



An Stiúrthóireacht um Ardchaighdeán
agus Sábháilteacht Othar
Oifig an Phríomhoifigigh Clínicíúil

National Quality and
Patient Safety Directorate
Office of the Chief Clinical Officer

National Quality and Patient Safety Directorate

Evaluation of Education and Learning Programmes Guide 2023



About National Quality and Patient Safety Directorate

The National Quality and Patient Safety Directorate (NQPSD) was established in mid-2021 as a result of the HSE Central Reform Review. The NQPSD is part of the HSE Office of the Chief Clinical Officer, and is led by Dr Orla Healy, National Clinical Director, Quality and Patient Safety.

Purpose

Our vision for patient safety is that all patients using health and social care services will consistently receive the safest care possible by:

- Building quality and patient safety capacity and capability in practice
- Using data to inform improvements
- Developing and monitoring the incident management framework and open disclosure policy and guidance
- Providing a platform for sharing and learning; reducing common causes of harm and enabling safe systems of care and sustainable improvements.

Teams

In line with the “Patient Safety Strategy 2019-2024”, the NQPSD delivers on its purpose through the following teams:

- **Office of the National Clinical director:** Working in partnership with HSE operations, patient partners and other internal and external partners to improve patient safety and the quality of care.
- **QPS Improvement:** Using of improvement methodologies to address common causes of harm.
- **QPS Intelligence:** Using data to inform improvements in quality and patient safety.
- **QPS Incident Management:** Developing and monitoring the Incident Management Framework, Open Disclosure Policy and National Incident Management System.
- **QPS Education:** Enabling QPS capacity and capability in practice.
- **QPS Connect:** Communicating, sharing learning, making connections.
- **National Centre for Clinical Audit:** Supporting Clinical Audit service providers locally and nationally.

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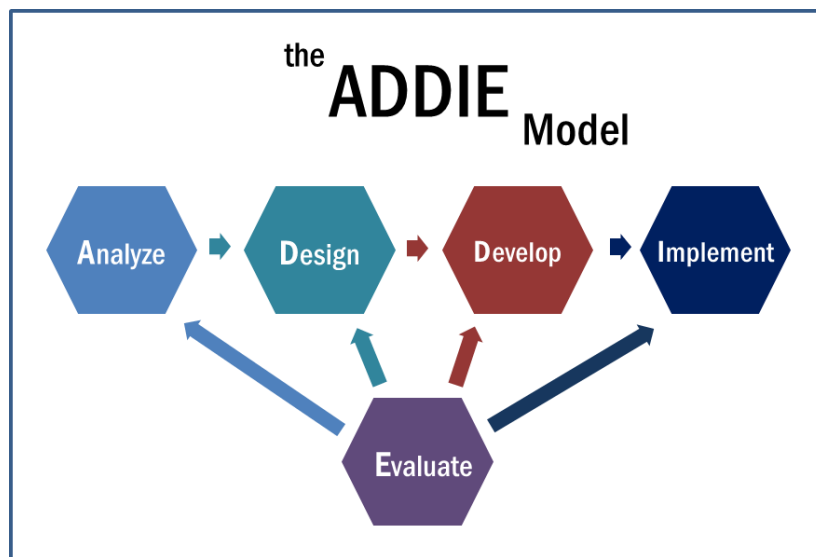
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1. Introduction

A strategic priority for Education and Learning across the National Quality and Patient Safety Directorate is to build excellence in learning across our learning programmes. It is generally accepted practice to include an evaluation alongside learning programmes that take place in healthcare workplaces [1], as a means of assessing their effectiveness, gathering feedback on opportunities for improvement, informing programme review cycles and achieving the programmes learning outcomes. The purpose of evaluation is to provide a systematic and objective assessment of a project, programme, event, policy or initiative to determine its effectiveness, efficiency, relevance and sustainability. [2] Evaluation plays an important role in promoting accountability and transparency, assessing the efficiency and effectiveness of resources invested in a programme, and providing information on how well a programme is achieving its goals.

Evaluation is a key part of the Addie model, an instructional design methodology used within the NQPSD to support and inform the development of learning programmes. It assists in streamlining the production of course content and supporting the use of feedback for continuous improvement. [3] The model is described in Figure 1.

Figure 1. The Addie model [3]



The purpose of this guideline is to:

1. Provide a standardised approach to evaluating NQPSD education and learning programmes*
2. Provide useful tools to support NQPSD education and learning programme evaluation

Taking a standardised approach will ensure that a systematic evidence-based method is applied to all programme evaluations which supports consistency and enables agreed core evaluation measures to be collated and presented at Directorate level.

*Note: Throughout this Evaluation Guide we refer to the evaluation of ‘learning programmes’. For the purpose of this Guide this also includes webinars, workshops and other education and learning initiatives (e.g. project clinics) delivered by the National Quality and Patient Safety Directorate’.

2. The Kirkpatrick model

A rapid review of evaluation frameworks used in education and training was undertaken. The most commonly used evaluation framework for education and training purposes is the Kirkpatrick model, introduced in 1959. Kirkpatrick is an outcome-focused model evaluating the outcomes of education programmes at four levels of (1) reaction, (2) learning, (3) behaviour and (4) result/outcomes. [4] The first level assesses the participant's satisfaction with the training and the second level monitors what they learned. The third and fourth levels define the correlation between acquired skills and impact on behaviour at work (transfer of learning), as well as impact on workplace outcomes.

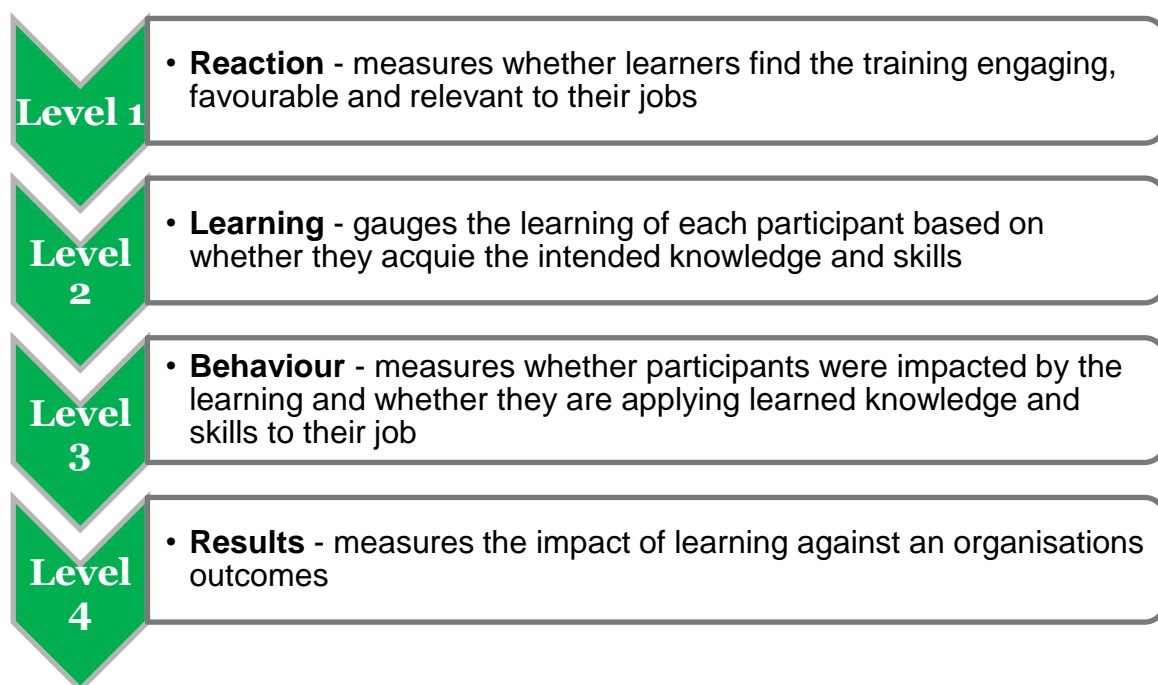


Figure 2. The Kirkpatrick Evaluation Framework

The Kirkpatrick Evaluation Framework offers a sequential and comprehensive approach for evaluating training effectiveness that is clear and intuitively understandable [1]. However, most evaluations that use this framework focus on level 1 and level 2 because of the challenge in measuring behaviour changes and impact of learning on organisational outcomes. [5] Assessment of level 1 only may be appropriate for a short online or in person classroom session, whereas assessment of all four levels of Kirkpatrick framework may be more appropriate for longer programmes carried out over a number of months. It is proposed that NQPSD use the Kirkpatrick Evaluation Framework for evaluating all education and learning programmes, including evaluation of level 3 and level 4 where appropriate.

3. Evaluation of Kirkpatrick Level 1

A core set of evaluation questions have been agreed for inclusion into all Level 1 evaluations. These four questions will provide quantitative data for each programme and enable the development of a directorate wide Education Profile.

An additional three questions have been agreed to support review of the NQPSD Classroom Management System as well as internal programme reviews. Information from the programme review questions will enable programme leads with support from QPS Education to make informed improvements if required to their programmes. These questions will provide qualitative data and will be analysed and summarised for each programme. The frequency of these reviews will be decided by learning programme leads and will contribute to quality assuring NQPSD programmes.

Table 1 provides a summary of tools that can be used in evaluation of Level 1 of the Kirkpatrick framework.

Table 1: Examples of tools to support Kirkpatrick Level 1

| Kirk Patrick Level | Evaluation Tools |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Level 1: Reaction | <ul style="list-style-type: none"> • Smart survey This can be shared with learners at the end of a module or programme. It can be designed to suit the needs of each programme. The core, online and review questions can be incorporated into survey. • Simple classroom polls • Smile sheets • Self-reflection journals |

Appendix 2 includes examples of additional Level 1 reaction questions which can be used when designing programme evaluations.

Core Questions:

| | Strongly disagree | Disagree | Agree | Strongly agree |
|------------------------------------------------------------------------------------|--------------------------|-----------------|--------------|-----------------------|
| The programme was well administered | | | | |
| Having completed this programme, I am more knowledgeable about the topics covered. | | | | |
| I was able to achieve the learning outcomes as stated in the programme. | | | | |
| I would recommend this programme to others. | | | | |

Additional question for online courses or courses with online component:

| | Strongly disagree | Disagree | Agree | Strongly agree |
|---------------------------------------------------------------------------------|--------------------------|-----------------|--------------|-----------------------|
| The e-learning platform for online component of the programme was user friendly | | | | |
| I have learned practical skills that I will apply in my area of work. | | | | |

Programme review questions:

| |
|---------------------------------------------|
| What I enjoyed most about the module was... |
| The module could be improved by... |



4. Evaluation of Kirkpatrick Level 2:

This level focuses on evaluating what participants have learnt from the programme. Examples of tools to support evaluation of Kirkpatrick Level 2 are included in Table 2.

Table 2: Examples of tools to support Kirkpatrick Level 2

| Kirk Patrick Level | Evaluation Tools |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Level 2: Learning | <ul style="list-style-type: none"> • Smart survey Pre and Post programme knowledge assessment surveys can be distributed to learners. The questions included must align to the specified learning outcomes of the programme. e.g. within the Improvement in Practice programme a Pre and Post knowledge survey was designed using the HSE Improvement Knowledge and Skills Guide. • Classroom assessment techniques such as quizzes and polls • Examinations • Assignments • Portfolios • Observations • Role play |

5. Evaluation of Kirkpatrick Level 3

Assessment of level 3 focuses on changes in behaviours which can be measured at the start of a programme, on completion and following return to work (e.g. after 3-6 months).

Table 3: Examples of tools to support Kirkpatrick Level 3

| Kirk Patrick Level | Evaluation Tools |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Level 3: Behaviour | <ul style="list-style-type: none"> • Smart survey Pre and Post programme assessment of behaviours e.g. within the Improvement in Practice (IIP) programme behaviour change was measured by designing a survey using identified behaviours from the HSE Knowledge and Skills guide • Classroom assessment techniques such as quizzes and polls • Assessment scale for project implementation • Interviews and focus groups • Observations • Simulated scenarios |

Appendix 3 includes examples of the survey assessment of behaviour change from the IIP programme, an AMRIC eLearning programme and the IHI assessment scale for QI project implementation.



6. Evaluation of Kirkpatrick Level 4:

Evaluation of level 4 may be out of scope for some programmes however NQPSD can work with organisations to identify KPIs that could align with learning and be used to assess impact of programmes.

7. Reporting of evaluation findings

The information gathered from learning programmes will be used by:

- Learning programme leads and NQPSD team leads to review individual programmes to inform changes to the content and programme facilitation
- QPS Education to develop a quarterly NQPSD Education Profile
- NQPSD Team Leads and QPS Education to inform yearly/biannual programme reviews and potential changes to programme design
- QPS Education to identify potential testimonials for inclusion on NQPSD website and QPS Prospectus
-

8. Data Governance

To comply with GDPR in relation to contacting participants after an education and learning event, it is recommended that the following statement should be included in any evaluation correspondence.

I consent to being contacted by the HSE NQPSD for information, evaluation or research purposes relating to quality and patient safety.

Yes/No

If yes, please provide your contact email address. _____
Indicating your consent here does not oblige your participation. You can opt out at any time.

Any personal data collected from participants will only be used by the HSE NQPSD for the administration, delivery and evaluation of programmes or for research relating to quality and patient safety. Anonymised data should be used for evaluation and monitoring of education and learning events and should not include any personal data including name and email address. All personal data collected by the HSE is retained in accordance with the HSE Record Retention Policy. The HSE Record Retention Policy is published on the HSE website at: www.hse.ie/eng/services/yourhealthservice/info/dp/recordretpolicy.pdf.

HSE staff who have access to this data are bound to the HSE via confidentiality agreements and are obliged to keep your personal data secure, and to use it only for the purposes specified by the HSE. Data should not be kept for longer than required in compliance with the Data Protection Act 2018 and the European Union General Data Protection Regulation (GDPR).



9. Summary

This document sets out NQPSD's framework for evaluation of its education and learning programmes. It summarises a number of tools that can be used in applying the Kirkpatrick framework to evaluating programmes. These tools can be adapted to design an evaluation that is appropriate for a particular programme, and it may not be necessary or feasible to evaluate all levels of Kirkpatrick.

While it can be challenging to evaluate level 4 of the Kirkpatrick model and it may be outside the scope of NQPSD in many cases, it may be possible to work with organisations engaging with larger learning programme and project based learning programmes to identify local KPIs that can be monitored at an organisational level to evaluate the impact of programmes.



Appendix 1: Rapid review of evaluation frameworks for education and learning programmes

Frameworks for evaluation education and training programmes

It is accepted practice to include an evaluation alongside learning programmes that take place in healthcare workplaces, as a means of assessing their effectiveness. There has been a tendency to focus evaluations on the relevance of the intervention and the learning achieved by the individual, rather than the context within which the learning intervention is situation and its impact on the workplace. [1] There has been a growing interest in theory-driven evaluation and one of the key reasons for this is the recognition of the inability of even the most sophisticated learner-focused evaluations to explain what factors are responsible for the success or failure of a programme. [1] Many evaluations of learning interventions look primarily at the learner's perspective; however organisational results are of at least equal importance but often less clear. There are numerous existing theoretical frameworks which have been used for the evaluation of education and training programmes, a number of which are described in brief below.

Kirkpatrick

The most commonly used evaluation framework for education and training purposes is the Kirkpatrick model, introduced in 1959. Kirkpatrick is an outcome-focused model evaluating the outcomes of education programmes at four levels of (1) reaction, (2) learning, (3) behaviour and (4) result/outcomes. [4] The first level assesses the participant's satisfaction with the training and the second level monitors what they learned. The third and fourth levels define the correlation between acquired skills and the employee's behaviour at work, as well as their impact on the workplace.

Advantages:

- Clear and intuitively understandable [1]

Disadvantages:

- Most evaluations focus on level 1 and level 2 [5]
- Fails to provide evaluator with an insight into underlying mechanism that inhibit or facilitate the achievement of programme outcomes [4]
- Level 4 typical involves longitudinal measurement and assessment of impact of training, and difficult to establish link between training and such outcomes [5]
- Provides very little guidance on how to identify evidence of impact [1]
- Questions of bias in selection of data and standards and comparators are not addressed

In response to shortcomings, a new version of the Kirkpatrick model has added new elements to recognise the complexities of the programme context. The main changes have been made at level 3 to include processes that enable or hinder the application of learned knowledge/skills. [4] The new model emphasises that it is important to identify the behaviour and results orientated outcomes during programme planning, develop indicators for them, and embed mechanisms for collecting the data into the programme, and provide a broader description of what to evaluate at level 3. [6] Drivers that reinforce, monitor, encourage and reward learners to apply what is learned during training, on the job learning and learner's motivation and commitment to improve their performance on the job are factors that may influence the given outcomes at level 3.

CIPP

The CIPP (Context-input-process-product) evaluation framework was introduced by Stufflebeam in 2001 [7], and it is claimed that it can guide evaluations of programmes, projects, personnel, products, institutions and evaluation systems. Its emphasis is on formative and summative review of learning with emphasis on context, and it provides a holistic view.

Below is a summary of the components of the CIPP framework:

- Context - goal, objectives, history and background of organisation
- Inputs - material and human resources needed
- Process - Implementation of different practices
- Product - quality of learning and usefulness for individual and organisation

The framework poses four basic questions - what should we do, how should we do it, are we doing it as planned, and did the programme work?

Advantages:

- Context evaluation will enable identification of political climate that will influence the success of a programme
- Encourages assessment of programme goals both formative and summative measure, such as environmental analysis of existing documents, case study interviews and stakeholder influence [1]
- Encourages programme personnel to use evaluation continuously, and systematically plan and implement programmes [8]

Disadvantages:

- Strong on data gathering but less so on analysis of data
- Close collaboration between evaluator and stakeholder may introduce bias [8]

Donabedian

Donabedian developed a framework for evaluation which states that quality of healthcare can be drawn from three categories - structure, process and outcomes. It is traditionally used to evaluate healthcare services, however it in recent years it has been proposed as an evaluation model for use educational settings [9].

Advantages:

- Useful in drawing attention to physical and political environment
- Simple and straightforward

Disadvantages:

- Falls short of assessing the extent to which the context supports or inhibits the application of learning
- Focus on system

Utilisation-focused evaluation model

The Utilisation-focused evaluation model (UFE) was created by Michael Patton and begins with the premise that “evaluation should be judged by their utility and actual use’ therefore evaluations should facilitate the evaluation process and design any evaluation with careful consideration of how everything that is done, from beginning to end, will affect use” [10]. It provides a comprehensive checklist and decision framework for designing and implementing an evaluation and is done for and with specific primary intended users for specific, intended uses. [11]

Advantages:

- Context-specific and can be adapted and applied in most situations
- Intended users determine the most important questions
- Can be applied at any stage of the programme implementation process
- Emphasises strict adherence to standard evaluation practices leading to comparable outcomes

Disadvantages:

- Leads to high turnover of involved users
- Ceding control to programme users can lead to unorthodox practices and unexpected or exaggerated outcomes
- Difficult to define one single user to centre evaluation activity around as a programme has several stakeholders [8]

Consumer-oriented model

The consumer-oriented approach is one of the Improvement- and Accountability- Oriented approaches, which emphasises the assessment of value in programmes. It takes a consumerist view of evaluation and seeks to inform consumers about products so that they have the information for making judgements about service products such as commercial educational programmes and materials. [8]

Advantages:

- Comprehensive and practical analysis
- Emphasises the needs of the user
- Systematic approach [8]

Disadvantages:

- Can alienate programme staff
- Value is dependent on whose standards one is judging a programme
- Stringent criteria and standards in the evaluation process may curb creativity and bias outcomes [8]



Appendix 2: Level 1: Reaction Survey Question Examples

Each question is rated against a 4 point Likert scale: Strongly Disagree, Disagree, Agree and Strongly Agree.

Section 1 INTRODUCTION AND SELF-DIRECTED RESOURCES

| |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| |
| 1. Communication about the module was clear. |
| 2. The delivery of the module was well organised. |
| 3. This module covered what I expected it to cover. |
| 4. The module was applicable to my development needs. |
| 5. The content of the module was easy to understand. |
| 6. The HSeLanD learning management system was easy to navigate. |
| 7. The self-directed learning resources contained an appropriate mix of media (e-learning video, webinar, reading material) that enhanced my learning experience. |

Section 2 CLASSROOM SESSION

| |
|------------------------------------------------------------------------------------------------------------------|
| 8. The facilitators were knowledgeable about the content they delivered. |
| 9. Participation and interaction were encouraged throughout the session. |
| 10. There was sufficient opportunity for discussion throughout the session. |
| 11. The facilitators supported my learning. |
| 12. The platform used for the virtual classroom was easy to navigate |
| 13. The use of interactive tools (eg. chat box, polls, break-out rooms) enabled me to participate in discussion. |
| 14. Any technical issues were quickly dealt with by the facilitators. |



Section 3 RESOURCES

15. Materials and resources provided were helpful to my learning

16. Adequate supports were sign-posted during module to enable me to transfer the learning to my workplace.

Section 4 - LEARNING

19. The content of this module was better suited to a blended learning approach (mix of self-directed and classroom learning) than a full classroom session.

20. I prefer to undertake blended learning (mix of self-directed and classroom learning) rather than the traditional classroom based learning.



Appendix 3: Level 3 Resources

Example from Improvement in Practice Programme

Within the Improvement in Practice programme participants assessed themselves against the following behaviours at the start of the programme and then again at the end of the 20 week programme with behaviour questions based on HSE Knowledge and Skills Guide.

| | Never | Rarely | Sometimes | Often | Always |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I actively work within my team to set improvement objectives and assist in implementing them | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I use various methods to partner with people who use the health services in my team's quality improvement work | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I use engagement and facilitation techniques to support improvement work | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I consistently apply methods and tools for improving quality to achieve sustainable quality improvement in my workplace | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I take a consistent, robust and planned approach to measurement for improvement | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I engage with managers in my organisation to share the improvement work of my team | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel confident to share my improvement knowledge and skills with my colleagues | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

HSEland Practice Evaluation Survey for an AMRIC eLearning programme

You completed the eLearning programme a short time ago. We are keen to find out how you have applied what you learned in your area of work. This survey will take around 5-10 minutes to complete. We will safeguard your personal data and use it only for the purposes of gathering feedback to help determine if the programme meets the needs of you and your colleagues. No participants will be individually identifiable when reporting on the feedback results.

Thinking about how the AMRIC eLearning programme impacted on the way you work, how strongly do you agree or disagree with the following statements? 1= Strongly disagree, 3 = Neutral, 5 = Strongly agree

| | 1 | 2 | 3 | 4 | 5 |
|------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| 1. The programme has had a positive impact on how I do my job. | | | | | |
| 2. My knowledge in this topic has improved because what I learned on the programme. | | | | | |
| 3. I have noticed a positive change in my clinical practice at work since completing the programme. | | | | | |
| 4. I can make better informed decisions as a direct result of completing the programme. | | | | | |
| 5. I am motivated to apply what I learned when the opportunity arises. | | | | | |
| 6. I return to the programme online to access links and resources that help me apply the learning in my area of work. | | | | | |
| 7. Completing the programme has given me practical tips and supported my decision-making in my work. | | | | | |
| 8. I plan to continue to integrate the things I have learned into how I work. | | | | | |
| 9. I have received the support I need to apply what I learnt in my area of work. | | | | | |
| 10. I have come across barriers that prevented me from applying what I learnt in my area of work. | | | | | |
| 11. I have been able to positively change the way my colleagues work because of this programme. | | | | | |
| 12. I would benefit from further training on this topic. | | | | | |
| To improve our educational programmes, please give us 1 example of how you have applied what you've learned in the programme into your area of work. | | | | | |
| What, if anything, has stopped you applying what you've learned into your area of work? | | | | | |
| Please provide any other comments or suggestions about the eLearning programme. | | | | | |



The IHI Assessment Scale

The IHI Assessment scale provides a template to assess a team’s progress throughout an improvement project. It allows advisors to determine how well a team is doing in meeting improvement goals and implementing change, on a scale of 1-5. [12]

For project based learning programmes this tool can be used to measure a team’s ability to apply their QI learning to implementing a QI project.

| Assessment/Description | Definition |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.0 Forming team | Team has been formed; target population identified; aim determined and baseline measurement begun. |
| 1.5 Planning for the project has begun | Team is meeting, discussion is occurring. Plans for the project have been made. |
| 2.0 Activity, but no changes | Team actively engaged in development, research, discussion but no changes have been tested. |
| 2.5 Changes tested, but no improvement | Components of the model being tested but no improvement in measures. Data on key measures are reported. |
| 3.0 Modest improvement | Initial test cycles have been completed and implementation begun for several components. Evidence of moderate improvement in process measures. |
| 3.5 Improvement | Some improvement in outcome measures, process measures continuing to improve, PDSA test cycles on all components of the Change Package, changes implemented for many components of the Change Package. |
| 4.0 Significant improvement | Most components of the Change Package are implemented for the population of focus. Evidence of sustained improvement in outcome measures, halfway toward accomplishing all of the goals. Plans for spread the improvement are in place. |
| 4.5 Sustainable improvement | Sustained improvement in most outcomes measures, 75% of goals achieved, spread to a larger population has begun. |
| 5.0 Outstanding sustainable results | All components of the Change Package implemented, all goals of the aim have been accomplished, outcome measures at national benchmark levels, and spread to another facility is underway. |

Appendix 4: QI outcomes across each level of Kirkpatrick

The below figure describes QI outcomes across the levels of Kirkpatrick, and can be found at the following link:

<https://q.health.org.uk/idea/2018/transferring-learning-from-qi-training-for-better-impact-on-care/>

Figure S1. QI outcomes across each level of Kirkpatrick





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