

Quality Improvement Projects for Doctors in Training

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There is an increasing impetus to include quality improvement (QI) into doctors' training. In the UK¹ the foundation year curriculum states that FY2 trainees are now required to contribute significantly to at least one QI project and report their work in their e-portfolio. QI is best defined as the combined efforts of healthcare professionals to make changes that will lead to better outcomes for patients, health, better systems performance, better care, better professional development, and better learning. Doctors both now and into the future must not only provide good clinical care, they are also expected to devise strategies to improve that care. It is an important skillset to acquire as change and improvement are never easy. Even simple systems become much more complex when change is being introduced.

When confronted with the need for change many individuals respond by attempting more of the same, more equipment, more technology, more people. Another response is to try for perfect change. The better approach is to focus on changes that alter how work and clinical activity gets done².

QI is more acceptable to healthcare professionals than quality assurance (QA). The difference between QI and QA is significant. The QA approach emphasises inspections and sanctions for medical errors. It is individual focussed and follows a perfection myth. QI, on the other hand, is systems focussed and recognises fallibility. It concentrates on teamwork and sees errors as opportunities for learning. QI encourages creative thinking.

QI originated from industrial processes used in product development and quality control. William Edwards Deming³, who worked in the automobile industry, was an important figure in the development of QI. He recognised that variation leads to poor outcomes.

He used analytical tools to determine the sources of variation. The more the variation, the more the errors. When applied to clinical practice, patients treated outside best practice guidelines receive unacceptable variation in care.

This approach has shifted the focus from individuals to the underlying systems. The concepts that were implemented included: provide training on the job, improve constantly, drive out fear, and eliminate silos.

Teaching QI at early stage in doctors careers has been shown to be beneficial. It frequently leads to positive changes in patient care. There are many healthcare areas that a trainee can find a QI project. Examples include areas of non-compliance with best practice, shortfalls in the delivery of care, long waiting times in the ED and OPD, and near misses in clinical practice such as drug dose errors.

One is struck how frequently trainees struggle at interviews when they are asked how they would go about implementing a change in practice. There is clearly a need for more teaching and training in this area. Prior to embarking on a project, the four key elements to consider are: an appreciation of the system, understanding variation, building knowledge, and the human side of change.

An appreciation of the system means that one scopes out how the hospital or practice currently operates. Understanding variation means that one must identify how the current delivery of care deviates from the national or international norms. It is important to be able to distinguish between normal variation due to the flexibility of the system and special cause variation that creates defects. Building knowledge by making preliminary changes and observing the results is the foundation of improvement. The human side of change helps us to predict how people will react to a specific change. This understanding of psychology and human behaviour means that one is aware that at the commencement of any change project there will be enablers, followers, and objectors. This introduces the concept of spread. Spread happens when the staff decide to try something new. The involvement and input of senior members of staff is important when trying to spread the improvement.

Motivation is a key factor. One of the best ways to overcome an obstacle is to find some aspect of the change that will benefit the staff. For example, they are more likely to accept changes in ward round or theatre timetables if it means that their work becomes more streamlined or finishes earlier.

In simple terms the trainee needs to identify the problem, get a QI team together with a blend of skills, and formulate an initial plan. QI is a team activity⁴. When embarking on a QI project, a trainee will find that a project with a high throughput of patients can be completed more quickly.

Most QIs focus on problems identified by the clinical teams in which the trainee is working. This facilitates interprofessional support from the outset. The project should be one that is embedded in the trainee's daily clinical work. This makes it more practical and feasible. The clinical team should be primed and ready on day one when the trainee starts their rotation. Otherwise, valuable time is lost, and the project will not succeed.

A simple writing structure should be used. The suggested headings are aim, planned changes to be tested, predictions, summary of results and run charts, discussion with an emphasis on how the findings improve patient care. To help people develop tests and implement changes, the PDSA (plan, do, study, act) cycle is used as the framework for trial and learning methodology.

Jeffrey Braithwaite, Sydney, at an RCPI conference⁵ stated that QI began some three decades ago in response to errors in hospitals. A proportion of adverse events are preventable. He stated that it is not easy to effect improvements in a system as complex as healthcare. Processes aren't readily amenable to change because of their nature. He added that scientific, validly tested change strategies are needed to improve the way that care is delivered. QI is now fully recognised and is being integrated into clinical care.

Other commentators have pointed out that gone are the days when patients were under the care of a single individual, physician, or nurse. The delivery of care is now a complex system with many staff and organisations involved in the care of each patient.

Another challenge is sustainability. When an improvement has been adopted it must be preserved. This may not happen because of new staff shortages or financial restraints. When a QI project is proven to be of value, it needs to be ring-fenced by incorporating it into the clinical service.

The RCPI has a quality improvement department. It provides a wide range of QI educational programmes. Launched in 2011, there is a one year diploma programme that has been developed by the HSE and the RCPI. There are quality improvement scholarships and bespoke QI training programmes.

In summary, quality improvement has a lot to offer doctors in training and the patients that they look after.

References:

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