Getting Quality*Improvement* Right to Benefit Patients

Purpose

This book is intended to help healthcare professionals carry out quality improvement projects (QIPs) so that the projects actually result in measurable and sustained benefits for patients, staff or others. The book encourages professionals to carry out practical QIPs in short time frames. It includes ideas, methods and tools for each stage in the QI process, including the following:

- reaching consensus on the improvements to achieve and the patient group or service to focus on
- developing objectives for a QIP
- considering the stakeholders in a QIP and how to involve them
- testing the commitment of all those involved to carry out the QIP
- describing precisely how current processes or systems affect patient care or staff or the organization
- finding evidence of good practice that relates to an intended improvement
- using quantitative methods, such as a survey, a clinical audit, a run chart or control chart, costing, or demand-capacity analysis to establish a baseline of the effects of current practice on patient care
- using qualitative methods, such as a focus group or interviews, to establish a baseline of effects of current practice on patients or staff
- analysing problems revealed by baseline measurement to find their root causes
- selecting and implementing effective and feasible actions to achieve and sustain improvements that will benefit patients, staff or others
- repeating data collection to show the effects of the action taken and demonstrate the sustained achievement of an improvement.

The book advises that although a QIP may be led or facilitated by one or more individuals, a team should be involved throughout the process in order to facilitate any changes in practice shown as needed through the baseline measurement processes.

1 The quality improvement process

Why do quality improvement — *To provide the best possible care*

The primary purpose of QI is to provide all patients with the best possible care.[1] Having knowledge of best practice is not a guarantee that it will be adopted or will actually improve practice in all settings.[2] Patients can be harmed and their opportunity to heal reduced when the quality of care provided to them is not what it could be.[3] The QI process supports clinical teams in examining how the local practice environment shapes or influences the implementation locally of knowledge of best practice and, through the analysis of variation in local practice, helps teams to identify where and how practice might be improved.[2]

The obligation to improve the quality of patient care derives from several sources. Doctors and other healthcare professionals are bound by professional ethics to promote a patient's best interests. Patients trust that their health care will be characterized by skill, judgement, attention and concern. Professionals have a duty to honour this social contract with patients by participating in activities that are intended to measure, demonstrate and improve the quality of care. This duty to patients extends to the healthcare organization through a framework for accountability for the quality and safety of patient care.[3–6]

Benefits of the QI process **Guide**

The QI process involves a **team** of people in a healthcare organization — and patients where possible — working together to:

- identify **where** the **quality** of care or service **can be improved**
- gain the **commitment** of those who have a stake in the improvement to support the work involved in achieving improvement
- **measure** the **effects of current practice** on patients, staff and the organization
- **find** the **causes of shortcomings** in current care or service **and make effective changes** in day-to-day practice to achieve and sustain the intended improvement
- **demonstrate** the **effect of** the **changes** through repeat measurement.

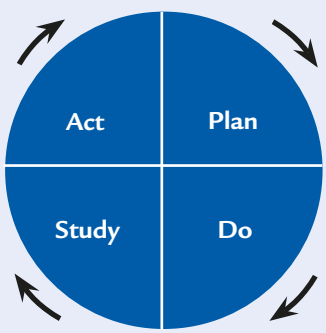
Disciplined and focused QI efforts can increase the quality of health care[6] and demonstrate accountability of a clinical team and a healthcare organization for the quality of care.

Term	Meaning	Key principles	Guide
A3 thinking[93–95]	A structured problem solving and improvement approach in which a **single sheet of A3 paper** is used to record a team's **analysis of a problem and** plan for implementing and evaluating **change** intended to address the problem *Involves teams in **carrying out a P–D–C–A cycle** using a **highly structured** format*	• Identify a **problem** or need • Collect information to understand the **current situation** • Carry out **root cause analysis** of the current situation • Devise **countermeasures** to address root causes • Develop a **target state** • Create an **implementation plan** • Develop a **follow-up plan** with predicted outcomes • **Discuss plans** with all affected parties • **Obtain approval** for implementation • **Implement plans** • **Evaluate the results**	

The P–D–S–A cycle in detail

The P–D–S–A cycle was originally described by Shewhart and Deming as a method for improving processes, as illustrated in the box.[91–92]

The P–D–S–A cycle for improvement	Model



Another way of explaining the cycle is that first, team members work to understand the process involved and how it meets end-users' needs. They attempt to eliminate potential errors in the process, streamline it and reduce potential variability. They establish procedures, provide training and document the process in order to carry out changes. Then, they implement all the work they have planned. Following or during implementation, they check to confirm that the plans are being followed

as planned and that they are working. Finally, they take action to extend the work or to ensure that the change is continuously implemented.

The P–D–S–A cycle represents a scientific approach to achieving improvement as follows.[96]

- The **Plan** phase provides **hypotheses for change** to achieve improvement.
- The **Do** phase is a **trial**, including a study protocol to collect data related to the hypotheses.
- The **Study** phase is the **analysis** and interpretation **of** the **results**.
- The **Act** phase allows **drawing conclusions and adapting and/or extending change**.

Other versions of the P–D–S–A cycle are the P–D–C–A, where C stands for Check the results of the change to identify lessons learned, and S–D–C–A, where S stands for Standardize the process by defining how it should be carried out by all workers in all situations.

The A–T–E–A–M approach — *A logical process*

In summary, to be effective and to truly benefit patients, the QI process applied in a healthcare setting needs to meet these overall characteristics:

- involve **actively the people** who **provide and** those who **receive the service** to the extent feasible
- **make effective use of all** the **ideas**, talents and abilities **of** the **people** involved for the purpose of bringing about improvements
- follow a **scientific approach**, using reliable and valid evidence, to demonstrate the effects of current and improved practice on patients and others
- be **systematic**
- be **supported** by the people who are responsible for the service
- **lead to real benefits** for patients or others.

Teams that are expected to achieve improvements in the quality of care or service may find it useful to follow a **logical model** as they work through the improvement process. A simple model derived from various models for doing QI is represented by the acronym A–T–E–A–M.[97] The stages in the process are described in the box on the next page and are in the diagram on page 39.

Stage	Meaning – The people involved:	Model
Agree on an aspect of care or service to improve and the objective of the improvement	Reach consensus on **something to improve** or on a proposed improvement project, including the specific objective for improvement	
Test the team's and others' commitment to achieving the improvement	Ensure they are **committed** to achieve the improvement and others who may be affected by the work also are committed	
Establish a baseline by describing or measuring the way things work now and the effects on patients or others	Use various tools to learn exactly **what happens now** and the **effects** of current practice on patients, staff or others	
Analyse how things can be improved and act to achieve improvements	Decide on the **problems** that impede providing quality of care or service and their **causes** and **develop and implement action** needed to overcome causes of problems and achieve improvements	
Measure again to compare the way things work after action and to demonstrate benefits for patients or others	**Repeat measurement** of the way things work to see if intended benefits have been achieved	

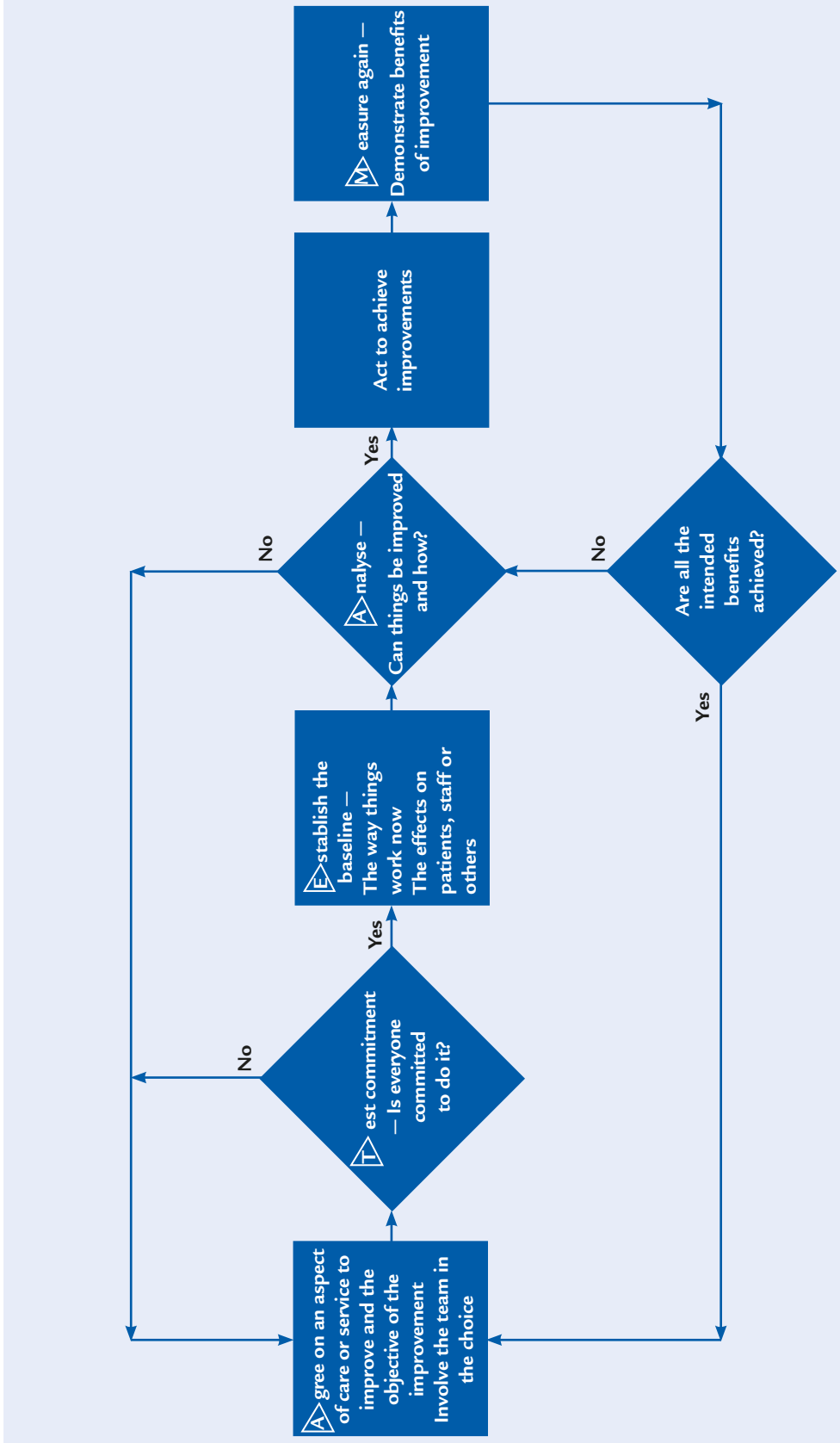
Tools can help teams to achieve the objectives of their QIPs. They help teams to:

- **make decisions**
- **confirm decisions and commitment** to the work by all concerned
- **understand** exactly **how care** or service **is delivered** now
- **count, measure and summarize** current practice
- **learn how others feel** about the way care is provided now and why
- **select and implement change** strategies
- **confirm** the **effectiveness of changes** made in terms of benefits to patients, staff or other stakeholders.

The tools and how they work in the A–T–E–A–M model are described in the following chapters.

The A–T–E–A–M approach to quality improvement

Diagram



Comparison of QI approaches — *Similarities and differences*

A comparison of approaches to QI is in the box. The A–T–E–A–M approach is **consistent with the evidence base** on successful implementation of QI, which emphasizes the **value of teams** being directly **responsible for achieving an improvement**. Also, the approach makes **commitment** to QI projects by key stakeholders an explicit stage in the process.

Comparison of QI approaches — **Analysis**

Stage/Model	Lean	Six sigma	Reengineering	P–D–S–A	Model for improvement	A–T–E–A–M
The approach to priority setting for improvement	Implicit	Implicit	Implicit	Implicit	Implicit	**Explicit with team involvement**
The commitment to achieve the agreed improvement	Implicit	Implicit *with organizational commitment to QI*	Implicit	Implicit	Implicit	**Explicit involving key stakeholders**
Establishing evidence of baseline (current) performance	Explicit *with a focus on process and control charts*	Explicit	Explicit	Explicit	Implicit	**Explicit using a range of quantitative and qualitative methods**
Analysing findings of measurement of current performance	Explicit	Explicit	Explicit	Explicit	Implicit	**Explicit**
Acting on the analysis to achieve improvement	Explicit	Explicit	Explicit	Explicit	Explicit if using P–D–S–A cycle	**Explicit**
Repeating measurement to demonstrate if improvement is achieved	Explicit	Explicit	Explicit	Explicit	Explicit	**Explicit**

All the approaches to QI have been used in healthcare settings. However, the evidence suggests that a **strategic approach to QI implementation that strengthens organizational improvement capability** by directing efforts to improve organization-wide systems, structures and processes is **more important than** the choice of **a specific approach or method**.[49, 51]