MODULE 15 | HOSPITAL INFORMATION SYSTEMS, RECORDS AND DATA

Data Quality, Hospital Reporting and Management Dashboards

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LECTURE

Practical hospital governance in Punjab, Pakistan

Turn checked records into clear decisions.
Show the numbers, their limits and the action.

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SELF-STUDY PDF

What you should be able to do

A useful report is accurate enough for its purpose and leads to a clear decision.

- Define exactly what each hospital figure counts.
- Check completeness, timing and agreement with source records.
- Calculate and interpret practical hospital measures.
- Use a dashboard to assign action and check results.

Study output

A checked dashboard with definitions, a data-quality note and an action record.

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.

Module 15 | Presentation 3 of 3. Allow 45-60 minutes with exercises. All explanations are on the pages; check the cited sources before live use.

What the PHC standards require

Use the standards for the hospital category and the edition applicable to your institution.

Clinical quality monitoring

- CQI-2 requires monitoring of clinical structures, processes and outcomes to support improvement.
- Clinical areas include assessment, diagnostics, invasive care, medicines, anaesthesia, blood and records.
- A dashboard should support the quality programme and its documented reviews.

Medical record review

- IMS-3 requires periodic review, with a documented process occurring at least quarterly.
- The review uses a representative sample reflecting the hospital services and authorised clinical reviewers.
- Check timeliness, legibility and completeness; record deficiencies and corrective action.

CQI = Continuous Quality Improvement. IMS = Information Management System.

Sources: **D1**:CQI-2 and IMS-3

Confirm where each report must go

The hospital information system and an external reporting platform have different purposes.

Report or system	What the MS should confirm
Hospital HMIS	Hospital Management Information System: approved modules, users, reports and local ownership.
Government return	Current departmental order, form, definitions, recipient, reporting period and due date.
Surveillance report	Applicable public health direction, case definition, focal person, urgency and secure reporting route.
Board or quality report	Authorised audience, approved indicators, review frequency and action record.

PITB documents tertiary HMIS work. Do not assume one system, or a district reporting duty, applies to every tertiary hospital.

Sources: **D5**:tertiary HMIS context | **D6**:surveillance framework

Give every important number an owner

Data quality is a clinical and management responsibility, supported by information staff.

1	**Clinical owner**	Defines the event and checks whether the interpretation is clinically sound.
2	**Data custodian**	Protects source records, manages permitted access and maintains the reporting trail.
3	**Analyst or compiler**	Applies agreed counting rules, checks the figures and records unresolved gaps.
4	**Approving officer**	Reviews exceptions, authorises the return and assigns actions arising from it.

Working method: record a named owner and backup for each return. A software vendor does not replace hospital accountability.

WORKING METHOD | Illustrative material is identified in the text.

Trace one figure back to its source

The same discipline applies to paper registers, spreadsheets and electronic systems.

1	**Record the event**	Enter the patient encounter, date, service and responsible professional in the authorised record.
2	**Apply the definition**	Select the correct period, population, status and exclusions. Keep the query or calculation.
3	**Check the total**	Compare with source evidence; investigate missing, duplicate and unusual entries.
4	**Approve and submit**	Keep the checked version, reviewer, submission receipt and any later correction.

Choose a small number of high-risk measures for regular source verification; expand checks when discrepancies appear.

Sources: **D3**:source verification

Create an indicator definition sheet

An indicator is a defined measure used to assess activity, resources, care or results.

01 Purpose

What decision will this number help someone make?

02 Count

Define the event or numerator and the unit: people, visits, days or rupees.

03 Population

Define the denominator, eligible group and any exclusions.

04 Time

State the event date, period, cut-off and reporting frequency.

05 Source

Name the register or system, owner, extraction method and checks.

06 Interpretation

State limits, comparison method, action trigger and review responsibility.

Working method: approve a version and date. A changed definition can break comparison with earlier results.

Sources: **D4**:standardised indicators and metadata

A person, a visit and an admission are different

Teaching example: one person attends twice, has two tests and is then admitted once.

Measure	Meaning in this example
Unique people	1 person, after matching identity within the stated period and service scope.
Outpatient visits	2 encounters, if both meet the agreed visit definition.
Tests or procedures	2 tests. Several tests may belong to the same visit or admission.
Admissions	1 new inpatient episode. An internal ward transfer is not a new hospital admission.

Never add visits, tests and admissions and call the sum “patients treated”. Show each unit separately.

TEACHING CASE | Illustrative material is identified in the text.

Keep coding and time rules consistent

Comparable totals need consistent dates, service categories and diagnostic coding.

Agree the rules

- Use the coding standard and version required by the reporting system; do not silently change codes.
- Distinguish suspected, provisional and confirmed diagnoses where the return requires this.
- Define whether activity belongs to the date of attendance, completion, discharge or reporting.

Check common errors

- A report written later may still describe an event in the previous month.
- Check midnight boundaries, cancelled procedures, repeat visits and internal transfers.
- Keep a record of corrected identities and codes; preserve the original clinical entry and audit trail.

A dashboard total may change after correction. Explain why, when and by whose authority.

WORKING METHOD | Illustrative material is identified in the text.

Five questions before trusting a total

These working checks support a structured review of the reporting process.

Check	Practical question
Completeness	Are all expected reports, eligible events and required fields present?
Timeliness	Was the report received by the actual required deadline?
Consistency	Do totals agree across periods, subgroups and related sources?
Verification	Can a recount from the source records reproduce the reported figure?
Validity	Are dates, values, codes and relationships possible under the definition?

A complete, punctual return can still contain errors. Verification should include source records.

Sources: **D2**:desk-review dimensions | **D3**:data verification

Separate completeness from timeliness

Invented example: 20 departments are expected to send one monthly report each.

Reports received	18 reports arrived by the review date. Completeness = 18 / 20 x 100 = 90%.
Reports on time	15 arrived by the required deadline. Timeliness = 15 / 20 x 100 = 75%.
Why not 15 / 18?	That gives 83.3% among received reports. It hides the two missing reports and answers a different question.
Field completeness	If 86 of 100 eligible records contain a required field, recorded completeness is 86%. This does not establish accuracy.

State the denominator. A late report can improve completeness while leaving deadline performance unchanged.

TEACHING CASE | Illustrative material is identified in the text.

Zero is a result; a blank is not

Unrecorded information must not be converted into reassuring performance.

Use distinct meanings

- Zero: the event was checked and none met the definition.
- Missing: the information is unavailable or has not been reported.
- Not applicable: the item genuinely does not apply, with the reason recorded.

Example: missing outcomes

- Of 100 eligible cases, 80 have a recorded outcome and 8 of those had an event.
- Observed proportion = 8 / 80 = 10% among recorded outcomes. Completeness = 80 / 100 = 80%.
- Do not report 8% as the established rate for all 100. The 20 missing outcomes remain unknown.

Display missingness beside the result. An estimate requires an explained method, not invented replacement values.

TEACHING CASE | Illustrative material is identified in the text.

Recount before correcting a reported figure

Invented example: a monthly return reports 240 completed procedures.

Check the scope	Use the same hospital unit, month, procedure definition and completion status as the return.
Recount the records	Complete source records support 228 completed procedures. Difference = 240 - 228 = 12.
Describe the discrepancy	Verification ratio = 228 / 240 x 100 = 95%. The source count is 5% below the reported count.
Find the cause	Check duplication, cancellations, late entries and wrong periods. Do not simply replace one number without evidence.
Correct the process	Authorise any correction; notify affected recipients; fix the source or extraction error and repeat the check.

A matched total does not prove that every record is correct; two types of error can cancel each other out.

Sources: **D3**:verification and system assessment

Compare related sources without forcing equality

A difference may reflect an error, timing or a genuine difference in what is counted.

Compare	What needs explaining
Clinical and billing	Completed procedures may include exempt or unbilled care; a bill is not proof of completed treatment.
Pharmacy and clinical	Stock issued to a ward is not the same as a dose administered to a patient.
Roster and attendance	Presence on site does not by itself prove the person covered the required clinical role.
Laboratory and HMIS	Orders, collected specimens, completed tests and authorised results are separate events.

Record a reconciliation: source totals, defined differences, unresolved items, owner and completion date.

WORKING METHOD | Illustrative material is identified in the text.

Keep one approved version of each return

Avoid several unexplained copies of the same month’s performance.

1	**Freeze the extract**	Save the reporting period, extraction time, definition version and protected source evidence.
2	**Check and approve**	Record reconciliations, exceptions, reviewer and the officer who authorises submission.
3	**Correct visibly**	Keep the original; issue a new version with reason, changed fields, date and approval.
4	**Notify and retain**	Tell affected recipients which version replaces the earlier one; follow the applicable retention and access rules.

Working method: maintain a correction log. Do not delete adverse results or backdate a record to improve a report.

WORKING METHOD | Illustrative material is identified in the text.

Choose the correct denominator

The denominator describes the people, events or exposure to which the result applies.

Before calculating

- Define who was eligible and observed for the relevant period.
- Match the numerator to the denominator: the same service, time and case definition.
- Exclude cases only under an agreed rule; report the number excluded and why.

Avoid misleading comparisons

- Hospital attendances do not measure population disease prevalence without a suitable population method.
- Admissions, discharges, procedures and device-days answer different questions.
- A denominator of zero gives an undefined rate. Report “not calculable”, not 0%.

Always show the count and denominator beside a percentage or rate.

WORKING METHOD | Illustrative material is identified in the text.

Mean and median describe different things

Invented waits in minutes for five comparable completed visits: 10, 15, 20, 25, 130.

Mean wait	Add the waits and divide by the number: (10 + 15 + 20 + 25 + 130) / 5 = 200 / 5 = 40 minutes.
Median wait	Put the values in order. The middle of five values is 20 minutes.
What each shows	The long wait pulls up the mean. The median describes the middle observation, but hides the extreme delay.
Reporting method	Define start and end times. Report missing timestamps and patients who left before assessment separately.

Show the median with an appropriate spread or long-wait count. A single average does not describe every patient’s experience.

TEACHING CASE | Illustrative material is identified in the text.

Bed occupancy uses available bed-days

Invented 30-day month: 100 usable staffed inpatient beds were available on every day.

Available capacity	100 beds x 30 days = 3,000 available bed-days.
Occupied capacity	The consistent daily census totals 2,400 occupied bed-days.
Occupancy	2,400 / 3,000 x 100 = 80%.
Definition check	Use the required census and bed-availability rules. Do not count a closed, unstaffed ward as usable capacity.
Interpretation	A monthly average can hide a crowded emergency area, a full ICU or pressure on particular shifts.

This is a calculation example, not an 80% target. Review specialty, staffing, isolation needs and surge capacity.

Sources: **D9**:occupancy definition

Changing capacity requires a weighted calculation

Invented month: 100 beds were available for 10 days, then 80 beds for 20 days.

Available bed-days	(100 x 10) + (80 x 20) = 1,000 + 1,600 = 2,600.
Occupied bed-days	800 in the first period + 1,440 in the second period = 2,240.
Monthly occupancy	2,240 / 2,600 x 100 = 86.2% after rounding.
Incorrect shortcut	The two period rates are 80% and 90%. Their simple average is 85%, which ignores their different available bed-days.
Across wards or months	Add occupied bed-days; add available bed-days; then divide. Use consistent definitions throughout.

Keep a dated bed-capacity log. A change in the denominator can alter occupancy even if demand has not changed.

Sources: **D9**:occupancy definition

Average length of stay needs a matched cohort

Invented example: 100 completed inpatient episodes have a total stay of 450 days.

Calculation	Average length of stay = total days stayed by those completed episodes / number of those episodes = 450 / 100 = 4.5 days.
Cohort rule	Use the required discharge definition, including deaths if specified. Apply the agreed same-day and transfer rules.
Common error	Do not divide all census bed-days in a month by admissions during that month and assume this is the same measure.
Interpretation	Review specialty, illness severity and discharge barriers. Shorter stay is not automatically safer or better.

Also examine readmissions and patient outcomes. A stay measure alone cannot judge care quality.

TEACHING CASE | Illustrative material is identified in the text.

Infection counts need defined exposure

Invented example only: 6 qualifying device-associated infections over 1,200 relevant device-days.

Use a protocol	The infection-control team must apply the selected surveillance case definition, time window and denominator rules consistently.
Calculate the rate	6 / 1,200 x 1,000 = 5 infections per 1,000 device-days.
Keep the unit clear	This is not “5% of patients”. Device-days measure exposure time, not unique people.
Check ascertainment	More testing or stronger surveillance can increase detected events. A fall in reports may reflect missing information.
Escalate concerns	Investigate a suspected cluster promptly through the clinical and public health routes; do not wait for a monthly dashboard.

Use the applicable NIH surveillance guidance. This example does not create a local reporting threshold.

Sources: **D7**:HAI surveillance guidance

Define readmission and mortality measures carefully

Both are useful signals when their population, follow-up and limitations are clear.

Readmission

- Define the earlier (index) discharge, follow-up window and eligible unplanned readmission.
- Count each eligible index discharge once in the numerator if the defined event occurs.
- If only the same hospital is tracked, state that readmissions elsewhere may be missed.

Inpatient mortality

- Define eligible inpatient deaths and completed inpatient episodes, including deaths in the denominator.
- State exclusions, transfers and the period. This is different from mortality within a fixed time after a procedure.
- Review the clinical records and case mix. A crude rate does not establish preventability or negligence.

For a readmission cohort, allow the full observation window before comparing results; disclose incomplete follow-up.

WORKING METHOD | Illustrative material is identified in the text.

Small numbers and case mix can mislead

Invented examples demonstrate why a ranking needs more than a percentage.

Small samples	1 death in 20 episodes = 5%; 2 in 20 = 10%. One additional event doubles the percentage.
Different patients	A referral unit treating critically ill patients may have a higher crude mortality rate than a lower-acuity service.
Better comparison	Use comparable patient groups, consistent definitions and, where appropriate, a validated risk-adjustment method.
Honest uncertainty	Show counts, period and missingness. Seek statistical support for confidence intervals or formal comparisons.
Management response	Review important events and underlying care processes even when the sample is too small for a stable rate.

Do not label a unit “best” or “unsafe” from a crude league table alone.

TEACHING CASE | Illustrative material is identified in the text.

Compare like with like over time

A visible change should lead to questions before it leads to a claim of success.

Check the data first

- Use the same definition, service scope and counting method across periods.
- Mark system changes, missing returns, bed closures, new services and altered referral patterns.
- Use longer runs of comparable observations; consider seasonality and unusual events.

Then interpret the change

- An improvement after an intervention does not by itself prove the intervention caused it.
- Examine process measures, other changes and possible unintended effects.
- Use a simple time chart with dates and annotations; obtain statistical help for formal control-chart rules.

Keep adverse months visible. Do not select only the starting and ending months that support a preferred story.

WORKING METHOD | Illustrative material is identified in the text.

Five measures of care and access

Working dashboard: adapt definitions to the hospital’s approved services and reporting rules.

Measure	Definition to record
Initial assessment	Eligible visits assessed within the approved time limit / eligible visits x 100; show missing timestamps.
Completed activity	Count completed procedures or visits by defined service and period; do not mix units.
Bed occupancy	Occupied bed-days / available bed-days x 100; show closures and critical-area pressure.
Readmission	Eligible index discharges with the defined unplanned readmission / eligible index discharges x 100.
Infection surveillance	Defined infection events / relevant exposure x the stated multiplier; show protocol and surveillance completeness.

These five measures are a teaching selection. They do not replace PHC indicators or required departmental returns.

Sources: **D1**:CQI-2 | **D4**:integrated analysis | **D9**:occupancy

Five measures of resources and reliability

Together, these ten measures connect care delivery with the resources and records supporting it.

Measure	Definition to record
Duty cover	Required shifts filled by appropriately authorised staff / required shifts x 100; identify critical gaps.
Essential stock-outs	Number of days each selected essential item was unavailable at the defined service point.
Equipment downtime	Hours the selected device was unavailable / scheduled service hours x 100; state planned-maintenance treatment.
Payment backlog	Verified unpaid amount and its age at the reporting date; distinguish disputed and not-yet-due items.
Report quality	Received / expected x 100; on-time / expected x 100. Show unresolved verification differences.

Show numerator, denominator, current result, trend, data-quality caveat, owner and action for each measure.

WORKING METHOD | Illustrative material is identified in the text.

Set action triggers without inventing standards

An internal target must have a reason and the correct authority behind it.

Identify the basis

- Use a binding requirement where one actually applies; identify its source.
- For improvement work, record the baseline, intended change, resources and review date.
- Use relevant comparable evidence; check whether the comparison has the same definitions and patients.

Keep the response clear

- Define what happens when a limit is crossed, who acts and when the matter escalates.
- Do not colour missing or unreliable data green. Label the quality problem explicitly.
- Keep patient safety concerns visible even when an overall target is achieved.

A locally approved improvement target is not automatically a PHC, legal or universal clinical threshold.

Sources: **D1**:CQI-2 indicator 99 benchmark context

Use the dashboard to make decisions

A meeting should leave a record of what will change and who will check it.

1	**State the finding**	Give the definition, result, comparison and data limitations in plain language.
2	**Identify the cause**	Separate a reporting error from a service problem; check the source and clinical context.
3	**Assign the response**	Specify the responsible person, required support, authority and completion date.
4	**Check the result**	Review completion evidence and the effect on care; record further action where the problem remains.

Suggested review pattern: urgent risks immediately, operational issues frequently and a consolidated review at an agreed interval.

WORKING METHOD | Illustrative material is identified in the text.

Urgent notifications must follow their own route

A monthly performance return does not replace a required disease or incident notification.

1	**Know the current rules**	Keep applicable directions, case definitions, contact details, forms and deadlines available to the duty team.
2	**Escalate immediately**	For an urgent suspected event, contact the clinical and surveillance focal persons through the authorised route.
3	**Send required information**	Use the designated secure channel and the required case details; record when and to whom the report was sent.
4	**Follow through**	Keep acknowledgements, updates and response actions. Reconcile subsequent routine reports with the case record.

IDSR = Integrated Disease Surveillance and Response. Confirm the current provincial and disease-specific arrangements.

Sources: **D6**:IDSR framework and current bulletins | **D7**:HAI surveillance

Public reporting needs a separate review

A report fit for an internal clinical meeting may not be fit for a public website.

Protect people

- Use the authorised release process and the minimum necessary information.
- Remove direct identifiers; check whether rare diagnoses, dates or very small groups can identify someone.
- Combine or withhold details where needed; review whether totals allow hidden small counts to be inferred.

Explain the numbers

- State the period, definition, source, exclusions and major limitations.
- Distinguish provisional results from final checked figures; publish corrections transparently.
- Research use and identifiable sharing need their own permission review; see Lectures 58 and 60.

WHO data principles support responsible sharing. They do not authorise disclosure under Pakistani law.

Sources: **D8**:data transparency and responsible stewardship

Report performance without overstating it

The MS should be able to explain both what a result shows and what it cannot show.

Defensible statement

- “Among 500 eligible records reviewed, 450 contained the required entry: 90%. The other records were reviewed for missing information.”
- “The recorded rate fell during this period. Definitions were unchanged; incomplete follow-up remains a limitation.”

Statements needing correction

- “The hospital is 90% compliant” when only one field or a limited sample was reviewed.
- “The initiative caused the fall” when the analysis only compared before and after.
- “There were no incidents” when reports were missing or staff did not feel able to report.

Do not change definitions, conceal gaps or discourage incident reporting to improve dashboard colours.

WORKING METHOD | Illustrative material is identified in the text.

A dashboard shows success, but the sources disagree

All people, events and hospital details in this teaching example are invented. They do not describe an actual hospital event.

The report	It claims 1,000 unique patients and 80% occupancy for the month.
The source	The 1,000 entries are visits. The identity review identifies 700 people with at least one visit.
The bed calculation	Occupied bed-days are 2,400. The denominator used was 100 x 30 = 3,000.
The closure	Only 80 beds were usable for the whole 30-day month. The closed ward was wrongly included.
Your decision	What should be corrected, and what service issue now needs urgent review?

Do not defend the published number merely because it was already approved.

TEACHING CASE | Illustrative material is identified in the text.

Correct the report and examine the real pressure

Reasoned response to the preceding invented example.

Patient activity	Report 1,000 visits and 700 unique people within the stated scope. Both figures may be useful.
Available bed-days	80 usable beds x 30 days = 2,400 available bed-days.
Corrected occupancy	2,400 / 2,400 x 100 = 100%. The earlier 80% used an incorrect available-capacity denominator.
Immediate review	Check crowding, staffing, isolation, delayed discharges and the closure plan. An average of 100% warrants operational review.
Administrative response	Issue an authorised correction, notify recipients and fix the bed-capacity log and indicator definition.

This example does not set a universal occupancy threshold or prove that every ward was full every day.

TEACHING CASE | Illustrative material is identified in the text.

Apply the definitions and calculations

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

1. Reporting

30 reports are expected. By review, 27 arrived; 24 were on time.

Calculate completeness and timeliness.

2. Capacity

60 beds were usable for 15 days, then 40 for 15 days. Occupied bed-days total 1,200.

Calculate available bed-days and occupancy.

3. Readmissions

A fully observed cohort has 200 eligible index discharges. 12 meet the defined unplanned readmission event.

Calculate the proportion. What limits need stating?

All figures are invented. Explain the denominator and the period before giving the answer.

TEACHING CASE | Illustrative material is identified in the text.

Answers and reasons

Use the evidence, the calculation and the cited source.

1. Reporting

Completeness = 27 / 30 x 100 = 90%. Timeliness = 24 / 30 x 100 = 80%. Both use the 30 expected reports.

2. Capacity

Available bed-days = (60 x 15) + (40 x 15) = 900 + 600 = 1,500. Occupancy = 1,200 / 1,500 x 100 = 80%.

3. Readmissions

12 / 200 x 100 = 6%. State eligibility, follow-up window, exclusions, whether only the same hospital is captured and how events were verified.

Correct arithmetic cannot compensate for a wrong definition, missing records or incomplete follow-up.

Build and defend one service dashboard

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

Define

Choose a service and five useful measures. Write the counting rules, source, owner and review interval.

Verify

Check one period against the source records. Calculate the measures and document gaps and corrections.

Act

Prepare a dashboard and action record. State the decision needed, responsible person and review date.

Review test: could another authorised reviewer reproduce each result and understand its limitations?

Use anonymised or invented information for teaching. Keep identifiable source evidence within the authorised hospital system.

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.

D1

PHC: MSDS for Category I Hospitals, revised edition 2024

CQI-2, Standard 17, indicators 99-105; IMS-3, Standard 30, indicators 156-162. Check the edition applicable to the hospital.

Punjab Healthcare Commission | **Official source**

D2

Data quality assurance, Module 2: discrete desk review (2023)

Official guidance on completeness, internal consistency and external comparisons. Used as a quality-review method, not a Punjab legal rule.

World Health Organization | **Official source**

D3

Data quality assurance, Module 3: site assessment (2023)

Data verification and system assessment. Supports checking reported totals against source records and investigating the reporting process.

World Health Organization | **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.

D4

Routine health facility data: integrated health services analysis (2023)

Guidance for district and facility managers on indicators, analysis and dashboards. The examples and suggested dashboard here are original teaching methods.

World Health Organization | **Official source**

D5

Implementation of HMIS in 15 tertiary care hospitals (2023)

Official account of the SHC&ME orientation for Punjab tertiary hospitals. This establishes context, not a current reporting direction for every hospital.

Punjab Information Technology Board | **Official source**

D6

Pakistan IDSR Roadmap 2024-2028 and surveillance bulletins

National approach to disease surveillance and response. Current disease-specific alerts and applicable provincial directions determine reporting routes and urgency.

National Institutes of Health, Pakistan | **Official source** | **Official bulletins**

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Sources and continued use | 3

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

D7

National HAI Surveillance and Response Implementation Guidelines (2025)

Reference for healthcare-associated infection surveillance. Use the applicable case definitions, denominator rules and authorised reporting arrangements.

National Institutes of Health, Pakistan | **Official source**

D8

WHO data principles (2020)

Principles for WHO data governance, including transparent methods and responsible sharing. International guidance; not a substitute for Pakistan law or hospital permission.

World Health Organization | **Official source**

D9

Bed occupancy rate: indicator definition

Occupied bed-days divided by available bed-days, expressed as a percentage. International statistical reference; no universal safe occupancy target is implied.

WHO Regional Office for Europe | **Official source**

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