after training sessions.

One team saw a 63% absolute increase in their referrals during the programme, alongside an improvement in junior doctors' confidence in identifying, referring, and treating smokers.

The implementation of a new mandatory smoking status section in the VTE assessment form, which included a prompt for tobacco dependency referrals and NRT prescriptions, resulted in more patients seen by tobacco dependency services and a change in the source of referrals. Prior to the new form, 81% of referrals came from the tobacco dependency team, whereas after its introduction 84% of referrals were generated from the new form.

Another team saw the use of virtual booking clinics as a means of referral resulting in steady growth in referral rates by midwives up to 90%.

NRT provision QI projects

Four teams looked at NRT provision in their QI projects. The project aims were around increasing inpatient NRT prescriptions, increasing NRT on TTOs (to take out medication) and reducing time from admission to NRT prescription.

The change ideas used by teams were as follows:

- Bespoke NRT training to clinical staff groups- building awareness and confidence in prescribing
- Provision of a ward resource folder on NRT post training

- Provision of business card style NRT prescribing cards to clinical staff
- Stickers in medical notes as a reminder to prescribe NRT on discharge
- Sending NRT reminders via the patient system to doctors/pharmacists
- Trust wide NRT protocol and building this into the e-record system

Project outcomes were positive for this topic area with one team seeing a 48% absolute increase in patients receiving NRT on their TTOs from the start of the project to the latest available data. Another team saw a steady rise in NRT prescribing resulting in a 15% absolute increase on their participating wards from January to July.

Some teams had difficulties accessing quantitative data on this topic. Another team captured qualitative feedback on their training sessions whilst they awaited quantitative data. Their findings suggest that the training was well received and has led to volunteers to be ward champions.

Transfer of care to the community QI projects

Transfer of care to the community was the final topic which 2 teams focused on. The project aims focussed on increasing the number of smokers seen in community after hospital discharge. The change ideas tested included increasing awareness of services to ward staff and streamlining documentation.

One of the teams met their project aim and achieved a greater than 5 times increase in community engagement in their stop smoking services and 2.8 times rise in their 28-day quit rate.

The teams also highlighted their plans to build on this work with one team exploring ways to embed an ongoing QI approach as part the Tobacco Dependency Treatment Service and Smoke free agenda's work programme and adding QI as a standing item on the agenda for the monthly meeting of the Trust's Smoke Free Steering Group. A number of other change ideas were also identified for future work.

Summary

Of the 25 teams selected to participate in this programme, 2 withdrew during the course citing staffing issues within their services. Another 2 teams participated in the programme but did not submit a final project update.

Final project updates were received from the majority of participating teams (80%) and the dropout rate for the programme was low (8%). There were four main themes to teams' projects and improvements were seen across each of these areas. The improvements achieved by teams included:

- Rises in the number of inpatients screened for smoking status

- More referrals to local tobacco dependency services
- Increases in NRT on TTOs and ward prescribing
- Growth in transfers to the community and 28 day quit rates

Even where teams did not see improvements or were unable to get projects off the ground due to competing pressures it was good to see future plans for QI work.

Environmental sustainability

This programme was delivered entirely remotely, and all resources were sent to teams as electronic copies only. The online nature of the programme was a conscious decision from an environmental sustainability perspective and also to encourage participation from teams across the UK. It is estimated the remote delivery of this programme saved around 10,500 miles of travel based on the 3 individuals from each team travelling to London for each of the webinar sessions.

QI sustainability

The final webinar included a focus on sustaining change in QI and teams were provided with a suite of resources to refer to on this topic.

A celebration event was planned and completed in October 2023. This date was chosen to allow time for teams to put their learning into practice and return with feedback on ongoing QI projects. The chosen guest speaker focused on sustaining change and reinforced this message.

Prior to the October event, a questionnaire was sent out to teams to identify whether they were still working on their projects, what they have been doing, and what have been their barriers and enablers to sustaining their projects.

Upon completion of the programme, teams initial thoughts on how they would sustain their QI projects and improvements were identified.

Their ideas included:

- Linking in with the existing hospital QI teams to gain project support.
- Trying to automate as many processes as possible.
- Having a focus on visibility within their trust for their project team.
- Focusing on feedback to staff of the effects of their actions e.g. from a patient they know has stopped smoking to show the effectiveness of the service.
- Sustainability being included as a measure of success when reviewing what you have done and identifying things to change to sustain the initiative.
- Using evidence on current limitations to push for a QI approach/change.

- Utilising the programme resources for ongoing learning.

Tobacco dependency learning

Services

From working closely with teams it became apparent that the Tobacco Dependency Treatment Services varied greatly between settings with some well-established and others smaller and at an earlier phase in their delivery.

In many cases, the services did not turn out to be developed as how they described themselves in the programme application forms. As part of the recruitment, there may be some benefit to having calls with prospective teams to gather information from them directly to assess their suitability. This would enable an assessment to be made of teams' baseline knowledge and would allow potential barriers and enablers to be identified earlier.

IT systems and data

IT (Information Technologies) was the single greatest challenge faced by teams participating in the programme. IT systems were seen to be outdated, with updates long overdue and teams faced challenges gaining access to those able to make changes. The more successful teams were those who had relationships with IT and Business Intelligence teams either already existing, or as a result of this programme.

Due to IT limitations, data collection was primitive at times and added to the existing workload of teams. In future programmes, it may be helpful to consider how prescriptive data collection should be. In this programme 4 outcome measures were set for teams to collect data on, based on NHS data submission requirements. In reality, a more pragmatic approach was taken due to the limited data and systems teams had access to. Whilst some teams were able to effect changes and gain access to data, others were not. Therefore, the programme highlighted the importance of gathering data where possible on relevant areas but ensuring consistency to detect change across a period of time.

Project teams

The programme eligibility criteria stipulated teams needed to be multidisciplinary. In reality, Tobacco Dependency Advisors were well represented at webinars and were often those responsible for driving projects forward rather than clinicians. In some teams there was strong clinical support and these teams tended to progress well. In other teams they struggled to get clinicians on board. A suggestion for future

programmes could be to have a named clinical lead and to meet with them early in the programme to reinforce the expected active nature of their role.

Some teams struggled with staff vacancies and high staff turnover which led to delays with their projects and reduced their participation. Whilst these cannot be predicted and prevented, examples were seen of teams with high staff turnover who then achieved good improvements. These teams utilised LifeQI as a record of their progress and this facilitated a handover to new team members. Feedback was also received from one team who found the programme a useful way to introduce their new starter to QI. The resources were designed in such a way to be used throughout the programme.

Online QI programme learning

Support mechanisms

The main support mechanism utilised by teams was via email directly to the facilitators. Some of these emails resulted in the scheduling of 1-2-1 coaching calls with teams but generally email support was sufficient for the majority of team queries and support requirements. This method of support allowed for flexibility but did place an administrative burden on the team. Drop-in sessions were scheduled immediately following the webinars; however these had limited uptake. This likely because support was readily being sought by email therefore reducing the need for scheduled time with the programme facilitators.

LifeQI

Based on use and feedback of using LifeQI from teams, LifeQI may not be an essential component of future online QI programmes. It was seen to be very useful for some teams, but it was not universally adopted by teams overall. Reviewing only what was recorded on LifeQI would have caused programme facilitators to miss work from certain teams who did not use LifeQI as much as others. Future programmes may benefit from access to LifeQI if the budgets permit. A parallel offer of an alternative project management process may also be beneficial. This might include templates for driver diagrams, or PDSA cycles housed in a team's shared online space.

Advice to teams starting out in QI

Participating teams suggested a number of areas to highlight to future teams starting on QI programmes. These included the importance of regular team meetings, ensuring team roles were clearly defined with expectations for the roles and early communication with the data team.

There was an emphasis on the need to prioritise time and resources for the QI programme and not regarding it as a 'luxury thing to do', and instead use it as a vehicle to identify and showcase quick wins to obtain organisational buy-in. Starting small and not being afraid to do so was a key piece of advice a number of teams wanted to pass on.

Patient involvement

Patient involvement is an important part of quality improvement. Teams were introduced to this topic, which covered the general concept, potential benefits, and barriers. They were also presented with examples of how patients could be meaningfully involved at all stages of quality improvement.

This topic was introduced towards the end of the programme due to the initial need to train teams on the fundamentals of quality improvement. However, it was highlighted as a very important area, and going forward teams were encouraged to upskill and empower patients when including them in their projects.

At the end of the programme some teams had begun to involve patients in their QI programmes. The initial examples of patient involvement included several teams obtaining patient feedback on change and improvement ideas through surveys.

There is a need for this area to develop further to include meaningful patient involvement at all stages of quality improvement projects. It is anticipated this area will evolve as teams QI projects continue and begin to embed the practical examples shared with them.

Conclusions

This programme set out to deliver a new national Quality Improvement programme, which aimed to support Acute Trusts to develop high-quality tobacco dependency treatment services for inpatients and improve existing services. 25 teams from across the UK were selected to participate and the programme was delivered as planned through a series of webinars, self-directed tasks and coaching sessions.

Pre and post programme questionnaires had good response rates and positive outcomes. These included teams reporting increases in their self-rated QI knowledge and confidence in using QI methodology to improve their inpatient tobacco dependency treatment pathways following the programme. In addition, new and enhanced project management skills were reported post-programme, along with a modest increment in teams' self-rated understanding of their pathways and an growth in their understanding of the issues faced within their local tobacco dependency pathways.

Final project updates were received from the majority of participating teams and the dropout rate for the programme was low. Overall, the uptake and use of QI tools and methodologies was good. Feedback also identified attitudes to using QI methodology to improve tobacco dependency pathways increased after completion of the programme, which may suggest future behaviour change and a move to using QI methodology.

Teams' QI projects were based around four main themes and improvements were seen across each of these areas. The improvements achieved by teams included:

- Increases in the number of inpatients screened for smoking status
- More referrals to local tobacco dependency services
- Growth in NRT on TTO's and ward prescribing
- A rise in transfers to the community and 28 day quit rates

A celebration event took place on October 2023. Spread and sustainability have been highlighted as areas of focus for projects going forwards. Teams have also been encouraged to celebrate their successes to date and to share their work both locally and wider.

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The following participating sites:

- Frimley Health NHS Foundation Trust
- Gateshead Health NHS Foundation Trust
- Gloucestershire Hospitals NHS Foundation Trust
- Leeds Teaching Hospitals NHS Trust
- Lewisham and Greenwich NHS Trust
- Liverpool University Hospitals NHS Foundation Trust
- North Middlesex University Hospital Trust
- North Tees and Hartlepool NHS Trust
- Northampton General Hospital
- Portsmouth Hospitals University NHS Trust
- Royal Cornwall Hospital Trust

- Royal London Hospital and St Barts Hospital
- Salisbury NHS Foundation Trust
- Sheffield Teaching Hospitals NHS Foundation Trust
- Sherwood Forest Hospital NHS Foundation Trust
- South Eastern Health and Social Care Trust
- The Newcastle Upon Tyne NHS Foundation Trust
- Torbay Hospital
- University College London Hospitals
- University Hospitals Birmingham NHS Foundation Trust
- University Hospitals Coventry and Warwickshire NHS Trust
- University Hospitals of Derby and Burton
- University Hospitals of Leicester
- Whipps Cross Hospital

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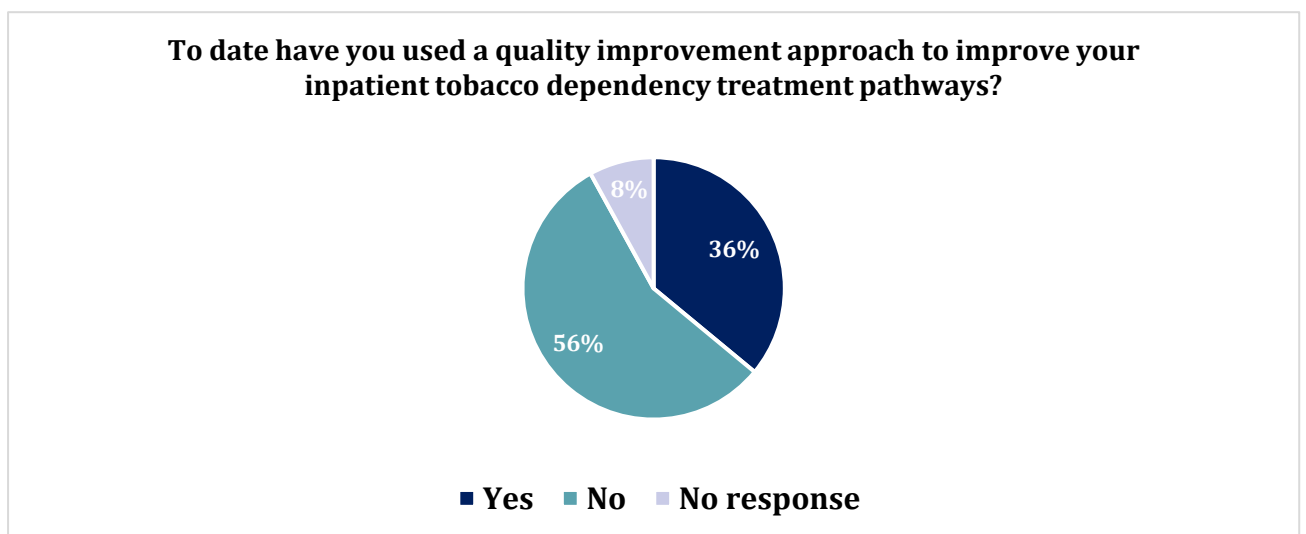
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Appendix 1: Pre and post programme questionnaire findings

Teams were asked to complete pre and post programme questionnaires, to help gauge skill uptake and confidence. One completed questionnaire was requested per team. The findings from these questionnaires are set out in this appendix.

In the pre-programme questionnaire teams were asked 'To date have you used a quality improvement approach to improve your inpatient tobacco dependency treatment pathways. The responses can be seen in figure 7 with the majority of teams not having used a QI approach on their pathways previously.

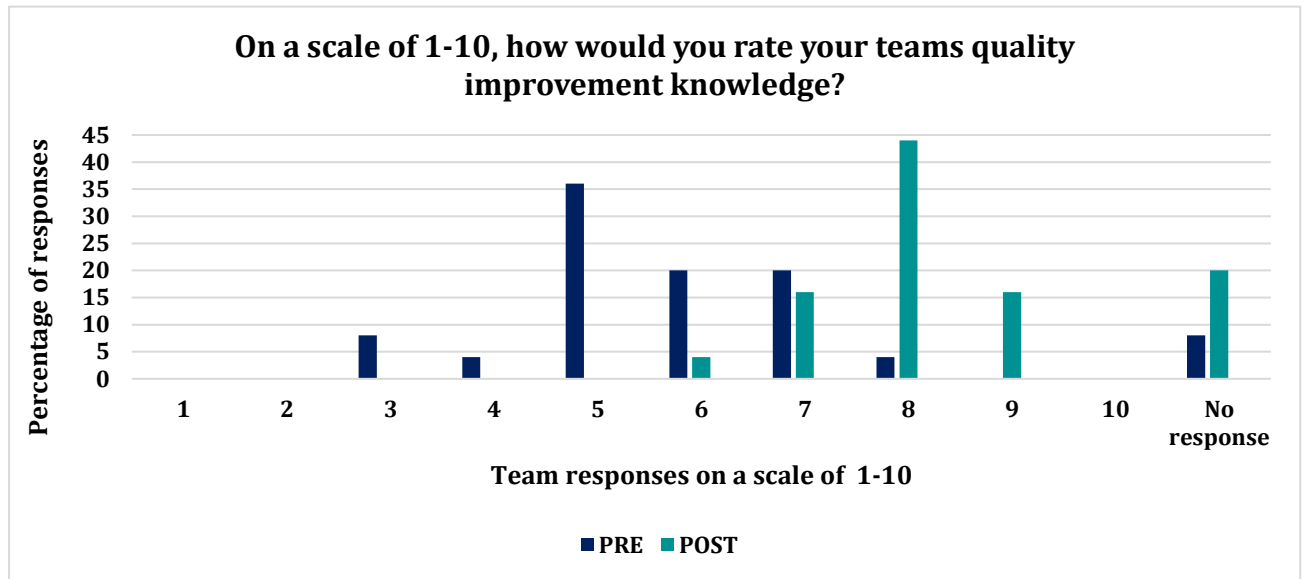
Figure 7: Pre-programme questionnaire responses regarding previous QI use



Teams were asked to self-rate their QI knowledge and their confidence in using QI methodology to improve their tobacco dependency treatment pathways before and after completion of the programme. The responses can be seen in figures 8 and 9 respectively.

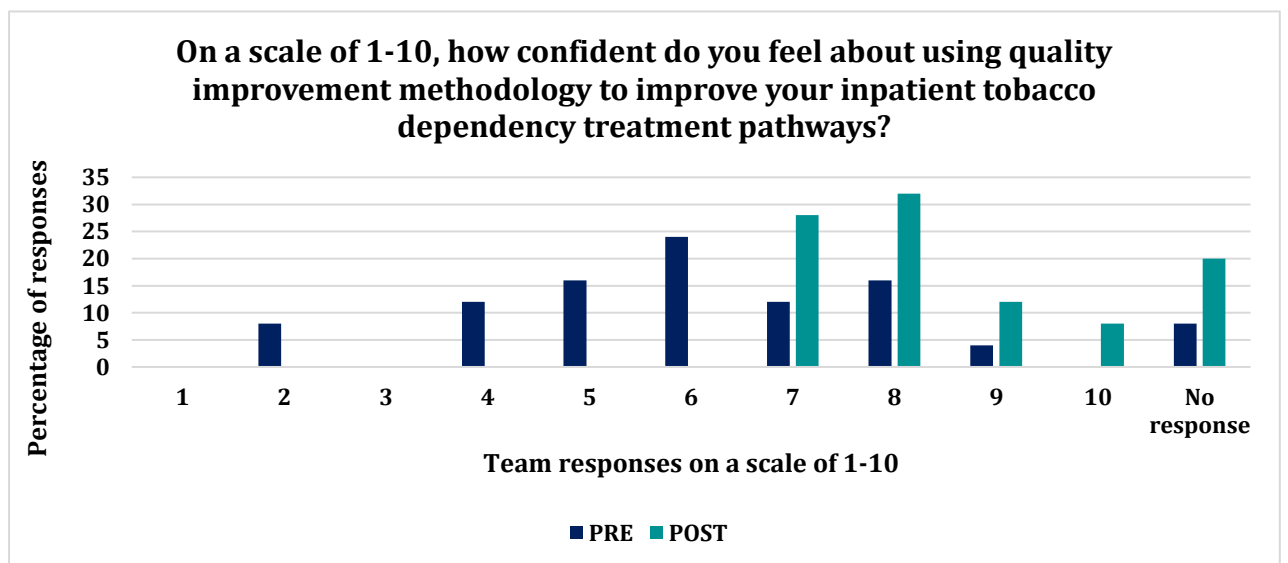
Teams were asked 'On a scale of 1 -10, how would you rate your team's quality improvement knowledge?'. Before the programme the average self-rated QI knowledge score was 5.6/10. Whereas after the programme the average self-rated QI knowledge score had increased to 7.9/10 as seen in figure 8.

Figure 8: Questionnaire responses regarding QI knowledge



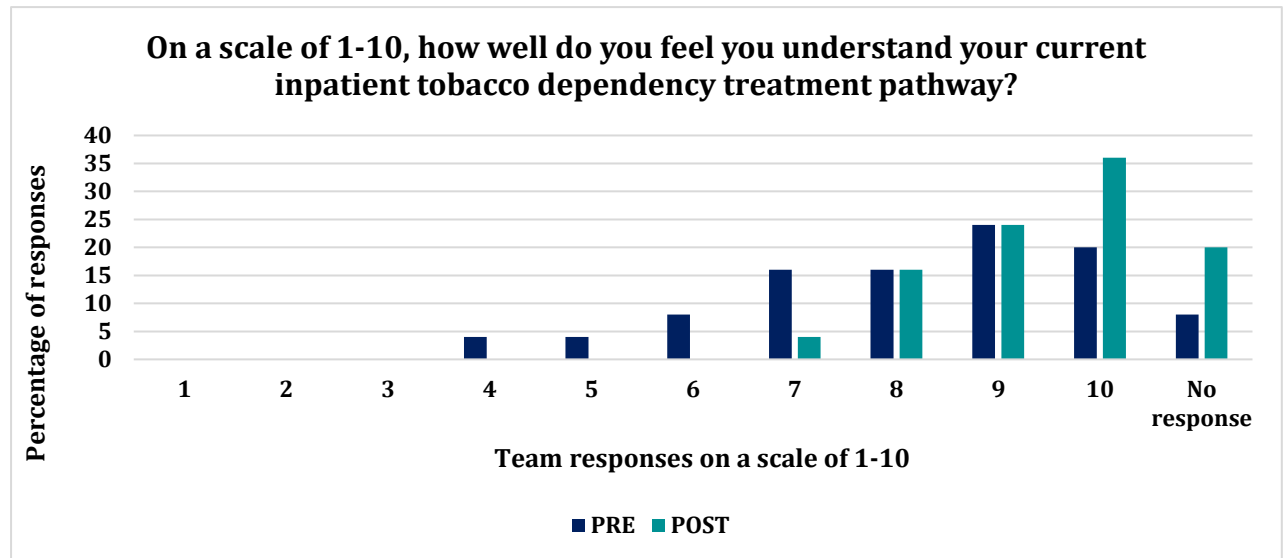
Confidence in QI methodology was another topic on the pre- and post-questionnaires with teams asked, ‘On a scale of 1-10, how confident do you feel about using quality improvement methodology to improve your inpatient tobacco dependency treatment pathways?’. Prior to the programme, teams the average self-rated score from teams regarding their confidence in using QI methodology was 5.8/10 and after the programme the average self-rated confidence score had increased to 8/10 as seen in figure 9.

Figure 9: Questionnaire responses regarding confidence in using QI methodology



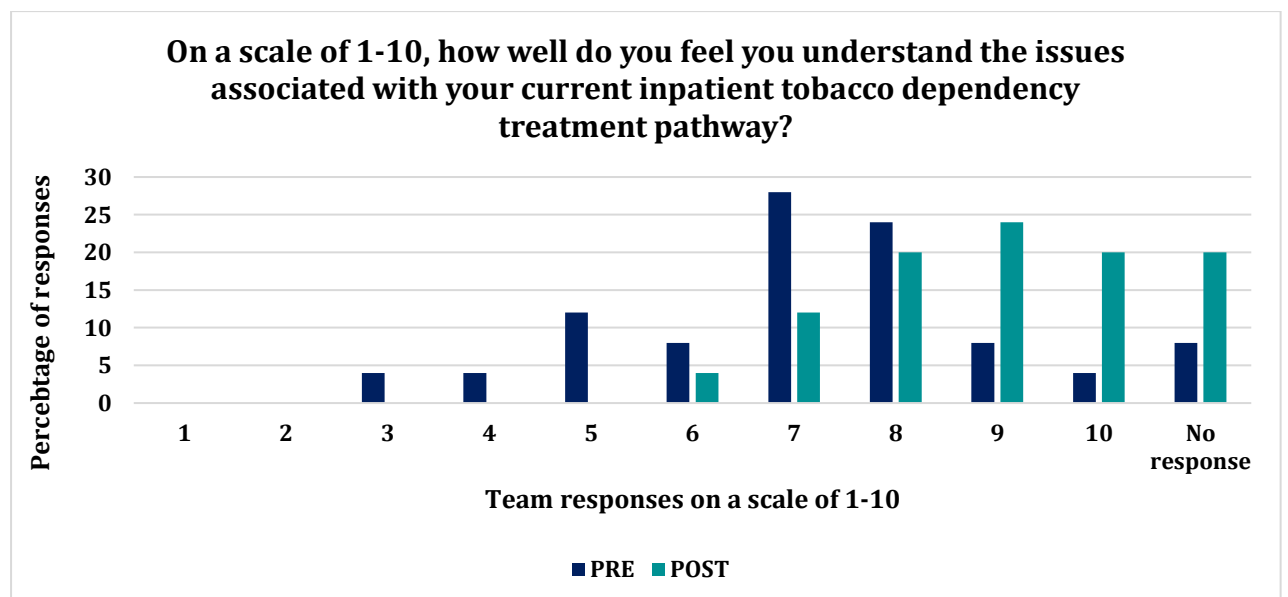
The questionnaire asked teams ‘On a scale of 1-10, how well do you feel you understand your current inpatient tobacco dependency treatment pathway?’ Before the programme teams average self-rated understanding of their programmes was 8/10 and after the programme this had increased to 9.2/10. This is seen in figure 10.

Figure 10: Questionnaire responses regarding tobacco pathway understanding



Teams were asked ‘On a scale of 1-10, how well do you feel you understand the issues associated with your inpatient tobacco dependency treatment pathway?’ Prior to the programme the average self-reported understanding of pathway issues was 6.9/10. This increased to 8.6/10 post-programme as seen in figure 11.

Figure 11: Questionnaire responses regarding the understanding of local issues

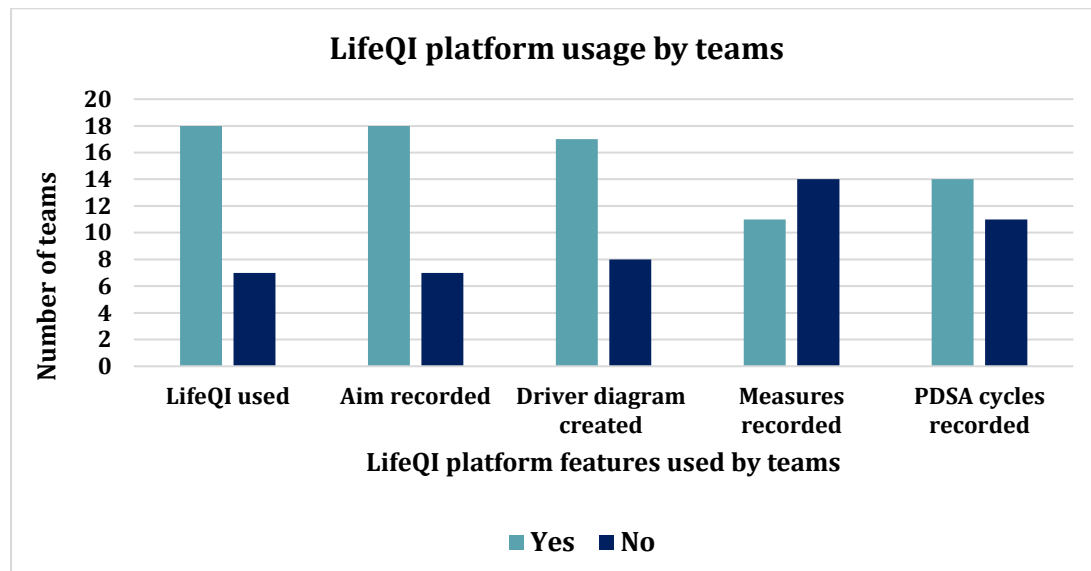


Appendix 2: Life QI and QI tool usage by participating teams

Participating teams were provided with access to LifeQI, an online QI platform for the duration of the programme. The platform was intended to aid teams in the organisation, running and reporting of their QI projects. Use of LifeQI and other QI tools and methodologies are set out in this appendix.

Figure 12 provides an overview of how teams used the LifeQI platform. Overall, 72% of teams were seen to have used LifeQI for any aspect of their projects with the platform most used to record project aims (72% of teams) and create driver diagrams (68% of teams).

Figure 12: LifeQI platform usage by participating teams



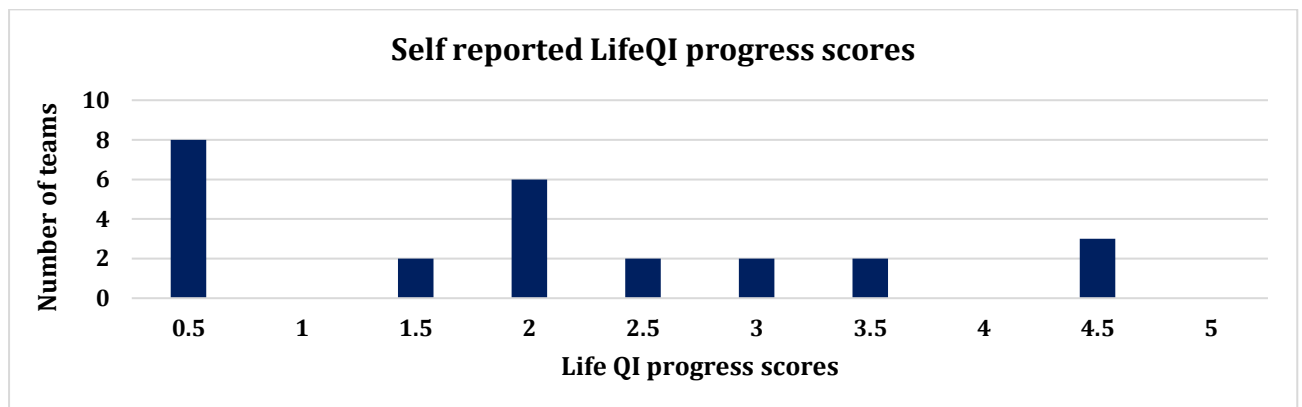
LifeQI also has a function where teams can self-report their project score according to their progress. See Figure 13 for the score definitions.

At the end of the programme teams' LifeQI scores were noted and can be seen in Figure 14. Whilst these scores can be useful to show progress, some teams did not utilise LifeQI, and others used LifeQI but did not update their score in line with their developments.

Figure 13: LifeQI project progress score definitions

0.5	Intent to Participate	✓
Project has been identified, but the charter has not been completed nor team formed.		
1.0	Charter and Team Established	✓
1.5	Planning for the Project has begun	✓
2.0	Activity, but no changes	✓
2.5	Changes tested, but no improvement	✓
3.0	Modest Improvement	✓
3.5	Improvement	✓
4.0	Significant Improvement	✓
4.5	Sustainable Improvement	✓
5.0	Outstanding Sustainable Results	✓

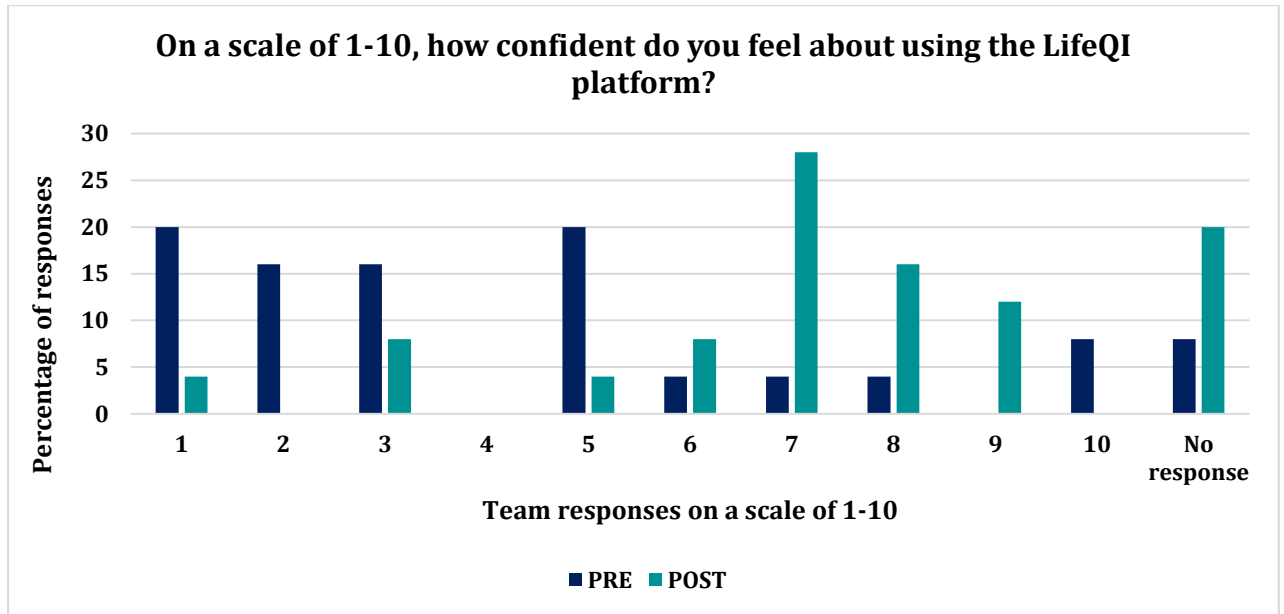
Figure 14: Teams’ self-report LifeQI project scores at the end pf the programme



Facilitators sought to understand teams’ usage of the LifeQI platform and their confidence in doing so. Teams were asked ‘On a scale of 1-10, how confident do you feel about using the LifeQI platform?’. Prior to the programme, and before receiving training, the average self-reported confidence using LifeQI was 4/10. Responses to the post programme questionnaire show this had increased somewhat to 6.6/10. The questionnaire responses can be seen in Figure 15.

(1)

Figure 15: Questionnaire responses regarding confidence in using LifeQI



Feedback on the usefulness of LifeQI was also sought from teams. In their post-programme questionnaires, they were asked ‘On a scale of 1-10, how useful do you think the LifeQI online platform has been during this programme?’. Team responses were very varied with answers ranging from 1/10 to 10/10 and the average rating of how useful LifeQI was during the programme was a modest 6.5/10. The responses can be seen in Figure 16.

Figure 16: Questionnaire responses regarding the usefulness of LifeQI

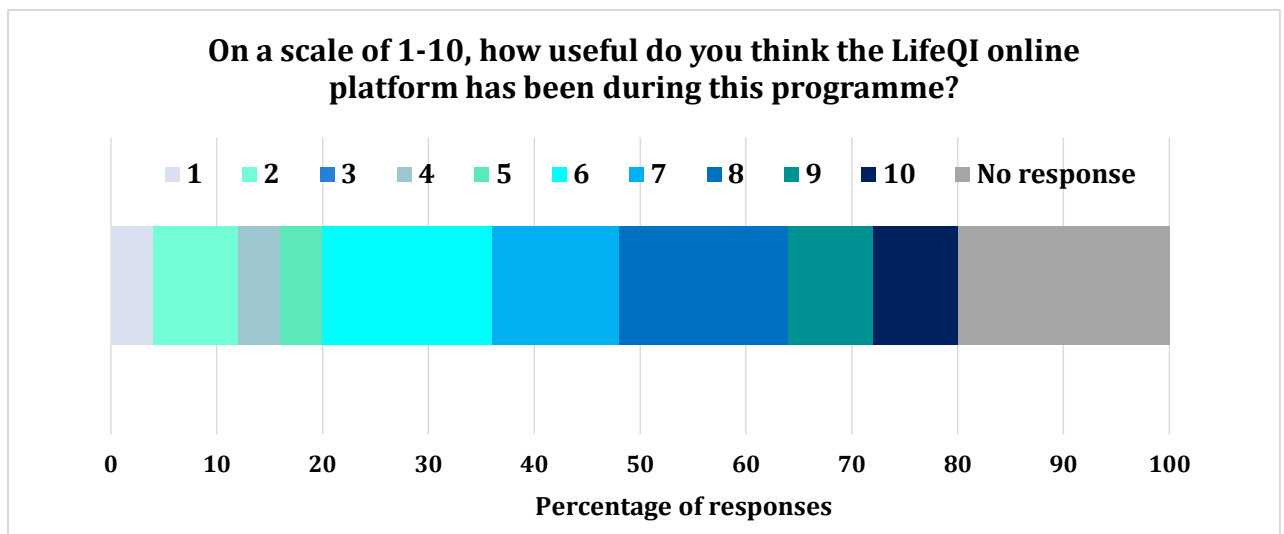
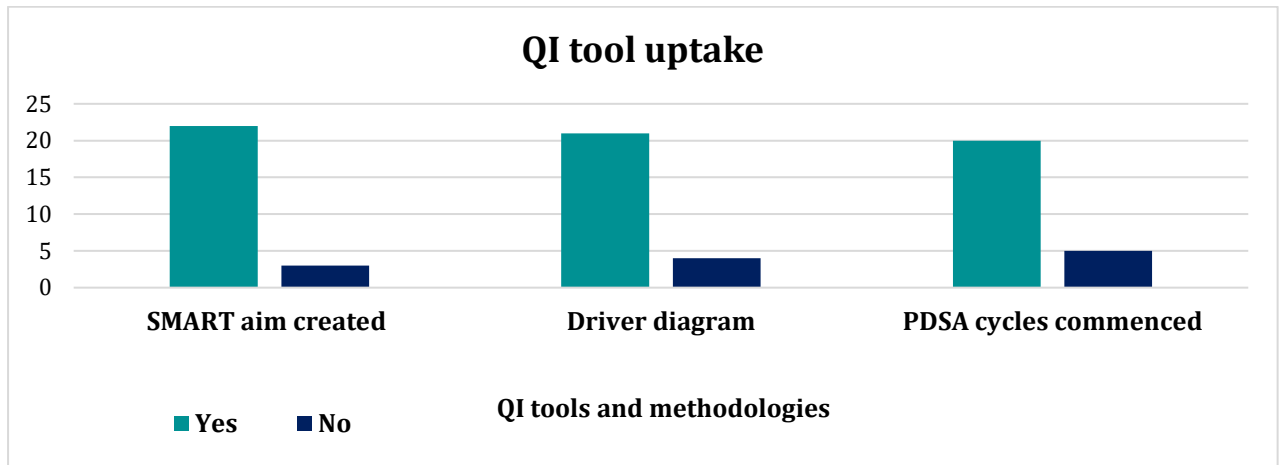


Figure 17 outlines the use of QI tools/methodologies by teams during the programme. It is clear that the vast majority of teams created a SMART aim, a driver diagram and make some progress either the initial planning or full completion of PDSA cycle.

Figure 17: Teams’ use of QI tools/methodology during the programme



Teams’ attitudes towards QI were also considered pre and post programme in order to consider their future behaviours. Teams were asked ‘On a scale of 1-10, how likely are you to use quality improvement methodology to make changes to your inpatient tobacco dependency treatment pathways?’. Prior to the programme, the average self-reported likelihood of using QI methodology to make changes to local pathways was 7.6/10. After the programme this had increased to 8.6/10 as seen in Figure 18.

Figure 18: Questionnaire responses regarding the likelihood of using QI methodology

