

MODULE 7 | SAFE PATIENT CARE, PHC STANDARDS AND QUALITY IMPROVEMENT

Measuring Quality, Clinical Audit and Improvement

Practical hospital governance in Punjab, Pakistan

Define the gap. Test a safe change.
Check whether better care is sustained.

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Use evidence to improve the service

For the Medical Superintendent: make the problem measurable, support a safe response and require evidence of the result.

- Choose a useful patient-care measure.
- Read percentages, rates and trends correctly.
- Complete an audit and test a safe change.
- Maintain improvement after the project ends.

OFFICIAL SOURCE

A principle tied to a named law, standard or official guidance.

WORKING METHOD

A practical control or teaching format to adapt to the authorised system.

TEACHING CASE

An invented hospital example, used to practise applying the correct process.

Study output

One defined measure, one small improvement plan and one concise report for the institutional head.

Module 7 | Presentation 5 of 5. Allow 45-60 minutes with exercises. All explanations are on the pages; check the cited sources before live use.

Keep law, guidance and local targets separate

This lecture teaches improvement methods. Lecture 29 addresses the Punjab Healthcare Commission framework and applicable standards.

Source-based principles

- WHO describes the dimensions of quality. IHI explains improvement methods. HQIP provides clinical audit and ethics guidance.
- These international sources do not themselves create Punjab legal powers, staffing entitlements or a PHC compliance score.

Local working methods

- The calculation examples, project forms and review schedules here are teaching tools. Approve suitable local arrangements through the hospital's authorised system.
- An improvement target does not replace a mandatory standard. Verify the applicable PHC requirement and its approved assessment method separately.

In this module, PHC means Punjab Healthcare Commission. WHO also uses PHC to mean primary health care; read the context.

WORKING METHOD | Illustrative material is identified in the text.

Quality starts with the patient

WHO identifies seven connected dimensions. The questions below apply three of them to hospital management.

Dimension	Plain meaning	A management question
Effective	Provide care supported by evidence to those who need it.	Are eligible patients receiving the indicated care?
Safe	Avoid preventable harm caused by care.	Which care process exposes patients to avoidable harm?
People-centred	Respect the person's needs, preferences and values.	Can the patient understand and take part in the care plan?

A busy service is not necessarily an effective service. Count activity and examine what happens to patients.

Sources: **Q1**: seven dimensions of quality

Quality also depends on how the service works

The remaining four dimensions show why clinical and administrative decisions must be considered together.

Dimension	Plain meaning	A management question
Timely	Reduce waiting and harmful delay.	Where is the patient waiting, and why?
Equitable	Provide consistent quality across patient groups.	Are language, disability or location creating a gap?
Integrated	Coordinate care across teams and services.	Does the next team receive the information it needs?
Efficient	Use available resources well and avoid waste.	Does a repeated task add value or only extra work?

Improving speed alone is insufficient if patients receive unsafe instructions or cannot obtain the next part of their care.

Sources: **Q1**: seven dimensions of quality

Choose work that matters to patient care

Working priority screen: use the risk register, clinical concerns, patient feedback and service data together.

01 Harm

Is there an immediate threat requiring action now?

02 Frequency

How often does the problem occur, with what denominator?

03 Care gap

Which accepted practice or required standard is not met?

04 Patient impact

What does the delay, omission or error mean to the patient?

05 Control

Which team can change the process and obtain support?

06 Capacity

Can the hospital support and follow through this project?

An urgent safety problem must be controlled immediately. Do not wait for an improvement project to finish before protecting patients.

Write the problem before writing the aim

Invented example: the project concerns discharge summaries in one adult ward.

A factual problem statement

- In a defined baseline sample, 12 of 20 eligible discharged patients had a complete summary documented as given before departure: 60%.
- The missing summaries may affect continuity of care. The initial finding does not yet identify the cause or prove an adverse outcome.

A measurable local aim

- Increase documented provision of complete summaries before departure in this ward from 60% to at least 90% within eight weeks.
- Use the same eligibility and completeness definitions. Check for added departure delay and inaccurate or copied information.

This is an invented local improvement target, not a PHC threshold. SMART means specific, measurable, achievable, relevant and time-bound.

Sources: **Q4**: setting measurable, time-bound aims

PHC expects a working quality programme

Category I hospital MSDS, Standard 16 (CQI-1): the following is a summary, not the complete assessment tool.

01 Committee and plan

93: A multidisciplinary committee, plan, powers and reporting method.

02 Documented work

Indicator 94: minutes record issues, activities and outcomes; staff know the plan.

03 Coordinator

Indicator 95: a designated individual with a defined job description and known role.

04 Coverage

96: Include all departments and high-risk areas; record QI activities.

05 Communication

Indicator 97: coordination, staff training and examples of programme impact.

06 Continuing review

Indicator 98: documented review at least annually and continuing improvement.

Standard 17 (CQI-2) requires key indicators for clinical structures, processes and outcomes to be used for continual improvement.

Sources: **Q2**: Standard 16, indicators 93-98; Standard 17; pp. 108-113

Use measures that answer different questions

The examples below are teaching choices. Select a small set that fits the actual problem.

Type	What it asks	Discharge example
Structure	Is the required capacity available?	An approved summary template and a working printer.
Process	Was the intended step performed?	Complete summaries documented as given before departure.
Outcome	What happened to the patient or service?	Patients reporting that they understood the follow-up plan.
Balancing	Did improvement create another problem?	Extra departure delay or inaccurate summary content.

An available template does not prove that it was used. A completed form does not prove that the patient understood it.

Sources: **Q2**: Standard 17 / CQI-2 | **Q3**: outcome, process and balancing measures

Define each indicator before collecting data

Working indicator dictionary: two trained people should reach the same count from the same records.

01 Purpose

State the question and whether higher or lower is better.

02 Numerator

Define exactly what qualifies for the top number.

03 Denominator

Define the eligible group or exposure in the bottom number.

04 Population

State exclusions, location and the measurement period.

05 Source

Name the record, data field, collector and checking method.

06 Reporting

State frequency, missing-data handling and the review owner.

Keep a version date. If the definition changes, mark the change and assess whether earlier and later figures can still be compared.

A percentage needs two verified counts

Invented discharge example. All 20 sampled records are available and eligible under the stated definition.

Denominator	20 eligible discharged patients in the defined sample and period.
Numerator	12 of those patients meet every required item in the local completeness check and have documented issue before departure.
Calculation	$12 / 20 \times 100 = 60\%$.
Interpretation	The documented process was met for 60% of this sample. It was not demonstrated for 8 of the 20 cases.
Limit	This finding does not show the performance of every hospital ward or prove that all eight patients suffered harm.

Always report 12/20 as well as 60%. The denominator shows how much evidence sits behind the percentage.

Combine counts, not unweighted percentages

Invented example. Both wards use the same definition, period and complete measurement of their eligible patients.

Ward	Meets criterion / eligible	Percentage
Ward A	18 / 20	90%
Ward B	20 / 100	20%
Combined	$(18 + 20) / (20 + 100) = 38 / 120$	31.7%
Incorrect shortcut	$(90\% + 20\%) / 2$	55% is not the combined patient proportion.

This pooling works because these are comparable counts of eligible patients. Unequal sampling fractions need further analysis before estimating the whole hospital.

Use an exposure denominator for a rate

Invented example. The same ward and month have 4 recorded falls and 2,000 patient-days.

Define the event	A fall is counted using the hospital's approved definition. A patient with two separate falls contributes two events.
Define exposure	Patient-days are the sum of daily inpatient counts under the stated census method, not the number of admissions.
Calculation	$4 / 2,000 \times 1,000 = 2$ falls per 1,000 patient-days.
Interpretation	This is an event rate for the stated time and ward. It is not a statement that 2% of patients fell.
Comparison	Use the same case definition, observation method, location and time period when comparing rates.

Do not mix device-days with patient-days, or admissions with occupied bed-days. Each denominator answers a different question.

Zero, missing and not applicable are different

A green dashboard can be misleading if incomplete data are treated as a good result.

Entry	Meaning	Correct handling
Zero events	The reporting process was completed and found no events.	Record zero with the checked denominator.
Missing data	The required return or record is unavailable.	Show missing; obtain it and document the limitation.
No eligible cases	The denominator for this period is zero.	Show no eligible cases; do not divide by zero.
Exclusion	A case meets a pre-defined exclusion.	Record the reason and apply it consistently.

If 5 of 20 selected files are missing, do not silently replace the denominator with 15. Report availability and apply the pre-defined analysis method.

WORKING METHOD | Illustrative material is identified in the text.

Use a sample you can explain

Sampling can reduce workload, but the selection method determines what can reasonably be concluded.

Define the selection first

- Decide whether to examine every eligible case or use a sample. State the dates, wards and selection method before seeing results.
- Include relevant shifts and days. A sample of convenient weekday files may miss the weekend problem being investigated.

State the limits

- For a small local test, a few cases can show whether a form or workflow is usable. That does not estimate a rare complication reliably.
- For precise rates, high-stakes comparisons or formal statistical conclusions, obtain a suitable sampling and analysis plan.

Do not invent a universal minimum sample size. The required number depends on the purpose, event frequency and precision needed.

Sources: **Q3**: using sampling

Check the data before presenting the result

Working validation checklist: use the original record to resolve discrepancies and keep the correction history.

01 Eligibility

Check that included patients meet the stated definition.

02 Duplicates

Ensure that one event or patient was not counted twice.

03 Dates

Confirm that timestamps and periods use the same rule.

04 Source trace

Keep a secure route from the summary count to its records.

05 Second check

Recheck a defined subset and resolve disagreements.

06 Release

Record the version, reviewer and known limitations.

Do not place patient names or identifiers on a public dashboard. Restrict the detailed checking file to authorised staff.

Look inside the overall average

A hospital-wide figure can hide a ward, shift or patient group that is receiving poorer care.

Separate useful groups

- Examine relevant wards, shifts, weekdays and weekends using the same definition. Where appropriate, check barriers related to language or disability.
- Show each denominator and missing-data level. Protect confidentiality when a group is small enough to identify an individual.

Make fair comparisons

- A unit treating sicker patients may have worse raw outcomes even when its care is appropriate. Check differences in patient risk, referrals and follow-up.
- Do not rank clinicians from small, unadjusted outcome counts. A difference is a reason to investigate, not proof of fault or of cause.

Compare like with like. Where risk adjustment or formal inference is needed, involve the appropriate clinical and analytical expertise.

Sources: **Q3**: stratification and measurement

Read performance in time order

Invented series. Each week has 20 eligible cases measured in the same way; a new template was tested from week 4.

Period	Complete summaries before departure	What can be said
Weeks 1-3	12/20, 11/20, 13/20 = 60%, 55%, 65%	The initial results vary around a similar level.
Weeks 4-6	15/20, 17/20, 18/20 = 75%, 85%, 90%	The recorded process is better in these three weeks.
Next step	Continue the series and record other changes.	Check whether gains persist and balancing measures remain acceptable.

A run chart plots time on the horizontal axis and the measure on the vertical axis. Annotate changes; three better points alone do not prove causation.

Sources: Q3: plotting data over time

Make the dashboard lead to a decision

Illustrative monthly review format. Select a few measures that relate to the hospital's current risks and priorities.

Required field	What the reviewer should see
Result and context	Numerator, denominator, period, definition and data completeness.
Time pattern	Several consecutive periods and the dates of relevant changes.
Gap and consequence	What is below the required or agreed level and why it matters.
Action and ownership	Specific corrective step, responsible post and due date.
Review decision	Continue, change, escalate or close with evidence of sustained control.

Colours are a display aid. State whether a threshold is statutory, evidence-based or a local management target; colour alone is not assurance.

WORKING METHOD | Illustrative material is identified in the text.

Audit compares actual care with an explicit criterion

Clinical audit links a defined care requirement to measurement, action and a further check.

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| 1 Prepare | Choose a relevant evidence-based criterion, scope, responsible clinician and method. |
| 2 Measure | Compare the defined sample or population with the criterion. |
| 3 Improve | Examine the gap and implement an authorised response to its causes. |
| 4 Check again | Repeat measurement and decide how improvement will be maintained. |

Producing a baseline report is not completion of improvement. The service still needs action and evidence of the result.

Sources: **Q6**: definition and section 3 audit cycle

Do not confuse the criterion with the target

Working distinction: the criterion describes the required care; a percentage describes achievement against it.

The care criterion

- State exactly what the care record must demonstrate, for whom and when. Link it to the current applicable standard or evidence-based guidance.
- For the invented discharge project, use an approved completeness checklist. Do not make the lecture's short description a universal clinical content standard.

The improvement target

- The ward may choose 90% within eight weeks as a staged local aim. That does not change any requirement applying to each eligible patient.
- Record justified exceptions in advance. Do not add exclusions after seeing poor results merely to improve the percentage.

Keep the criterion, source edition, inclusion rules and target in the project file so a later re-audit measures the same thing.

Identify the activity and the correct oversight

These short descriptions help frame the question; they do not replace the institution's project classification process.

Activity	Main question
Clinical audit	Does current care meet a defined, evidence-based criterion?
Quality improvement	Can a carefully tested change improve this care process?
Service evaluation	How is the existing service working, and for whom?
Research	What new, generalisable or transferable knowledge is being investigated?
Financial audit	Were financial records, controls and transactions properly handled?

Activities can overlap. Calling a project audit or QI does not settle its ethics status, data permissions or publication requirements.

Sources: **Q7**: classification and ethical oversight

Obtain the right review before starting

Ethical oversight applies to improvement work as well as research. Use the required local approval and data-access routes.

Check the proposed activity

- Identify patient risks, privacy issues, added tests or visits, changes to usual care and any allocation of different interventions to groups.
- Refer uncertainty to the designated quality, research or ethics office. Obtain the required review before implementing the project.

Protect patients and information

- Use the minimum necessary information with authorised access and secure handling. Obtain consent where the applicable process requires it.
- Do not withhold indicated care, randomise treatment or introduce an unapproved clinical intervention under a local QI label.

HQIP is cited for ethical principles. Its description of UK approval arrangements is not a statement of the approval rules in Punjab.

Sources: **Q7**: ethical review and oversight; pp. 16-18

Follow the patient journey to find the delay

Invented discharge process. Observe the actual work with the people performing it before selecting a solution.

Observed step	Possible gap to verify	Question for the team
Decision to discharge	The decision is not visible to the next person.	Who is told, how and at what time?
Summary preparation	Clinical information must be collected from several places.	Which required item is repeatedly missing?
Clinical review	The document waits for an available authorised reviewer.	Is a clear review and cover arrangement in place?
Issue to patient	Printing or explanation is delayed.	Can the patient leave with a usable, checked plan?

A process map is the ordered sequence of real steps and handovers. Remove avoidable waiting while preserving necessary clinical checks.

TEACHING CASE | Illustrative material is identified in the text.

Answer three questions before testing

The Model for Improvement was developed by Associates in Process Improvement and is used by IHI.

Question, in plain language	Answer for the invented ward project
What result do we want?	Complete summaries documented as given before departure: from 60% to at least 90% within eight weeks.
What evidence will show progress?	The defined weekly proportion, with checks on departure delay and summary accuracy.
Which change might help?	Test a clearer template and an earlier review arrangement after the team confirms the actual delay.

A proposed solution is a testable idea. State why it might help, then examine what actually happens.

Sources: **Q4**: three questions and testing changes

Use Plan-Do-Study-Act to learn from a small test

PDSA is a repeated learning process, not simply a new name for issuing an instruction.

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| 1 | Plan | Specify the change, prediction, cases, responsibilities, measures and safety limits. |
| 2 | Do | Carry out the authorised small test and record what actually happened. |
| 3 | Study | Compare the observations with the prediction; examine problems and unexpected effects. |
| 4 | Act | Keep, adapt or stop the tested change and define the next test. |

Keep a short dated record of each cycle. A completed form without observations and a decision provides little evidence of learning.

Sources: **Q5**: purpose and use of the PDSA worksheet

Plan the first discharge-summary test

Invented small test of an approved documentation process. No clinical treatment is changed.

Scope	One ward team, five consecutive eligible discharges on the agreed morning. Use the authorised template and usual clinical review.
Prediction	The team predicts that 4 of 5 patients will receive a complete summary before departure.
Data	Record the completeness check, issue and departure times, corrections and staff comments for each case.
Safety limit	Do not issue unreviewed information or delay necessary care. Escalate errors or any safety concern immediately.
Responsibility	The ward clinician supervises; a named nurse records issue time; the quality officer checks the five entries with the team.

The prediction is not an achieved result. Keep it beside the actual observations so the team can learn whether its idea was correct.

Study the result and change the next test

Invented result from the five-case test; it is separate from the weekly time-series example.

Observed process	4 of 5 patients received a complete summary before departure: $4 / 5 \times 100 = 80\%$.
Unexpected problem	The fifth case waited for the printer. One draft contained an outdated medicine entry, caught during normal clinical review.
What was learned	The documentation workflow appears workable in this small test, but printing reliability and draft accuracy need attention.
Next action	Correct the template prompt and printing arrangement. Repeat an authorised small test including a different shift.
Limit	Five cases cannot prove reduced readmissions or long-term safety. Continue the planned outcome and balancing checks.

Do not report the original prediction as proof of success. Report what happened, what failed and what will change next.

Move from a successful test to routine practice

Working implementation checklist: expand only after the team has enough evidence and the required authority.

01 Different conditions

Test relevant shifts, weekends and foreseeable workload changes.

02 Approval

Obtain the needed clinical and administrative approval.

03 Document control

Issue the approved version and withdraw obsolete forms.

04 Training

Explain the changed task and verify staff can perform it.

05 Resources

Provide the required staffing, equipment, supplies and support.

06 Monitoring

Name who will detect deterioration and arrange corrective action.

A test that depends on one enthusiastic officer staying late may fail when that officer transfers or goes on leave.

WORKING METHOD | Illustrative material is identified in the text.

Show the resource effect honestly

Working financial review: connect the quality benefit to the actual resource requirement.

Identify the requirement

- Separate one-time setup costs from recurring costs. Include staff time, training, printing, maintenance and any new support need.
- State which budget, procurement or approval route applies. A quality project does not create spending authority.

Do not inflate the saving

- If staff save 30 minutes daily, that may release time for other duties. It is not automatically a cash saving in the salary budget.
- Do not label shorter stays, fewer tests or fewer staff as improvements without checking clinical appropriateness and unintended harm.

Compare feasible options and patient impact. Keep efficiency, safety and quality in the same decision paper.

A useful monthly briefing for the MS or ED

Illustrative review format. Bring enough detail to answer these six questions without relying on a colour chart.

01 Problem

What care gap is being addressed, and why does it matter?

02 Result

What changed in the defined measure, with what denominator?

03 Reliability

What checks support the data, and what remains uncertain?

04 Patient effect

What do outcomes, balancing measures and patient feedback show?

05 Decision needed

What resource, authority or cross-department action is required?

06 Next review

Who will act, by when, and what evidence will be presented?

Agree a date to recheck the action. Sending a circular or training attendance list is not evidence that the care process improved.

WORKING METHOD | Illustrative material is identified in the text.

Close the project without losing the control

Working closure and handover method: distinguish a completed project from ongoing service responsibility.

Keep the evidence

- Retain the approved aim, definitions, methods, data checks, change records, results and limitations in the authorised project file.
- Report achievement accurately. A certificate, successful inspection or local improvement result does not demonstrate every clinical outcome.

Transfer the ongoing task

- Name the service owner, monitoring frequency and trigger for re-opening the issue. Include the work in departmental handover.
- Publish only authorised, non-identifiable information. State the period and method so later readers understand what the result actually shows.

Clinical improvement and PHC compliance are connected duties, but evidence for one should not be represented as proof of all requirements in the other.

Check the measurement and the decision

Write your answer and the reason before turning to the next page.

1. Two wards

Ward A has 18/20 compliant cases. Ward B has 20/100. Both measure all eligible cases in the same period using the same definition.

What is the combined percentage, and why is 55% incorrect?

2. An empty return

A ward sends no incident return. The dashboard officer enters zero and colours the cell green.

What is wrong with the entry, and what should be recorded?

3. A proposed test

A team calls a project QI and proposes allocating patients to different clinical treatments without seeking review.

Does the QI label remove the need for approval?

Explain both the result and the next management action. Use the stated facts; do not add invented authority or patient outcomes.

Answers and reasons

Use the evidence, the calculation and the cited source.

1. Pool the counts

$38 / 120 \times 100 = 31.7\%$. The simple average of 90% and 20% gives each ward equal weight despite unequal patient numbers. Use comparable counts and show the denominator.

2. Record missing information

No return is missing data, not verified zero events. Ask for the return, check the reporting process and display the incompleteness until it is resolved.

3. Obtain the appropriate review

The label does not decide the governance route. Refer the design to the authorised clinical, research and ethics system and obtain the required approvals before changing treatment.

An honest limit is part of a sound report. Do not convert uncertainty into a reassuring number or an unsupported legal conclusion.

Sources: **Q7**: classification and ethical oversight

Prepare one safe, measurable improvement project

Use a non-confidential real case or the invented examples in this lecture.

Define the gap

Choose a narrow care process. State the problem, source criterion and local aim.

Define the evidence

Write a measure dictionary, data-checking method and a balancing measure.

Plan action and review

Set out an authorised small test, safety limits, owner and date to check the result.

Review with the clinical and quality leads. Check the need, feasibility, approvals and clarity before starting.

Module 7 complete. Link the PHC requirements, patient-safety controls and improvement evidence into one continuing hospital quality programme.

WORKING METHOD | Illustrative material is identified in the text.

Sources and continued use | 1

Select a source title or its official-source link to open the document.

Q1 **Quality health services**

WHO fact sheet, 19 May 2025. Definition and seven dimensions of quality. Used as international guidance, not as a Punjab statutory instrument.

World Health Organization | [Official source](#)

Q2 **Minimum Service Delivery Standards for Hospitals**

Category I hospital manual, 2024 cover edition; document code CG-01MS-Ed2-01092023. Standards 16-17, especially indicators 93-98 and clinical indicator monitoring. Access the applicable hospital manual through PHC.

Punjab Healthcare Commission | [Official source](#)

Q3 **Model for Improvement: Establishing Measures**

Official IHI guidance, accessed 4 October 2026. Outcome, process and balancing measures; sampling and measurement over time. Hospital figures in this lecture are invented.

Institute for Healthcare Improvement | [Official source](#)

Educational material by Dr Qurban Hussain Khan. Source editions are stated; verify later amendments and applicable institutional orders before live use.

Sources and continued use | 2

Select a source title or its official-source link to open the document.

Q4 **Model for Improvement**

Official IHI guidance, accessed 4 October 2026. Model developed by Associates in Process Improvement: aims, measures, change ideas and repeated tests.

Institute for Healthcare Improvement | [Official source](#)

Q5 **Plan-Do-Study-Act (PDSA) Worksheet**

Official IHI tool and instructions, accessed 4 October 2026. The teaching examples are original local illustrations, not reproductions of IHI worksheets.

Institute for Healthcare Improvement | [Official source](#)

Q6 **Best practice in clinical audit**

HQIP, April 2020, sections 2-3. Clinical audit principles and the audit cycle. UK institutional and legal arrangements are not represented as Punjab requirements.

Healthcare Quality Improvement Partnership | [Official source](#)

Educational material by Dr Qurban Hussain Khan. Source editions are stated; verify later amendments and applicable institutional orders before live use.

Sources and continued use | 3

Select a source title or its official-source link to open the document.

Q7

Guide to managing ethical issues in quality improvement or clinical audit projects

HQIP, October 2025. Ethical oversight, project classification, privacy and review of risks. Obtain the approvals required in the actual institution and jurisdiction.

Healthcare Quality Improvement Partnership | **Official source**

Educational material by Dr Qurban Hussain Khan. Source editions are stated; verify later amendments and applicable institutional orders before live use.