

## A COMPREHENSIVE REVIEW OF EFFECTIVE ON QUALITY IMPROVEMENT AND PATIENT SAFETY IN HEALTH CARE

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### ABSTRACT

*Quality improvement (QI) is the framework used in healthcare to methodically enhance patient care. It is possible to measure, evaluate, improve, and regulate the features of a process. Quality improved (QI) And patient safety (PS) are critical components in health care aimed at enhancing care standards, reducing medical errors, and ensuring patient centered care. This review underscores the improvement to sustain high quality, safety patient care. Patient safety and the quality of treatment given to patients have both improved as a result of quality improvement. To keep improving patient care, providers must continue to participate in quality improvement initiatives. PDSA is a Quality Improvement (QI) model used in healthcare to bring continuous improvement in patient care services. It is a systematic method to test changes on a small scale and improve processes.<sup>1</sup>*

**KEYWORDS** – *Quality Improvement, Patient Safety, Healthcare Quality, Medical Errors, Patient Centre Care , Health Care Safety Culture, PDSA Cycle .*

**INTRODUCTION:** The primary goals of health care reform, national initiatives to foster a culture of safety and quality, the concepts of quality improvement, and how these concepts might be used in patient care and medical practice are all covered in this overview. Life expectancy and quality of life have evolved significantly over the past century due to advancements in medicine and surgery. However, despite the American health care system's numerous notable achievements, there are still chances to raise access, quality, and affordability. The United States spends about twice as much per person on health care as other industrialized nations, according to the Organization for

Economic Cooperation and Development.<sup>2</sup>

### CONCEPT OF QUALITY IMPROVEMENT AND PATIENT SAFETY

**QUALITY IMPROVEMENT** -Quality improvement, or QI, is a rigorous and continuous process in the medical sector that aims to improve patient care outcomes, increase safety, improve patient satisfaction, and raise the effectiveness of healthcare services. A continuous effort by healthcare professionals and organizations to improve health services by identifying problems, applying solutions, and evaluating results.<sup>3</sup>

## OBJECTIVES OF QI

- The Quality Improvement Goals
- Decrease adverse events and medical mistakes
- Increasing patient safety
- Enhance the standard of nursing care
- Boost treatment effectiveness
- Minimize infections contracted in hospitals
- Increased productivity and decreased waste
- Boost patient satisfaction

## QI MODELS USED IN HEALTHCARE

### 1.Continuous Quality Improvement

**(CQI)-** Its is an ongoing approach to improve healthcare processes by regularly monitoring performance, finding gaps, and implementing changes to enhance outcomes.

#### PDSA Cycle (Plan–Do–Study–Act)

**Plan:** Identify problem and plan solution.

**Do:** Implement change

**Study:** Observe results and collect data

**Act:** Standardize if successful or modify if needed

**Uses:** testing new ideas and improving processes

**Example-** improving hand hygiene compliance <sup>4</sup>

### 2. Total Quality Management (TQM) -

Total Quality Management (TQM) is a management approach used in healthcare and other organizations to achieve long-term success by focusing on continuous improvement in quality and patient satisfaction.

**Total** = involvement of everyone in the organization

**Quality** = meeting standards and patient expectations

**Management** = planned and systematic administration

**Uses** – overall hospitals quality improvement.

### 3.Six Sigma -Six sigma is a Quality

Improvement (QI) approach used to reduce errors/defects and improve performance in healthcare and other industries. It focuses on improving processes by removing the causes of variation.

#### Six Sigma Method: DMAIC Cycle (Most Common)

##### **1. D – Define**

Identify the problem and goals

Define patient needs and process issue

**Example:** High medication errors in ward

##### **2.M – Measure**

Collect baseline data

Measure current performance

**Example:** Count medication errors per week

**3. A – Analysed**

Find root cause of the problem

**4.I – Improve**

Implement solutions to remove root causes

**Example:** double-check system, barcode scanning, training.

**5. C – Control**

Maintain improvements through monitoring

Example: audit checklist, monthly review, supervision

**3.Lean OI (Lean Quality Improvement)**-it is a method used to improve healthcare services by reducing waste, improving efficiency, and increasing patient satisfaction.

**Key Concept of Lean QI**

Lean is based on “Value”:

Value = activities that directly benefit the patient.

Waste = activities that do not add value.

**4.Continuous Quality Improvement (CQI)**- it is an ongoing approach to improve healthcare processes by regularly monitoring performance, finding gaps, and implementing changes to enhance outcomes.

**5.FMEA (Failure Mode and Effects Analysis)**- it is a proactive Quality Improvement (QI) tool used to identify

possible failures in a process before they occur and prevent patient harm

**6.Root Cause Analysis (RCA)**– it is a systematic method of investigating an incident to find the basic underlying cause rather than blaming individuals.RCA (Root Cause Analysis) is a Quality Improvement (QI) tool used to identify the main cause of aproblem or error so that it can be prevented in the future

**PATIENT SAFETY** - Patient Safety means preventing avoidable harm to patients during healthcare delivery. Preventing mistakes and negative consequences related to healthcare is known as patient safety.

**Common Patient Safety Strategies**

- Use of checklists
- Hand hygiene compliance
- Safe medication administration (5 Rights)
- Incident reporting system <sup>6</sup>

**RELATIONSHIP BETWEEN QI AND PATIENT SAFETY**

Aspect	Quality Improvement (QI)	Patient Safety
<b>Meaning</b>	Improves overall care processes	Prevents harm and errors
<b>Focus</b>	Efficiency, effectiveness	Risk reduction

	s, patient and satisfaction safety	
<b>Approach</b>	Continuous improvement	Prevention and control of errors
<b>Goal</b>	Better healthcare outcomes	Safe healthcare outcomes
<b>Tools</b>	PDSA, audits, Lean, Six Sigma	Safety checklist, reporting, RCA
<b>Outcome</b>	Improved service quality	Reduced adverse events

**CONCLUSION** –The review concludes by highlighting the efficacy of various tactics and interventions in improving patient safety and quality improvement in various healthcare settings. Effective quality improvement and patient safety are essential elements of systems of health. Improving health outcomes requires ongoing efforts to lower risks, increase patient-centered approaches, and improve the quality of care. By addressing present challenges and implementing evidence-based strategies, healthcare institutions can attain sustained improvements in patient safety and treatment quality. One of these key safety strategies is the "Room of

Improvement" simulation, which enhances error detection during ICU handovers. Efficient communication between healthcare facilities and established procedures guarantee consistent high-quality care. Teamwork and discharge procedure are enhanced via virtual inter professional education. Students gain vital skills when quality improvement and patient safety instruction are incorporated early in health curriculum. Simulation-based training and zero-harm initiatives also greatly improve patient safety and preparedness for handling challenging circumstances.

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