MODULE 16 | EMERGENCIES, DISASTERS, SECURITY AND SERVICE CONTINUITY

Hospital Emergency Preparedness and Mass-Casualty Management

62

LECTURE

Practical hospital governance in Punjab, Pakistan

Prepare the authority, people and resources.
Coordinate the response and keep patients safe.

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SELF-STUDY PDF

Preparedness means being able to act

The Medical Superintendent (MS) must connect a written plan with clear authority, trained staff and resources that can actually be used.

- Know who may activate and direct the hospital response.
- Prepare for increased demand and loss of capacity.
- Coordinate clinical teams and outside agencies.
- Use records and exercises to identify and close gaps.

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

An emergency-control brief, a checked surge estimate and an exercise with an action record.

Module 16 | Presentation 1 of 3. Allow 45-60 minutes with exercises. All explanations are on the pages; check the cited sources before live use.

Three parts of emergency governance

Hospital leadership needs a plan for the event, protection during the event and continuation of essential care.

Lecture	Main subject	Practical output
62	Emergency command and mass-casualty management.	Activation brief, surge review and exercise.
63	Security, violence prevention and safe evacuation.	Security and evacuation controls.
64	Essential services and recovery after disruption.	Continuity plan and recovery review.

The module concerns hospital governance. Clinical procedures and specialist rescue tasks require the relevant training.

WORKING METHOD | Illustrative material is identified in the text.

Recognise when ordinary arrangements are insufficient

These working definitions help the team describe the problem clearly.

Term	Plain meaning
Emergency	A dangerous situation requiring prompt action to protect people or services.
Mass-casualty incident	Patient demand exceeds the available local clinical resources; the trigger is a mismatch, not one fixed number.
Internal incident	A problem inside the hospital, such as fire, utility failure or loss of a critical system.
Combined incident	An outside event increases arrivals while also disrupting the hospital or its supply routes.

The same number of arrivals may be manageable in one hospital and overwhelming in another.

Sources: **E5**: mass-casualty context

Connect the hospital with the public response system

The legal framework allocates functions across organisations. The local response plan should show the working connections.

Body	Relevant role
NDMA	National Disaster Management Authority: national coordination, implementation and guidance.
PDMA Punjab	Provincial Disaster Management Authority: provincial planning, coordination and response arrangements.
District authority	District disaster planning, coordination and implementation through current notified arrangements.
Rescue 1122	Emergency response, rescue, communication, coordination and patient transport within its statutory functions.

Maintain the current health-department and district contact route. A hospital incident team does not replace these authorities.

Sources: **E2**: sections 9, 16 and 20-22 | **E3**: sections 3 and 5 | **E9**: overview

What PHC requires the hospital to demonstrate

Category I standards provide specific evidence requirements.

Area	Requirement to check
Emergency services	Documented emergency procedures, clinical triage, trained staff and recorded admission, discharge or transfer.
Emergency plans	Fire and non-fire plans for early detection, containment and abatement (bringing the hazard under control).
Evacuation	A documented, displayed and tested plan, including whole-hospital arrangements and assigned roles.
Drills and training	Mock drills at least annually across areas and shifts; evidence that staff understand their emergency roles.

Check the relevant equipment-fitness certification as well as the plan. Lecture 63 examines evacuation arrangements.

Sources: **E1**: standard 3; standard 23, indicators 126-129

Review the hazards that matter locally

Suggested review with clinical, nursing, engineering, security, infection-control and administrative teams.

01 Surge

Road crashes, crowd incidents, epidemics and other sudden demand.

02 Fire

Smoke, electrical faults and other threats within the building.

03 Utilities

Loss of power, oxygen, water or other critical support.

04 Weather

Flooding, extreme heat, access disruption and storm damage.

05 Security

Violence, threats, crowd pressure and restricted access.

06 Systems

IT failure, communication loss and interrupted supplies.

For each hazard, record likely effects, exposed services, existing controls and the most important unresolved gap.

WORKING METHOD | Illustrative material is identified in the text.

Make the plan usable during a shift

Suggested core contents of one controlled hospital emergency plan.

01 Activation

Who may activate it, when, and who acts if absent.

02 Roles

Named duties, deputies, contact routes and handover.

03 Clinical flow

Triage, care areas, diagnostics, admission and transfer.

04 Resources

Staff, usable capacity, supplies and external support.

05 Communication

Internal alerts, outside liaison, families and public updates.

06 Records

Patient tracking, decisions, expenditure and review actions.

Keep accessible copies and a fallback when digital systems fail. Control the version and remove superseded operational copies.

WORKING METHOD | Illustrative material is identified in the text.

Name the leader and the alternate before an incident

Suggested hospital command arrangement, subject to the approved plan and actual delegated powers.

Before the event

- The competent authority approves who directs the hospital response, the deputy and arrangements outside office hours.
- State who may change service arrangements, request support, authorise resources and issue official communications.

During the event

- Record who is in charge, from what time, and the current command location and contact method.
- Use an explicit handover if leadership changes. Avoid competing instructions from several senior offices.

The incident role coordinates the response; it does not create financial, employment or police powers.

Sources: **E4**: command and control

Assign the work behind the command role

Suggested functions; one person may cover more than one function only when the workload permits.

Function	Question the lead must answer
Clinical operations	Which patients need which care, and what is preventing it?
Resources and staffing	Which competent staff, supplies and usable treatment spaces are available?
Safety and liaison	What threatens safe working, and which outside agencies must be involved?
Information and records	What is confirmed, what has been decided, and which actions remain open?

Provide deputies and administrative support. Keep finance and procurement advice available for urgent resource decisions.

WORKING METHOD | Illustrative material is identified in the text.

Set activation triggers and review points

Suggested local stages. Names and thresholds must be approved for the institution.

Stage	Typical management action
Heightened readiness	Verify an alert, check resources, brief key teams and prepare to expand.
Active response	Mobilise the relevant functions because actual or expected demand exceeds ordinary arrangements.
De-escalation	Reduce extraordinary measures after checking continuing arrivals, risks and clinical workload.
Recovery	Restore services safely, reconcile records and supplies, and address delayed care and staff needs.

Do not wait for a fixed casualty count if critical capacity is already threatened. Record the reason for each change of stage.

Sources: **E6**: preparedness and activation

The first response must establish control

Suggested sequence; urgent clinical care and immediate protective action proceed at the same time.

1	**Receive and check**	Record the source, time, location, likely patient needs and any continuing hazards.
2	**Activate and notify**	Use the approved authority and alert route; call the required clinical and support leads.
3	**Protect and prepare**	Secure safe access, identify usable care areas and check essential service support.
4	**Set the next review**	State the immediate priorities, named owners and when the team will update the position.

Early decisions may use incomplete information. State uncertainty and update the record when facts change.

WORKING METHOD | Illustrative material is identified in the text.

Verify the alert without delaying readiness

Suggested information request to the authorised incident or ambulance contact.

01 Location

Where is the event, and which routes remain usable?

02 Event

What happened, and are hazards still present?

03 Patients

How many are expected, with what broad care needs?

04 Timing

When may arrivals start, and over what period?

05 Support

Which other hospitals and response teams are involved?

06 Reliability

Who supplied the information and when will it be updated?

Separate confirmed facts from estimates. Do not circulate an unverified casualty count as an established fact.

Use a short situation report

Suggested format for command briefings and the authorised external reporting route.

Heading	What to record
Position at a stated time	Incident, affected services, arrivals and current clinical workload.
Available capacity	Usable beds or treatment places, key teams and critical support limits.
Actions and risks	What has been done, unresolved hazards and anticipated changes.
Assistance required	Exact resource or decision, quantity, urgency, location and responsible contact.

Timestamp each update and retain its source. Keep patient-identifiable information within the authorised reporting purpose.

WORKING METHOD | Illustrative material is identified in the text.

Coordinate assistance through a named route

Suggested interface with the health department, district administration, Rescue 1122 and receiving hospitals.

When asking for help

- Describe the specific gap: a competent team, transport, a receiving service, a utility resource or a supply.
- State the required quantity, safe delivery point, urgency and contact. Confirm whether help has actually been accepted and dispatched.

When giving instructions

- Give hospital staff one agreed operational direction. Share changes with the response agencies affected.
- Record incoming directions, the issuing authority and the action taken. Escalate conflicting instructions promptly.

Rescue involvement does not remove the hospital’s responsibility to protect patients and maintain its own preparedness.

Sources: **E3**: sections 3 and 5

Count usable capacity, not beds alone

Suggested readiness check for each proposed treatment area.

01 Space

The area is safe, accessible and suitable for the intended care.

02 Staff

The required competent team is present or confirmed.

03 Equipment

Equipment is working and available for the specific tasks.

04 Supplies

Medicines, consumables and necessary blood support are ready.

05 Utilities

Power, oxygen, water and communication can support the area.

06 Next step

Patients can move to appropriate continuing or definitive care.

A vacant bed may be unavailable if its staffing, equipment or supporting service is missing.

WORKING METHOD | Illustrative material is identified in the text.

Physical space can overstate surge capacity

Invented example for a defined observation service. The numbers are not clinical staffing standards.

Physical spaces	There are 24 potentially usable places. Four are unsafe or unavailable, leaving 20.
Staff and equipment	The approved service model can staff 16 places. Equipment and other support can safely cover 18.
Usable total	The limiting capacity is 16, provided all requirements can be matched to those same places.
Additional capacity	Ten places are already occupied by patients needing continuing care. Six additional places are available: 16 - 10 = 6.

Do not add separate staffing, bed and equipment totals. Check the complete care arrangement for each place.

TEACHING CASE | Illustrative material is identified in the text.

Keep triage a trained clinical function

PHC standard 3 requires triage based on clinical evaluation. WHO provides distinct routine and mass-casualty tools.

Management responsibilities

- Provide trained staff, an appropriate triage location, clear routing and the approved tool for the situation.
- Support repeat assessment when a patient’s condition changes or the response arrangements change.

Limits to administrative decisions

- Arrival order, influence or mode of arrival must not replace clinical need when assigning priority.
- An administrator should not invent treatment thresholds or use an unfamiliar colour system as a clinical instruction.

Mass-casualty triage requires suitable training and clinical oversight. This lecture does not teach its clinical algorithm.

Sources: **E1**: indicator 18 | **E7**: routine and mass-casualty triage

Protect the flow of patients through the hospital

Suggested coordination check from arrival to the next stage of care.

1	**Receive**	Keep a safe route from arrival to clinical assessment and patient identification.
2	**Place**	Direct patients to the appropriate supervised care area with the required staff and equipment.
3	**Support**	Confirm diagnostic, theatre, critical-care, pharmacy and blood-service support for actual clinical needs.
4	**Move onward**	Arrange safe admission, transfer or discharge through a clinical decision and documented handover.

Reorganising an emergency area must preserve care for patients already there. Relocation requires suitable receiving care.

WORKING METHOD | Illustrative material is identified in the text.

A specialist hospital needs a realistic receiving plan

Suggested approach for a cardiac or other specialist institution facing patients outside its usual service scope.

Plan before the event

- Map available capabilities, the limits of on-site care and the agreed referral routes for other specialties.
- Agree communication with neighbouring hospitals and transport services; verify these arrangements in exercises.

Act during the event

- Arrange prompt clinical assessment and immediate care within available competence, while seeking the required specialist support.
- Coordinate transfer with the receiving team, transport capability and patient’s condition. Escalate when a safe route is unavailable.

A specialty label does not replace clinical assessment. A proposed diversion requires authorised coordination and a safe care pathway.

WORKING METHOD | Illustrative material is identified in the text.

Prepare support departments before the queue grows

Suggested readiness questions for the operational briefing.

Service	Confirm the next limiting factor
Laboratory and imaging	Staff, supplies, safe testing, result delivery and urgent communication.
Theatre and critical care	Suitable teams, equipment, beds and recovery support for the clinical priorities.
Pharmacy and blood service	Usable stock, issue procedures, replenishment, storage and patient identification.
Portering and facilities	Patient movement, cleaning, waste, utilities, equipment repair and secure access.

Appoint one coordinating contact for each service. Preserve essential care for patients unrelated to the incident.

WORKING METHOD | Illustrative material is identified in the text.

Preserve one traceable record for each patient

Suggested documentation controls during a surge, including periods when the main computer system is unavailable.

01 Identity

Use the approved identifier, including a temporary one if needed.

02 Assessment

Record the relevant assessment, priority and responsible clinician.

03 Care

Record important treatment, medicines, procedures and results.

04 Movement

Track the patient’s current location and each transfer.

05 Handover

Identify the receiving team and unresolved clinical actions.

06 Reconciliation

Resolve duplicate or temporary records through a controlled process.

Keep records with the correct patient and preserve privacy. Lectures 59-60 cover digital downtime and medical-record controls.

WORKING METHOD | Illustrative material is identified in the text.

Reconcile the incident patient list

Invented snapshot. Categories are mutually exclusive, all patients are unique and “departed” means they have actually left.

Starting position	At 14:00, the incident register contains 48 arrivals.
Current locations	25 are receiving care in the emergency area; 12 have been admitted to wards in this hospital.
Completed departures	7 have transferred to another hospital and 4 have been discharged and left: 25 + 12 + 7 + 4 = 48.
Useful totals	37 remain in this hospital; 11 have departed. A planned transfer is not yet a completed departure.

Use a stated time and incident definition. Reconcile changing totals without deleting earlier versions or counting one person twice.

TEACHING CASE | Illustrative material is identified in the text.

Mobilise competent people and maintain relief

Suggested staffing arrangement for an extended response.

Mobilisation

- Use a checked call-out list and record who accepted, arrived and was assigned to which task.
- Verify the identity, competence and authorisation of additional staff and volunteers; give role-specific orientation.

Sustained working

- Arrange clinical supervision, shift handover, rest, food, transport and access to staff support.
- Keep a reserve and relief plan. Do not deploy every available team at once without considering the next shift.

An offer to help is not evidence that a person is qualified or authorised for independent clinical work.

WORKING METHOD | Illustrative material is identified in the text.

Urgent resource use still needs a record

Suggested control for emergency requests, stock issues, borrowing and purchases.

Record	Question it should answer
Need	What is required, for which service, in what quantity and by when?
Authority	Who may approve it, and which lawful procedure or specific authorisation applies?
Supply and receipt	What was ordered, issued, borrowed or received, from whom and at what time?
Use and settlement	Where did it go, what remains, what is payable or returnable, and who checked it?

An incident declaration does not automatically waive procurement rules. Use the lawful emergency route and retain the decision evidence.

WORKING METHOD | Illustrative material is identified in the text.

Give families and the public a reliable information route

Suggested communication controls that protect care, privacy and confidence.

Families and carers

- Provide a staffed information point, accessible communication and a way to trace enquiries safely.
- Verify identity and authority before sharing personal information. Arrange private communication of serious news by the appropriate team.

Public and media updates

- Use a designated spokesperson and verified, time-stamped figures. State what is known and what remains uncertain.
- Coordinate service advice with response authorities. Protect patient identities and access to clinical areas.

Families need understandable updates. A public request for information does not create permission to reveal patient details.

WORKING METHOD | Illustrative material is identified in the text.

Protect people who may otherwise be overlooked

Suggested planning checks for dignity, accessibility and safeguarding.

People needing additional support

- Plan for children, older people, disability, language barriers and patients needing continuous clinical support.
- Use verified family-reunification and safeguarding procedures for separated or unidentified people.

Deaths and bereavement

- Arrange respectful care, identification, secure belongings and the appropriate mortuary and medico-legal route.
- Keep a traceable record and use authorised certification and release processes. Avoid unverified identification or public naming.

A large response does not remove the duty to document decisions and treat each person with dignity.

WORKING METHOD | Illustrative material is identified in the text.

Identify a hazard before it enters every care area

Suggested management response; specialist teams determine the clinical and technical procedures.

Possible hazard	Immediate coordination need
Infectious outbreak	Clinical and infection-control advice, safe patient routing, staff protection and required public-health notification.
Chemical contamination	Rescue and trained hazardous-material support, protected assessment arrangements and a controlled receiving route.
Radiological concern	Specialist assessment and liaison with the relevant radiation-safety and emergency authorities.
Ongoing violence	Police and security coordination, safe access and protection of patients and staff.

Do not improvise decontamination, protective equipment or rescue procedures. Prepare and practise the authorised arrangements.

WORKING METHOD | Illustrative material is identified in the text.

Use clinical priorities and document difficult decisions

Suggested decision safeguards when demand exceeds resources.

Clinical decision-making

- Use the approved clinical framework, competent senior review and regular reassessment of the situation.
- Record the relevant clinical need, available resources, decision-maker and reason for any change of care pathway.

Institutional responsibility

- Escalate the shortage and seek additional capacity. Apply fair criteria rather than status, influence or personal connections.
- Arrange appropriate supportive and palliative care when required. Explain decisions through the responsible clinical team.

Scarcity requires transparent, clinically led decisions. An MS should not invent a treatment-withholding rule during the incident.

Sources: **E5**: mass-casualty care and support resources

A role card should fit the actual job

Invented example: hospital resource coordinator. WHO action cards illustrate this approach.

Report to	The designated hospital incident lead through the approved command contact; name the deputy.
First tasks	Check usable care places, staff attendance and critical supplies. Report urgent gaps and confirmed support.
Continuing tasks	Track requests, deliveries, staff relief and changes in capacity; provide updates at the agreed review time.
Limits and handover	Use the proper financial and staffing authority. Record outstanding actions and hand over to the next named coordinator.

A role card supports a trained person. It cannot replace orientation, competence or the full emergency plan.

Sources: **E8**: role-specific action cards

Test the plan and close the observed gaps

Suggested exercise process. PHC indicator 128 sets an annual minimum for mock drills across areas and shifts.

1	**Choose the test**	State a realistic scenario and the specific actions the exercise will check.
2	**Protect real care**	Approve scope, staffing, safety limits and a way to stop the exercise for a real emergency.
3	**Observe performance**	Record actual times, handovers, communications and gaps rather than only attendance.
4	**Correct and retest**	Assign owners and dates; verify that the revised arrangement works before closing the action.

Tabletop discussion and practical drills test different things. Choose the exercise needed to demonstrate the actual requirement.

Sources: **E1**: indicators 128-129

TEACHING CASE

A specialist hospital receives an unexpected surge

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

Alert	Rescue informs a cardiac hospital that a road incident may produce several arrivals. The exact number and injuries remain uncertain.
Capacity	The hospital has 12 empty physical places, but only 5 can currently support the anticipated level of care with staff and equipment.
Pressure	Several offices issue separate instructions. A public message claims a confirmed casualty count that no responsible source has verified.
Decision required	The duty MS must activate the right coordination, assess capability, obtain support and maintain safe clinical assessment.

What should be confirmed immediately, and which actions can begin while further information is being obtained?

TEACHING CASE | Illustrative material is identified in the text.

TEACHING CASE

A reasoned response to the unexpected surge

Suggested answer to the preceding invented case.

1	**Establish one lead**	Use the approved activation and deputy arrangement; notify clinical and support leads.
2	**Check capability**	Verify the alert and the five usable places. Arrange triage and protect existing essential care.
3	**Coordinate the gap**	Seek appropriate teams, receiving capacity and transport through the district and hospital network.
4	**Maintain reliable information**	Issue a verified situation report, correct unconfirmed figures and track patients and decisions.

The plan must work for the hospital’s real capability. Twelve empty places do not establish twelve safe care places.

TEACHING CASE | Illustrative material is identified in the text.

Three decisions for the institutional head

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

1. Surge arithmetic

A service can use 30 spaces. Staff can cover 20 and equipment can cover 24, matched to the same spaces. Sixteen places are occupied.

How many additional places are usable now?

2. An unread plan

The emergency plan is signed. Night staff cannot identify their roles, and no drill record exists for the past year.

What evidence and corrective action are needed?

3. Unconfirmed arrivals

A message says 40 people will arrive. The ambulance coordinator can confirm only that the event is continuing.

How should readiness and communication proceed?

Give the reason and identify who must act. Do not treat illustrative figures as statutory thresholds.

TEACHING CASE | Illustrative material is identified in the text.

Answers and reasons

Use the evidence, the calculation and the cited source.

1. Four additional places

The limiting capacity is 20, subject to matching all required resources. With 16 occupied, 20 - 16 = 4 additional places are usable. Address the limiting resource before claiming further capacity.

2. Test and demonstrate readiness

Arrange role training across the relevant areas and shifts, conduct the required safe drill, record findings and verify corrective action. A signature alone does not demonstrate the PHC plan, drill and training requirements.

3. Prepare while verifying

Check the source and anticipated needs, use the approved readiness stage and obtain updates. Describe 40 as unconfirmed if it must be mentioned internally; do not publish it as a verified casualty total.

The responsible officers must document actual capacity, actions and unresolved uncertainty.

Sources: **E1**: indicators 127-129

Prepare an emergency-control brief

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

1. Authority and roles

Identify activation authority, deputy, command roles and the current external contact route.

2. Capacity and gaps

Check one care area: space, staff, equipment, support and the safe additional capacity.

3. Exercise and action

Test one realistic scenario; record the observed gap, owner, completion date and retest.

Review with the clinical, nursing, engineering, security and administrative leads. Refer unresolved authority or resource gaps for decision.

Use invented patient information for teaching. Keep sensitive contact lists and operational security details in controlled records.

WORKING METHOD | Illustrative material is identified in the text.

Six questions during the response

Suggested questions for a short command review.

01 Lead

Who is directing the hospital response and who is the deputy?

02 Patients

What care is needed now, and which patients remain at risk?

03 Capacity

Which resources are genuinely usable and which are missing?

04 Safety

What hazards threaten care, access, staff or the building?

05 Support

Which request or decision needs outside assistance?

06 Next review

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

Next: Lecture 63 examines security, violence prevention and safe evacuation.

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.

E1

Minimum Service Delivery Standards for Hospitals 2024

PHC Category I manual: standard 3, indicators 15-20, on emergency services; standard 23, indicators 126-129, on fire and non-fire emergencies. Use the applicable category and later directions.

Punjab Healthcare Commission | **Official source**

E2

National Disaster Management Act 2010

Sections 9, 16 and 20-22 concern national, provincial and district responsibilities and plans. The Act does not make the MS the commander of every outside agency. Check current notifications and orders.

Ministry of Law and Justice, Pakistan Code | **Official source**

E3

Punjab Emergency Service Act 2006

Official consolidated text. Sections 3 and 5 address continuing responsibilities, preparedness, response, communication, coordination and transport. Powers assigned to rescuers are not automatically hospital powers.

Punjab Emergency Services Department | **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.

E4

Hospital Emergency Response Checklist, 2011

WHO all-hazards guidance for hospital administrators. Covers command, communication, safety, triage, surge, essential services, staff, logistics and recovery. International guidance, not a Punjab statute.

World Health Organization | **Official source**

E5

Mass Casualty Management in Emergency Units

WHO resource portal with preparedness, activation, clinical and patient-tracking tools. Used for the distinction between ordinary care and an overwhelming surge. Clinical application requires suitable training.

World Health Organization | **Official source**

E6

MCM Preparedness and Activation Checklists

WHO templates for preparedness, activation and monitoring. Hospital examples in this lecture are suggested adaptations; clinical relocation requires individual safety assessment and suitable receiving care.

World Health Organization | **Official source**

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Sources and continued use | 3

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

E7

Interagency Integrated Triage Tool

WHO guidance distinguishes routine and mass-casualty triage. Use the approved, appropriate tool with trained clinical staff; this governance lecture is not a substitute for clinical triage training.

World Health Organization | **Official source**

E8

Mass-Casualty Management Action Cards

WHO examples of task cards for clinical, resource and command roles. The local card in this lecture is a teaching example and must be approved for the actual hospital plan.

World Health Organization | **Official source**

E9

PDMA Punjab: institutional overview

Official account of provincial and district disaster-management coordination and links with response agencies. Obtain current departmental plans, district arrangements and contacts before operational use.

Provincial Disaster Management Authority, Punjab | **Official source**

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