

MSc Public Health and Social Care in Practice

Health Care System Organisation and Leadership (LCHS7002)

Case Study Analysis Report

Systems, Governance and Leadership Analysis of a Wrong-Patient Incident at Kota
Medical College Hospital, Rajasthan

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1. Introduction

On 12 April 2025, at Kota Medical College Hospital in Rajasthan, India, a 60-year-old man waiting outside an operating theatre while his son underwent surgery was called by a name he shared with a patient scheduled for a different procedure, taken into theatre without verified identification, anaesthetised, and given a surgical incision before the error was recognised (PTI, 2025). Wrong-patient events are categorised internationally as preventable by design rather than as clinical complications, and they signal failure in the most elementary process a health service performs: establishing who is in front of it. Eliminating such avoidable harm is the first strategic objective of the global patient-safety agenda (WHO, 2021). Chassin and Becher (2002) demonstrated in a comparable case that these events arise not from single lapses but from numerous interacting errors, none individually sufficient, combining with underlying system weaknesses.

This report analyses the Kota incident as a case study in health system organisation and leadership: identifying the problem and its system context, examining where decision-making authority is located, evaluating leadership through relevant theory, and developing an evidence-based improvement strategy. Leadership is understood here not as the conduct of individuals holding formal office but as the set of functions through which health and social care organisations establish direction, allocate responsibility, enable staff to act and hold themselves accountable for outcomes (West et al., 2014).

Three frameworks structure the analysis. Centralisation and decentralisation describe where authority to decide is located, examined through Bossert's (1998) concept of decision space. Leadership theory is applied selectively: transformational leadership for vision and culture, distributed leadership for shared responsibility and frontline voice, and situational leadership as a comparative lens on adaptiveness. Leadership matters acutely following patient-safety incidents because an organisation's response to failure determines whether that failure produces learning or merely sanction (Reason, 2000). Systems thinking provides the organising perspective, treating harm as emerging from interactions between people, tasks, tools, environments and organisational conditions rather than from individual fault (Carayon et al., 2020; Rasmussen, 1997).

One limitation must be stated at the outset. All case-specific evidence derives from press reporting; no inquiry findings have been published, and accounts differ on how the error was detected. The report therefore distinguishes throughout between confirmed case facts, external evidence, analytical interpretation and reasonable inference, and treats organisational conditions at the facility as unestablished unless evidenced.

Section 2.1 identifies the central problem and system context, supported by a rich picture; 2.2 examines centralisation and decentralisation; 2.3 evaluates three leadership theories and human-resource implications; 2.4 develops the improvement and evaluation strategy. Section 3 presents prioritised recommendations and Section 4 answers the central question.

2. Main Body and Analysis

2.1 Identifying the Problem and Setting the System Context

At the super-speciality block of Kota Medical College Hospital, a 60-year-old man awaiting his son's surgery was called by a name he shared with a patient scheduled for an arteriovenous fistula procedure. He raised his hand, was taken into theatre without verified identification, was anaesthetised, and an incision was made on his arm before the error was recognised (PTI, 2025; India TV, 2025). Accounts differ on the point of detection: some report recognition by a clinician arriving at the theatre, others that the patient's son discovered his father missing (PTI, 2025; India TV, 2025). Both accounts nonetheless converge on the same conclusion, since neither describes an engineered safety barrier. This section applies systems thinking and governance concepts to health-system functioning (LO1) and demonstrates their use in identifying improvable outcomes (LO3).

Two established features are analytically decisive. Both the man taken into theatre and the intended patient had impaired speech, and both were addressed by the same forename. Identification consequently depended on a capability neither possessed. These are not obscure hazards: WHO's patient identification solution directs organisations to provide clear protocols for distinguishing between patients with the same name and to develop non-verbal approaches for identifying patients who cannot communicate (WHO Collaborating Centre for Patient Safety Solutions, 2007). The central problem is therefore not an absence of relevant knowledge but the distance between an internationally specified standard and enacted local practice.

International evidence establishes both the significance and the character of such events. Reviewing 15,548 records across eight transitional economies, Wilson et al. (2012) found approximately 8% of admissions associated with at least one adverse event, of which 83% were judged preventable and 30% associated with death: rates comparable to high-income settings, but with considerably higher preventability. Preventability, not incidence, is the analytical target. The most instructive precedent is Chassin and Becher's (2002) root-cause analysis of a patient mistakenly taken for another's invasive procedure, in which at least 17 distinct errors were identified, none sufficient alone, and in which active errors interacted with

latent conditions, most remediable absent or misused identification protocols, faulty information exchange and poorly functioning teams. The Kota event conforms to this established pattern rather than constituting an anomaly. Synthesised evidence reinforces the point: 0.9% to 1.86% of reviewed events involved wrong-patient procedures, and an analysis of 142 wrong-site cases attributed causation principally to leadership (30.9%), human factors (23.4%) and miscommunication (10%), finding no reduction in prevalence following implementation of the Universal Protocol (AHRQ, 2020). Mandating a barrier and securing its operation are demonstrably different achievements. The implementation deficit is global: WHO's first global report found that more than one in ten patients experience harm in health care, around half of it preventable, yet only about a quarter of countries had begun applying human factors principles in clinical practice (WHO, 2024).

The Indian evidence follows the same structure. India's National Patient Safety Implementation Framework explicitly identifies patient identification, communication and handover protocols as priority action areas (MoHFW, 2018). Yet evaluating implementation across 18 public facilities, Krishnamoorthy et al. (2023) found that although standard protocols and checklists were available, staff shortages, infrastructural deficits, limited patient-safety awareness and non-compliance with standard guidelines were pervasive. Landefeld, Sivaraman and Arora (2015) similarly identified 129 distinct barriers across five themes, with limited resources most prominent, followed by health-systems issues and medical culture, the latter including a punitive response to adverse events and a rigid workplace hierarchy. Regional audit evidence sharpens the diagnosis: at a public tertiary hospital in Pakistan, identity confirmation achieved 95.6% compliance while allergy recording reached only 26.3% (Toru et al., 2023), and Indian audits report comparable unevenness across checklist phases (Ambulkar et al., 2018). The pattern is not one of absent standards but of documented compliance without reliable enactment.

Figure 1 presents a rich picture of the case, developed as the problem-structuring stage of soft systems methodology (Checkland, 2000) to represent competing stakeholder perspectives rather than a linear causal sequence. It illustrates four things the narrative obscures. Standards operate above the point of care while ownership at the corridor is undefined. Four intended barriers exist, of which only one is evidenced as having operated. Detection was incidental rather than engineered. Finally, the external accountability loop through media and political reaction is evidenced, while the internal reporting and learning loop is not.

Interpreted through SEIPS 3.0 (Carayon et al., 2020), the work system explains what individual accounts cannot. The person element included two patients unable to self-identify; the task

employed verbal name-calling, which in a shared space does not merely fail but actively generates false positives; the environment placed attendants within earshot of theatre calls; and the organisation comprised two departments operating within one theatre complex with no evidenced cross-departmental verification. Because the harm crossed departmental boundaries, the patient-journey extension in SEIPS 3.0 is more appropriate than earlier formulations. Reason's (1990, 2000) distinction between active failures and latent conditions clarifies why redundancy was illusory: successive pre-operative checks are independent in design but coupled in practice, each inheriting the assumption that identity was established upstream, so that they fail as one barrier rather than several. The model's linearity and retrospective character are acknowledged limitations, though Larouzee and Le Coze (2020) defend its continued relevance on the basis of its systemic foundations while conceding its analytical constraints.

Governance is best understood as the outermost layer. Standards demonstrably existed above the facility (WHO Collaborating Centre for Patient Safety Solutions, 2007; MoHFW, 2018); whether corresponding local instruments existed is unevidenced and treated as a gap rather than a failure. What is observable is the shape of the response: an internal committee convened within 72 hours following media exposure (PTI, 2025). Detection of the event was incidental and detection of the governance problem was external; neither was engineered. This corresponds to what Reason (2000) terms the person approach, in contrast to the system approach that concentrates on the conditions under which individuals work.

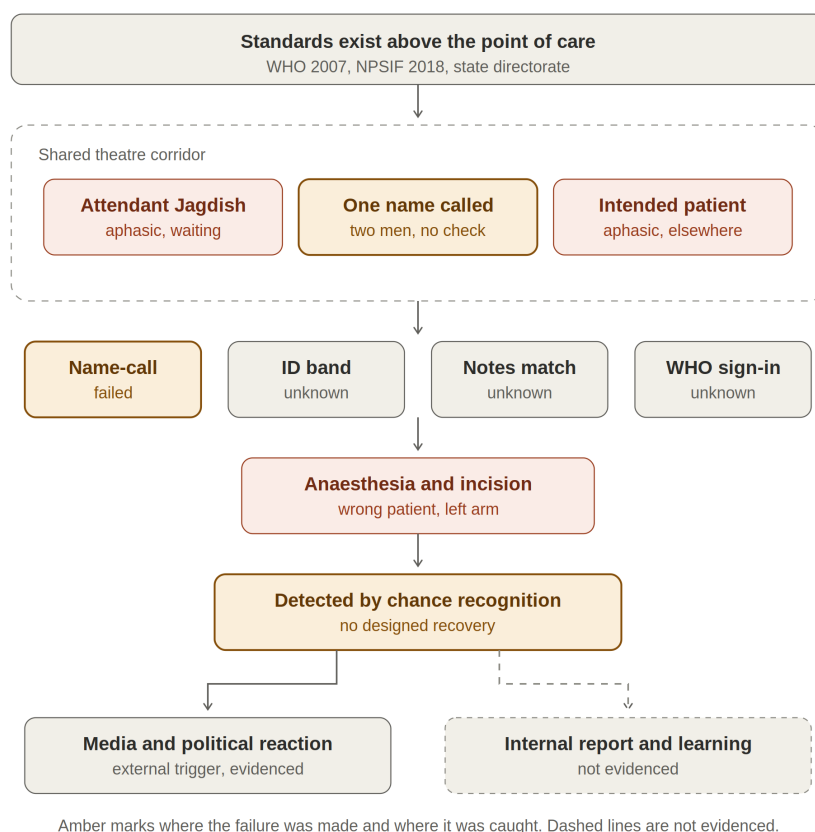


Figure 1 Rich picture of the Kota wrong-patient incident, showing safety barriers, identification failure, incidental detection, and evidence gaps in organisational learning.

2.2 Centralisation or Decentralisation within the Case Study

Centralisation and decentralisation describe where authority to decide is located within a health system, and the analytically useful question is not which is preferable but which functions are allocated where. Bossert (1998) reframes this through decision space: the range of choice that central authorities permit local officials across financing, service delivery, human resources and governance. Decentralisation is evaluated not as an end in itself but by whether local choices improve system performance. Applied to a patient-safety failure, three questions follow. Who determined how patients would be identified? Who could have halted the procedure? Were those the same actors?

Rasmussen's (1997) framework is appropriate here because it models risk management as a control problem spanning levels from legislators through managers and work planners to system operators, arguing that safety cannot be understood by studying any single level in isolation. Mapping the Kota case across these levels reveals a structural feature that behavioural accounts obscure. At the constitutional level, authority is divided: public health, hospitals and dispensaries remain a State subject under the Seventh Schedule, while medical education was transferred to the Concurrent List by the 42nd Amendment (Government of

India, 1950). A medical college hospital is therefore simultaneously a State-administered health facility and a nationally regulated educational institution. At the national level, the patient-safety framework specifies identification and handover protocols as priorities but leaves implementation to states (MoHFW, 2018). At state level, the institution is owned and administered through the Department of Medical Education (Government of Rajasthan, 2026). Below that sit hospital management, two clinical departments sharing a theatre complex, and the theatre team itself.

The mapping exposes an asymmetry visible in Figure 1. Vertical authority is well defined in two directions, downward for standard-setting and upward for post-hoc sanction, but the horizontal seam between two departments sharing one corridor has no owner at any level. Identification at that seam is a boundary-spanning task within a vertically organised structure. In decision-space terms, the choice of identification method appears to have been exercised informally at the point of care, with wide local discretion and no corresponding accountability; whether authority to halt an unsafe procedure was explicitly allocated is unevidenced and treated as a gap rather than a deficiency.

The case for greater centralisation is real. Uniform specification, standardised measurement and procurement at scale are functions central authorities perform better than facilities acting individually, and Kruk et al. (2018) argue that moving to a high-quality health system is primarily a political rather than a technical decision, implying that the necessary authority must sit where political commitment can be exercised. Yet the counter-evidence is substantial. Urbach et al. (2014) found that a policy encouraging universal checklist adoption across Ontario hospitals produced no significant reduction in adjusted operative mortality or complications, and Indian implementation research finds standard protocols available yet unevenly enacted (Krishnamoorthy et al., 2023). Central mandate reliably produces documentation; it does not reliably produce practice.

The case for decentralisation is equally qualified, and the empirical evidence does not support treating devolved authority as inherently safer. Synthesising nine reviews across the six WHO health-system building blocks, Sapkota et al. (2023) found a range of positive and negative impacts of decentralisation but concluded that overall these were more negative than positive, and that although the evidence remained inconclusive, effects on leadership and governance in particular appeared to shape the impact on the wider system. That finding is directly pertinent: decentralisation does not determine safety outcomes independently, but through the governance and leadership arrangements accompanying it. Reviewing decentralisation in India specifically, Panda and Thakur (2016) likewise report mixed performance outcomes, and West et al. (2014) caution that culture cannot substitute for operational capacity where staff

and resources are inadequate. Local authority could certainly redesign the corridor, allocate identification ownership and empower any team member to stop a list, adaptations no central directive could specify for every theatre complex. But wide informal local discretion is plausibly what allowed verbal name-calling to become the working method in the first place. Decentralisation without capacity or accountability generates variation, not safety.

Comparative evidence indicates that the enforcement mechanism matters more than the location of authority. In the United States, identification standards are enforced through accreditation: the Joint Commission made improving patient identification accuracy the first of its National Patient Safety Goals, sustained as an accreditation requirement (WHO Collaborating Centre for Patient Safety Solutions, 2007), and non-compliance carries institutional consequence. India's framework issues equivalent standards as guidance, with accreditation remaining voluntary (NABH, 2026). Even accreditation-linked enforcement has limits, as the Universal Protocol evidence in section 2.1 demonstrates, but the comparison shows how leadership operating at different system levels shapes whether identical standards become enacted practice (LO2).

The defensible conclusion is a hybrid with explicit criteria rather than a preference for either pole. Central authority should specify what must occur, namely two independent identifiers, a mandatory non-verbal pathway for patients unable to self-identify, common measurement definitions and technology procurement, while local authority should determine how it occurs and must hold unambiguous power to stop. Consistent with Sapkota et al. (2023), the allocation only functions if accompanied by governance arrangements that make local ownership real rather than nominal. This allocation also carries an efficiency judgement: specifying identification centrally avoids duplicated local rule-writing, while devolving execution allows adaptation without further capital expenditure.

2.3 Leadership Theories and Application to the Case Study

Leadership is examined here as a system property rather than as the conduct of identifiable individuals. No evidence exists concerning the behaviour of named leaders at Kota Medical College Hospital, and the specification precludes inventing it. The three theories below are applied as analytical lenses to ask what leadership functions the case required, whether the system was configured to supply them, and what each theory does and does not explain. This addresses how leadership shapes the planning, functioning and structuring of health systems and their outcomes (LO2).

Transformational leadership concerns the articulation of vision, the alignment of values and the motivation of discretionary effort toward collective goals, operating in safety contexts

through a climate in which safety is understood as intrinsically valued rather than externally imposed (West et al., 2017). Its relevance is established empirically, since leadership is the modal causal category for this event class at 30.9% of wrong-site cases (AHRQ, 2020). Clarke's (2013) meta-analytic path model, however, specifies the mechanism with more precision than general advocacy allows: active transactional leadership matters for ensuring compliance with rules and regulations, whereas transformational leadership is primarily associated with encouraging employee participation in safety. This distinction is decisive here. Patient identification is not a participation problem requiring discretionary engagement; it is a rule-adherence problem. Transformational leadership therefore under-explains the failure itself, while remaining central to the improvement agenda in section 2.4, where changing how staff understand the purpose of a check, rather than merely mandating it, is the challenge. Two limitations follow. First, the theory is conventionally operationalised through safety-climate instruments, and no climate data exist for this facility; it is consequently impossible to assert that leadership here was or was not transformational, and the analysis is confined to what the configuration required. Second, as noted in section 2.2, culture cannot substitute for operational capacity, a material qualification when applying models developed in well-resourced systems to a public teaching hospital where Indian research documents persistent staffing and infrastructural constraints (Krishnamoorthy et al., 2023).

Distributed leadership addresses the question the case turns upon: not who led, but who was empowered to stop. Where responsibility for safety is genuinely shared across a multidisciplinary team, each member constitutes an independent detection capability; where it is nominally shared but not explicitly allocated, responsibility becomes everyone's assumption and no one's task. The mechanism is psychological safety. Edmondson (1999) established that a shared belief that a team is safe for interpersonal risk-taking is associated with learning behaviour, which in turn mediates the relationship between psychological safety and team performance. Nembhard and Edmondson (2006) extended this to precisely this setting. They found that leader inclusiveness, meaning words and deeds that invite and appreciate others' contributions, helps cross-disciplinary teams overcome the inhibiting effects of status differences, and that profession-derived status is positively associated with psychological safety, a key antecedent of speaking up. A theatre team spans technicians, nurses, residents and consultants; the Kota event required that none halted a patient who was unprepped and could not confirm his own name. The evidence linking psychological safety to objective safety outcomes is supportive but should not be overstated: reviewing quantitative studies across eight databases, Montgomery et al. (2025) identified only nine eligible papers, five of which showed a significant relationship, with heterogeneous outcomes drawn predominantly from nursing samples in the United States. Transferability requires care and is best assessed

against evidence rather than assumption. Landefeld, Sivaraman and Arora (2015) found Indian providers describing a punitive approach to adverse events alongside a rigid workplace hierarchy, a combination that constrains speaking up and simultaneously suppresses the reporting on which such interventions depend. The critical judgement is therefore that distributed leadership is not straightforwardly the remedy: distributing leadership without distributing explicit authority diffuses accountability, which is the diagnosis rather than the cure. Chassin and Becher (2002) reached a comparable conclusion, identifying poorly functioning teams alongside absent identification protocols among the most remediable contributors. Synthesising 34 qualitative studies, Paterson et al. (2024) likewise found hierarchical culture among the principal barriers to surgical checklist use, while identifying effective leadership, audit and feedback, and local champions among its enablers.

Situational leadership is applied retrospectively and comparatively, as a lens on whether the response was adapted to circumstance rather than as a claim about what leaders did. The theory holds that effective leadership matches directive and supportive behaviour to follower readiness, competence and situational demands (Hersey, Blanchard and Johnson, 2013). The evidenced organisational response, a directive, time-limited committee convened following public exposure, is highly task-focused, which the theory would predict for a low-readiness, high-urgency condition. Its explanatory value is genuine but narrow. Thompson and Vecchio (2009) found that empirical assessments indicate minimal, often only directional, support concentrated in the low maturity condition, such that the theory cannot be fully endorsed as originally stated. The present application falls within that supported band, which is what makes it defensible; but the theory explains the response rather than the event, and it prompts the more useful question of whether a directive crisis response builds durable safety capability, or whether a developmental adaptation would have served better once immediate urgency passed.

No single theory suffices, and the reasoned judgement is an ambidextrous configuration: transactional mechanisms to render identification non-optional and auditable, transformational leadership to make the check meaningful rather than clerical, and explicitly allocated distributed authority so that stopping has an owner. The human-resource implications follow directly, encompassing role clarity at the departmental seam, supervision, multidisciplinary working and psychological safety, though staffing levels, skill mix, workload and training records for this facility remain unknown and are identified as evidence gaps rather than deficiencies.

2.4 Improvement and Lessons Learned

Synthesising the preceding analysis, the causal account is neither individual error nor an isolated identification lapse. The established facts are narrow: two patients sharing a forename, both unable to self-identify, a verbal call in a shared corridor, no verified identification, anaesthesia and an incision. Built on that core, the analytical account is that a task requiring a capability neither patient possessed was performed in an environment that made bystanders addressable, at an organisational seam owned by nobody, within a barrier structure whose redundancy was nominal. Detection was incidental. Governance and leadership conditions at the facility remain unevidenced and are treated as conditions of barrier reliability whose status is unknown. This section applies systems thinking to identify improvable outcomes (LO3).

The improvement pathway proceeds from problem structuring to embedding to testing. Soft systems methodology's early stages, which generated Figure 1, are designed for ill-structured problems where stakeholders hold divergent views of what the problem is (Checkland, 2000). Comparing a conceptual model of reliable identification against the observed situation isolates two actionable gaps: an identification task dependent on patient capability, and an unowned departmental boundary.

The first intervention addresses the identification task. The problem is that a non-patient entered theatre; the root cause is that the method presupposed self-identification. The evidence is unambiguous, since WHO directs organisations to provide protocols for distinguishing patients with the same name and non-verbal approaches for those unable to communicate (WHO Collaborating Centre for Patient Safety Solutions, 2007), and India's framework names identification and handover among its priorities (MoHFW, 2018). The intervention is two independent identifiers checked against the record at theatre reception, with a specified non-verbal route triggered automatically where a patient cannot speak. The mechanism removes dependency on a patient capability, converting identity from an assumption into a verifiable artefact. The expected outcome is closure of the pathway by which a non-patient reaches theatre; measurement is by observed compliance and by the proportion of non-communicative patients with a documented non-verbal plan. The principal risk is ritualisation, mitigated by auditing enactment rather than documentation.

The second intervention addresses the seam. The problem is that the error was manufactured in a corridor shared by two departments; the root cause is that no organisational level owns the boundary between two vertical hierarchies (Rasmussen, 1997). The intervention ends calling patients from a shared waiting area, substitutes escorted handover from the ward, and assigns a named identification owner for each list with explicit authority for any team member to halt. The mechanism removes the environmental affordance rather than guarding against

it, and converts diffuse responsibility into an assigned duty, addressing the accountability diffusion identified in section 2.3. Measurement is by escorted-handover rate and by the proportion of lists with a named owner. The risks are list delay and workload burden, mitigated through ramped testing with balancing measures.

Why these interventions might nonetheless fail is the more important question, and it is where normalisation process theory earns its place. May and Finch (2009) model how practices become routinely embedded through the work of implementation, embedding and integration under conditions of complexity, and their constructs map onto the failure modes evidenced here. Coherence requires that staff understand why name-calling fails rather than merely that a new form exists. Cognitive participation requires a departmental owner who legitimises the practice rather than a directive issued downward, and is the point at which stakeholder engagement becomes structural rather than consultative. Collective action asks whether two departments sharing a corridor can perform the practice under list pressure; where they cannot, workarounds follow, a pattern consistently reported in reviews of checklist implementation (Lim et al., 2023). Reflexive monitoring determines how the practice is appraised, and converts an audit-design preference into a theoretical claim: appraisal by documentation cannot detect ritualised checking. The evidence for that claim is the compliance asymmetry and the null checklist findings established in section 2.1. Recommending that a mandated practice become real work is therefore substantively different from recommending that a practice be mandated. This aligns with the broader intervention evidence: synthesising 76 systematic reviews, Ahsani-Estahbanati, Gordeev and Doshmangir (2022) found that error-reduction interventions cluster by error type rather than transferring universally, reinforcing the case for targeting the specific mechanism evidenced here.

Patients and families are participants in this work rather than recipients of it. Batalden et al. (2016) argue that healthcare services, unlike products, are always coproduced, so failure to recognise this limits success in partnering with patients. Identification is an unusually clear instance: a patient or attendant who understands the check constitutes a barrier outside the staff hierarchy, unaffected by the deference that inhibits junior staff. The evidence base for coproduced interventions in acute settings remains limited (Clarke et al., 2017), so this is offered as a design principle rather than a demonstrated effect. Plan-Do-Study-Act cycles provide the testing mechanism and the vehicle for continuous learning: implementation at a single list, then a single department, then the theatre complex, with balancing measures reviewed and the intervention modified between cycles rather than scaled unchanged.

Efficiency considerations reinforce this prioritisation. Technically, a wrong-patient event consumes an anaesthetic, a theatre slot and a rescheduled procedure, and generates rework

through inquiry and remediation, while standardised identification removes duplicated informal verification. Allocatively, relocating the call point and assigning ownership are process changes, whereas biometric or barcode systems are capital investments. Prioritising the low-cost intervention that addresses the evidenced failure mode over higher-cost technology addressing a hypothesised one is a defensible judgement, consistent with the finding that several Indian patient-safety barriers could be addressed with fewer resources (Landefeld, Sivaraman and Arora, 2015).

Table 2 sets out the evaluation framework across process, outcome and balancing indicators. Two interpretive cautions govern its use. No facility baseline exists, so a defined baseline audit period must precede target-setting rather than targets being assumed. Reported near-misses should be expected to rise initially, and that rise interpreted as improved surveillance rather than deteriorating safety, a distinction that matters particularly where reporting is inhibited by punitive responses (Landefeld, Sivaraman and Arora, 2015). Implementation risks are set out in Table 3 and centre on ritualised compliance, false reassurance, workarounds under production pressure and resource constraint, with mitigation running through observation-based audit, ramped testing and local ownership.

Table 1 Evaluation framework: process, outcome and balancing indicators for the proposed improvement.

Indicator type	Measure	Rationale
Process	Observed two-identifier compliance at theatre reception	Measures enactment of R1 rather than its documentation
Process	Proportion of non-communicative patients with a documented non-verbal plan	Captures the specific failure mode evidenced in the case
Process	Proportion of lists with a named identification owner	Measures whether ownership of the seam has been allocated
Process	Escorted-handover rate from ward to theatre	Measures displacement of the shared call point
Outcome	Wrong-patient and wrong-procedure events	Primary harm outcome; expected to remain at or near zero
Outcome	Reported near-misses per 1,000 admissions	Surveillance capability; an initial rise indicates improved reporting
Balancing	Theatre start delays and list throughput	Detects efficiency loss from added verification steps
Balancing	Staff-reported burden and observed workarounds	Detects erosion of the intervention under production pressure

Table 2 Implementation risks and mitigation strategies.

Implementation risk	Mitigation
Ritualised compliance: the check is recorded but not performed	Audit by direct observation rather than chart review (R4)

Implementation risk	Mitigation
False reassurance from high compliance scores	Interpret scores against the enactment rate, not in isolation
Workarounds under list pressure	Ramped PDSA testing at list level; redesign to fit workflow
Staff resistance where ownership is absent	Local departmental ownership rather than directive issue (NPT cognitive participation)
Punitive culture suppressing incident reporting	Explicit non-punitive reporting policy; report volume treated as a positive indicator
Resource constraint diverting effort	Prioritise process interventions; phase technology to a later cycle
Alert fatigue from additional checks	Replace the failing check rather than adding to it

3. Recommendations

Recommendations are prioritised by expected harm reduction relative to implementation burden, weighted toward interventions addressing evidenced rather than hypothesised failure modes. This criterion is itself an allocative judgement, applied consistently: the two highest-ranked recommendations address the only failure mode the case evidence establishes, while lower-ranked items address conditions identified through wider literature as contextual. Table 1 sets out each recommendation against the required dimensions. Every recommendation traces to a problem established earlier in the analysis, and none assumes organisational deficiencies at Kota Medical College Hospital that the available evidence does not support.

Three points warrant emphasis. First, the recommendations deliberately do not propose introducing the surgical safety checklist as a solution in itself, since mandated adoption has not reliably reduced harm (Urbach et al., 2014; AHRQ, 2020). What is recommended is the machinery by which a mandated practice becomes enacted work: ownership, observation and reporting.

Second, R1 and R2 should be implemented together rather than sequentially. Verification without removing the shared call point leaves the affordance intact and relies on the check catching every instance; removing the call point without verification leaves patients unable to self-identify without a compensating mechanism. The two address the same failure from opposite directions, and either alone is a partial barrier.

Third, sequencing follows the technology question deliberately. Barcode or biometric identification would strengthen R1 materially and is recommended as a subsequent phase once process reliability is established and a baseline exists. Implementing technology first risks automating an unreliable process and generating false reassurance, and commits capital that evidence suggests could be deployed against barriers addressable with fewer resources

(Landefeld, Sivaraman and Arora, 2015). Consistent with Bossert's (1998) decision-space logic, R1, R3 and R4 specify what must occur and are appropriately set centrally; R2 and R5 concern how it occurs locally and require devolved authority, particularly the authority to halt.

Implementation should proceed through ramped Plan-Do-Study-Act cycles with a defined baseline audit period preceding target-setting, since no facility baseline exists and none should be assumed. A defensible phasing places R1 and R2 together in an initial cycle at a single theatre list. R4 runs alongside them, so that enactment is measured from the outset rather than retrofitted, and R3 in parallel, because a reporting route must exist before improved surveillance generates reports. R5 follows once the revised process is stable enough for patients and attendants to be briefed on a consistent procedure. Accountability for delivery should be explicit at each level: specification and measurement definitions owned at state directorate level, implementation and ownership at hospital management level, and enactment at departmental level, mirroring the hybrid allocation argued in section 2.2.

Equally important is what is not recommended, and why. The analysis does not recommend increased staffing, mandatory retraining, disciplinary reform or new technology procurement, despite each being a plausible response to an incident of this kind. Staffing levels, skill mix, workload and training records at this facility are unknown; recommending remedies for deficits that the evidence does not establish would substitute assumption for analysis and would risk directing scarce resources at problems that may not exist. Where wider literature identifies such factors as contributors in comparable Indian settings, they are treated in section 2.4 as contextual risks to implementation rather than as established local failures. This restraint is itself a finding: the most defensible improvement strategy available on the present evidence is narrow, cheap and specific, and the case for a published root-cause analysis rests partly on the fact that a wider strategy cannot responsibly be designed without one.

Table 3 *Prioritised recommendations against the required dimensions, ranked by expected harm reduction relative to implementation burden.*

Dimension	R1 Two-identifier verification	R2 Remove shared call point	R3 Non-punitive reporting	R4 Audit enactment	R5 Patient participation
What	Two independent identifiers verified against the record before theatre entry, with a mandatory non-verbal pathway for patients unable to self-identify	End calling patients from shared waiting areas; escorted handover from ward; named identification owner per list with explicit stop authority	Confidential internal reporting route; root-cause analysis published for serious incidents	Replace chart-based checklist audit with observed enactment sampling	Brief patients and attendants on their role in identity confirmation; visually distinguish attendants in theatre areas
Who	Theatre reception, nursing, anaesthesia	Hospital administration with both department heads	Hospital administration with state directorate	Quality function with department heads	Ward and theatre nursing staff
How	Standard operating procedure with visible prompt at theatre door	Patient-flow redesign; ownership assigned and published per list	Reporting route independent of line management	Periodic observer sampling against defined criteria	Scripted admission briefing; signage; differentiated attendant identification
Why	The evidenced failure was a capability-dependent identification method (WHO CCPSS, 2007)	The evidenced failure occurred at an unowned departmental seam (Rasmussen, 1997)	No internal learning loop is evidenced; punitive responses inhibit reporting (Landefeld et al., 2015)	Documented compliance is not evidence of performance (Toru et al., 2023)	WHO advises patient participation at all identification stages (WHO CCPSS, 2007)
Expected benefit	Closes the pathway by which a non-patient reaches theatre	Removes the environmental affordance rather than guarding against it	Converts incidents into organisational learning	Detects ritualised checking before it causes harm	Adds a barrier operating outside the staff hierarchy
Measurement	Observed compliance; documented non-verbal plans	Escorted-handover rate; lists with named owner	Reports per 1,000 admissions; analyses completed	Enactment rate compared with documentation rate	Proportion briefed; patient-initiated queries
Resource	Low; procedural	Low to moderate; flow redesign and staff time	Low; policy and administration	Moderate; observer time	Low; staff time
Risk	Becomes a documentation ritual	List delays; workload objection	Under-reporting persists if responses remain punitive	Observer effect; audit burden	Deference inhibits families from querying staff
Mitigation	Audit by observation only, per R4	Ramped testing with balancing measures	Explicit no-blame policy; report volume treated as positive indicator	Sample rather than census; rotate observers	Framed by staff as expected rather than exceptional

4. Conclusion

This report asked how patient-identification and verification failures interacted with human, organisational, governance and leadership factors to enable a wrong-patient event at Kota Medical College Hospital, and what systems-based transformation could reduce the risk of recurrence.

The systems analysis establishes that the event is not adequately explained as individual error. Both patients were unable to self-identify, yet identification proceeded by verbal name-call in a corridor where attendants waited, requiring a capability neither possessed in an environment that made bystanders addressable. Successive pre-operative checks were independent by design but coupled in practice, each inheriting the assumption that identity had been established upstream, so that redundancy was nominal rather than functional.

The governance finding is that the relevant standards demonstrably existed above the facility, in WHO's identification solution and India's national framework, both of which specifically address same-name and non-communicative patients. The problem is not absent knowledge but the distance between centrally established standards and locally enacted practice; detection of the event was incidental and detection of the governance problem external.

The centralisation analysis locates the structural weakness not in any hierarchical tier but at the horizontal seam between two departments sharing one theatre complex, a boundary-spanning task within a vertically organised structure, owned by nobody. Neither pole resolves this: central mandate reliably produces documentation without producing practice, while wide informal discretion plausibly permitted the failing method. The defensible allocation is centrally specified requirements with locally owned execution and unambiguous authority to stop.

No single leadership theory is sufficient. Transformational leadership matters for improvement but under-explains a rule-adherence failure; distributed leadership identifies the pivotal question of who could halt the procedure, yet distributing responsibility without allocating authority diffuses accountability; situational leadership illuminates the response rather than the event.

Answering the central question directly: this was an emergent systems failure in which a capability-dependent identification task, an unowned organisational boundary and coupled safety barriers combined to permit an identification error to progress to an invasive procedure. Because documented compliance is not evidence of performance, recurrence is best prevented not by mandating further standards but by making an already-specified standard become real work.

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