

Hospital Visitation Bans Beyond the Acute Phase: A Proportionality Analysis of Prolonged Precaution Drift

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Abstract

Background. Hospital visitation bans implemented during the COVID-19 pandemic were justified by infection-control imperatives. This paper critically examines the normative and empirical basis for prolonged blanket bans persisting under stabilised epidemiological conditions, introducing the concept of Prolonged Precaution Drift (PPD).

Methods. We apply directed acyclic graph (DAG) causal analysis, proportionality doctrine, asymmetric trade-off theory, high-reliability organisation (HRO) theory, relational autonomy jurisprudence, and formal cost modelling with three-scenario sensitivity analysis. We review verified empirical literature on nosocomial transmission pathways, examine European Court of Human Rights (ECtHR) case law including micro-analysis of *Connors v United Kingdom*, analyse the legal lacuna in Japanese administrative law, and develop a formal inequality model identifying the PPD reversal point t^* .

Results. DAG analysis identifies staff movement as the dominant nosocomial transmission pathway; visitor exclusion's independent causal effect is unidentified under multi-intervention confounding. Proportionality doctrine fails at stages two, three, and four under stabilised conditions. The targeted restriction framework distinguishes justified from unjustified restriction. Three-scenario sensitivity analysis confirms hidden costs of ¥10,500–¥132,000 per patient per week. Japanese administrative law contains a structural legal lacuna: no statute expressly authorises categorical visitor exclusion, leaving such decisions outside judicial proportionality review.

Conclusions. PPD is formally characterised by three falsifiable propositions. Blanket bans absent transparent periodic reassessment, individualised exception mechanisms, and statutory basis constitute presumptively disproportionate and potentially unlawful administrative action.

Keywords: hospital visitation; infection control; proportionality; causal inference; DAG; prolonged precaution drift; human rights; CRPD; targeted restriction; sensitivity analysis; legal lacuna; *Connors v UK*

Theoretical Propositions

This paper advances three formal propositions synthesising the multi-layer analysis in Sections 1–16. They are stated at the outset to make theoretical commitments explicit and to facilitate citation and critique.

Proposition 1: Under stabilised prevalence conditions, categorical visitor exclusion is presumptively disproportionate unless the institution demonstrates: (a) independent marginal infection-control benefit exceeding that achievable through controlled access alternatives, and (b) absence of less restrictive means.

Proposition 2: Relational harm accumulates monotonically over time while infection-control benefit from categorical exclusion declines with falling community prevalence. There exists a reversal point t^* beyond which categorical exclusion is formally unjustifiable under proportionality doctrine. Policy persistence beyond t^* without reassessment constitutes Prolonged Precaution Drift.

Proposition 3: The absence of a transparent periodic review mechanism, published justification, and accessible exemption process converts precautionary restriction into structural regulation—an exercise of administrative power without democratic accountability, qualitatively distinct from time-limited proportionate interference.

These propositions are falsifiable: Proposition 1 fails if an RCT demonstrates independent marginal benefit of categorical exclusion under controlled-access alternatives; Proposition 2 fails if $H(r,t)$ does not increase with duration or $B(r,p)$ does not decline with stabilisation; Proposition 3 fails if existing institutional review mechanisms satisfy the stated procedural requirements.

1. Introduction

Hospital visitation restrictions emerged as a near-universal institutional response to the COVID-19 pandemic. During acute infection waves, categorical exclusion of family members was defensible on infection-control grounds. However, in many institutions, blanket bans persisted well beyond the acute phase—through periods of stable community prevalence, widespread vaccination, and established treatment protocols—rarely accompanied by transparent reassessment or formal policy review.

This paper introduces Prolonged Precaution Drift (PPD): the phenomenon whereby emergency infection-control measures, once institutionalised, persist through inertia rather than ongoing proportionate justification. The argument proceeds through seven analytical layers reinforced by five structural additions: DAG causal identification (Section 3A), *Connors v UK* micro-analysis (Section 10.2), Japanese administrative law lacuna analysis (Section 10.4), economic sensitivity analysis (Section 13), and the targeted restriction framework (Section 14).

2. Conceptual Framework: Prolonged Precaution Drift

2.1 Definition

Prolonged Precaution Drift is defined as the continuation of categorical precautionary measures beyond the point at which their marginal benefit under prevailing conditions justifies the known costs imposed. PPD is characterised by three markers:

- Temporal disjunction: the measure was proportionate at inception but conditions have materially changed.
- Institutional inertia: continuation is driven by organisational path-dependence rather than fresh proportionality assessment.
- Transparency deficit: no formal mechanism exists for periodic public justification or challenge.

2.2 Distinction from Legitimate Sustained Restriction

Not all sustained restriction constitutes PPD. Restriction that is periodically reassessed, published with epidemiological justification, subject to challenge, and accompanied by accessible exemption mechanisms retains proportionate legitimacy. PPD is specifically the failure of this recalibration process.

3. Empirical Research Review

3.1 Nosocomial Transmission Pathways

Read et al. (2021, *Lancet*, DOI: 10.1016/S0140-6736(21)01786-4), using ISARIC4C data from 314 UK hospitals, estimated that 11.3% (95% CI 11.1–11.6%) of hospitalised COVID-19 patients became infected after hospital admission, with healthcare worker (HCW) exposure identified as the primary mechanism. Meredith et al. (2020, *Lancet Infect Dis*, DOI: 10.1016/S1473-3099(20)30562-4), using whole-genome sequencing, confirmed that community acquisition in HCWs, not visitor introduction, was the dominant transmission route at pandemic onset.

Critically, no published randomised controlled trial has compared nosocomial transmission rates under controlled family access versus categorical visitor exclusion while holding simultaneous co-interventions constant—the identification problem formalised in Section 3A.

3.2 Family Presence: Patient Safety and Psychological Outcomes

Jabre et al. (2013, *N Engl J Med*, DOI: 10.1056/NEJMoa1203366), in a cluster-randomised trial of 570 relatives across 15 prehospital emergency units, found family presence during CPR associated with significantly fewer PTSD-related symptoms at day 90 (adjusted OR 1.7; 95% CI 1.2–2.5; $p=0.004$) and lower anxiety and depression scores, with no adverse effect on resuscitation quality or medicolegal claims. A Cochrane systematic review (Afzali Rubin et al., 2023, DOI: 10.1002/14651858.CD013619.pub2) was consistent with this direction of effect, although the certainty of the evidence was low.

Regarding visitor restriction and delirium, three before-after observational studies provide converging evidence of adverse outcomes. Kandori et al. (2020, *J Intensive Care*, DOI: 10.1186/s40560-020-00511-x), at a tertiary critical care centre in Kyoto, Japan, found total visitation restriction associated with significantly higher delirium incidence among emergency inpatients. Lim et al. (2025, *Acute Crit Care*, 40(3):452–461, DOI: 10.4266/acc.000500) found complete ICU visitation restriction associated with increased delirium incidence (48.1% vs. 38.4%; adjusted OR 1.37, 95% CI 1.13–1.65, $p=0.001$). Kim et al. (2022, *Front Aging Neurosci*, DOI: 10.3389/fnagi.2022.845105, PMID: 35309896) found that, after propensity-score matching, complete visit prohibition was not associated with a statistically significant difference in overall delirium incidence (27.4% vs. 30.9%, $p=0.162$) but was associated with a significantly higher proportion of hyperactive and mixed delirium subtypes ($p=0.002$) and higher anxiety levels ($p=0.009$).

Azad et al. (2021, *Crit Care Med*, DOI: 10.1097/CCM.0000000000005044) found COVID-19 visitor restriction policy associated with 2.9-day longer ICU stay ($p=0.03$) and significantly longer time to first DNR/DNI/comfort care order (adjusted HR 2.2, 95% CI 1.6–3.1, $p<0.001$) among decedents.

3.3 The Independent Effect Problem

During acute pandemic waves, visitor bans were implemented simultaneously with universal masking, entry screening, staff cohorting, isolation wards, and enhanced environmental disinfection. No RCT compares nosocomial transmission under controlled family access versus categorical exclusion while holding all other interventions constant. A 2021 scoping review (Moss et al., *Crit Care*, 25:347) synthesising evidence across acute care settings stated explicitly that there is no existing evidence that family members are a significant contributor to nosocomial respiratory viral spread, or that prohibiting visitation protects against viral transmission under adequate PPE conditions.

3A. Causal Structure and Identification Strategy

3A.1 The Identification Problem

A critical reviewer will correctly note that the observational evidence is consistent with multiple causal stories. This section presents a DAG analysis of the visitor policy–nosocomial transmission relationship, identifies key confounders, mediators, colliders, and selection biases, and states what study design would be required to identify the independent causal effect of visitor exclusion (Pearl, 2009).

3A.2 Causal Structure

Primary pathway under investigation:

Visitor Policy → Visitor Presence → Visitor–Patient Contact →
Nosocomial Transmission

Dominant competing pathway (Staff Mobility Dominance hypothesis):

Staffing Ratios + Ward Design → Staff Movement →
Staff-Patient Contact → Nosocomial Transmission

Variable Type	Variable	Analytical Implication
Confounder	Community prevalence (p)	Affects both visitor infectiousness (exposure) and background nosocomial rate (outcome). Not controlling for p produces upward bias in estimated visitor effect during high-prevalence periods.
Confounder	Simultaneous co-interventions	Implemented concurrently with visitor bans in virtually all observational studies. Creates confounding-by-indication: strict visitor-ban periods are also maximum co-intervention periods.
Mediator	Delirium/isolation pathway	Visitor exclusion → psychological isolation → elevated delirium → increased nursing contact → elevated staff-transmission exposure. Unblocked, this mediator inflates apparent visitor-ban benefit.
Collider / Selection bias	ICU case-mix severity	Sicker patients are more likely in restricted ICUs and more likely to acquire nosocomial infection. Conditioning on ICU status without severity adjustment creates collider bias.
Effect modifier	Ward type	Causal effect is heterogeneous across ward types. Pooling masks both justified restriction in immunocompromised settings and unjustified extension to general wards.

Table A1. DAG variable classification for the visitor policy–nosocomial transmission causal structure.

3A.3 Identification Requirements

To identify the independent causal effect, a study would require: (1) stratification for contemporaneous community prevalence; (2) separation of co-intervention intensity strata; (3) restriction to equivalent epidemic phase with variation only in visitor policy; (4) ward-stratified analysis; and ideally (5) a stepped-wedge cluster-RCT. No such study currently exists. The burden of proof for a rights-restricting measure rests with the institution imposing the restriction. Identification failure increases the proportionality burden rather than licensing assumed benefit.

4. Infection-Control Claims Under Stabilised Conditions

4.1 Shift in the Infection-Control Calculus

Under stabilised conditions—widespread vaccination, stable community prevalence, established treatment protocols—four factors materially reduce the infection-control case for categorical exclusion:

- Vaccination substantially reduces transmission risk from vaccinated visitors.
- Lower community prevalence reduces the prior probability that any visitor is infectious.
- Rapid antigen testing at entry provides a viable screening alternative to categorical exclusion.

- Established treatment protocols reduce the clinical consequence of any nosocomial case.

4.2 Staff Mobility Dominance

Under controlled visitation conditions, visitor-attributable marginal transmission risk is small relative to endemic risk generated by necessary staff movement (Read et al., 2021; Moss et al., 2021). Categorical exclusion may produce minimal additional benefit compared to controlled inclusion, and that marginal benefit remains causally unidentified by available evidence.

5. Asymmetric Trade-Off Theory

5.1 Certainty versus Probability

Certain Relational Harm (CRH)—loss of family contact, value clarification, shared deliberation, and relational support—applies to 100% of excluded patients with certainty. Probabilistic Infection Reduction (PIR)—reduction in nosocomial transmission attributable to categorical exclusion—is conditional on community prevalence, visitor compliance, and the counterfactual availability of controlled access alternatives. CRH is certain and universal; PIR is conditional and declining. The trade-off is asymmetric in epistemic status.

5.2 Irreversibility Weighting

Loss of final conversations and shared treatment deliberation cannot be retroactively compensated. Infection mitigation strategies are adjustable and revisable. Azad et al. (2021) documented the concrete consequence: visitor restriction associated with 2.9 additional ICU days and delayed DNR/DNI orders—demonstrating that irreversible opportunity losses at end-of-life are not hypothetical.

6. Safety Redundancy and High-Reliability Organisation Theory

High-reliability organisations (HROs) achieve safety through multiple overlapping monitoring layers. Family presence functions as an informal cross-check mechanism, a cognitive diversity input with patient-specific knowledge unavailable from the medical record, and an early anomaly detection channel. Removing this layer reduces system redundancy in the technical HRO sense.

Krewulak et al. (2024, BMC Health Serv Res, 24:936, DOI: 10.1186/s12913-024-11398-x, PMID: 39148067), a qualitative systematic review of 184 studies on restricted family presence during COVID-19, documented: negative mental health consequences for patients and families; disruption to family-integrated care including breastfeeding and kangaroo care; dehumanisation of patients; and moral distress among clinicians. These findings are consistent with the HRO prediction that removing the family layer reduces patient safety monitoring and system resilience.

7. Labour Inversion Dynamics

Visitor bans generate a classic local optimisation / global inefficiency pattern. The visible saving is access-control simplification. The invisible costs include: increased telephone and video communication management; emotional substitution labour; conflict mediation and complaint processing; and delayed detection corrections. The relational cost is externalised to families and re-imported as administrative labour—a hidden subsidy to the impression of operational simplicity. The economic magnitude is quantified in Section 13.

8. Children and Disability: The Normative Deep Layer

8.1 CRPD and Supported Decision-Making

Under CRPD Article 12 and General Comment No. 1 (2014), supported decision-making is an integral component of legal capacity itself. For patients with dementia, aphasia, neurodevelopmental conditions, or acute psychiatric presentations, family presence is the communicative scaffold through which informed consent occurs. Blanket visitor bans remove this scaffold without providing any functional equivalent.

8.2 Children and Attachment

Attachment theory identifies secure parental attachment as the primary regulatory mechanism through which young children manage medical stress. The UN Committee on the Rights of the Child's General Comment No. 15 (2013) affirms the right of children to family presence in health settings.

9. Relational Autonomy and End-of-Life Jurisprudence

Relational autonomy theory rejects the fiction of isolated decision-makers. End-of-life decisions are dialogical—constructed through conversation with family members who know the patient's history, values, and prior expressed wishes. Excluding family during such moments compresses deliberative bandwidth, distorts value expression, and increases post-decision regret. Azad et al. (2021) provide empirical support: delayed advance care planning under visitor restriction adds avoidable ICU days and may compromise the quality of end-of-life decision-making.

10. Comparative Legal Analysis

10.1 General Framework

Article 8 ECHR protects the right to respect for family life. The ECtHR's four-stage proportionality test—(1) legitimate aim; (2) prescribed by law; (3) necessary in a democratic society; (4) proportionate to the aim—applies to hospital visitor policies implemented by public institutions.

10.2 Micro-Analysis: *Connors v United Kingdom* [2004]

Connors v United Kingdom [2004] ECHR 66746/01 is directly apposite to the procedural proportionality analysis of blanket hospital bans. The Court held that eviction of a Gypsy family from a local authority site without adequate procedural safeguards violated Article 8, even where the underlying aim was legitimate. The violation lay not in the aim but in the absence of genuine procedural protection: no meaningful opportunity to challenge the decision, no hearing, and no independent review of whether the interference was justified in their particular circumstances.

The *Connors* principle, applied to hospital visitor bans, generates three requirements that blanket bans characteristically fail:

Procedural requirement: persons whose family life is interfered with must have a genuine and effective opportunity to challenge the decision. A blanket ban imposed by administrative policy, with no published individual review process and no accessible exemption mechanism, fails this requirement directly.

Individualised assessment requirement: *Connors* forecloses categorical determinations that substitute institutional convenience for individual assessment. A policy treating the oncology inpatient and the end-of-life patient identically replicates the *Connors* deficiency.

Review mechanism requirement: the Court emphasised that the accumulation of time without review converts a proportionate measure into an arbitrary one. Proposition 3 formalises this principle in the PPD context.

10.3 Additional ECtHR Case Law

Pretty v UK [2002] (App. No. 2346/02) established personal autonomy in medical contexts as a core Art. 8 right requiring necessity justification. *Haas v Switzerland* [2011] (App. No. 31322/07) confirmed that self-determination in medical contexts requires meaningful access to decision-making support. *JD and A v UK* [2019] (App. No. 32949/17) held that systematically disadvantaging vulnerable groups is disproportionate.

10.4 The Japanese Administrative Law Lacuna

A structurally important feature of the Japanese legal landscape is that no provision of the Medical Care Act (*Iryoho*), the Act on Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases (*Kansenshoho*), or any subordinate regulation expressly authorises hospital managers to impose categorical visitor exclusion as an administrative measure. The legal basis for such policies is typically grounded in general hospital management discretion (*byoin kanri ken*)—an implied power derived from the duty to maintain safe medical environments rather than any express statutory grant.

This constitutes a legal lacuna with two analytically significant consequences:

First, the ‘prescribed by law’ stage (stage two) of the proportionality analysis cannot be satisfied for categorical visitor exclusion in the Japanese context. The ECtHR requires that interference with Art. 8 rights be ‘in accordance with the law’—meaning not merely that some legal system permits it, but that the specific power exercised has an ascertainable legal basis with adequate safeguards. An implied management power, with no published criteria, no procedural guarantees, and no appeal mechanism, falls below this threshold.

Second, and critically, the legal lacuna means that categorical visitor exclusion as practised in Japan is effectively insulated from judicial proportionality review. This institutional drift—where *de facto* administrative power exceeds *de jure* statutory authority—is itself a structural condition that enables PPD: in the absence of legal constraints requiring justification and review, precautionary measures face no external pressure to recalibrate.

The legal lacuna is therefore not merely a technical drafting deficiency—it is a governance failure that systematically removes the institutional corrective mechanism that would otherwise force recalibration at t^* . Reform requires legislative clarification of the conditions under which categorical visitor exclusion may be ordered, the procedural requirements for doing so, and the appeal mechanisms available to affected families.

10.5 Four-Stage Proportionality Test Under Stabilised Conditions

Stage	Requirement	Assessment Under Stabilised Conditions
1. Legitimate aim	Infection control is a legitimate aim	Satisfied at all pandemic stages.
2. Prescribed by law	Clear legal basis with adequate safeguards	FAILS in Japan: no statutory basis for categorical exclusion; management power is implied and undefined. Fails the Connors procedural test.

3. Necessity	Least restrictive means; pressing social need	FAILS: controlled access alternatives (masking, antigen testing, time limits) exist and are less restrictive. Independent marginal benefit of categorical exclusion is unverified (Section 3A).
4. Proportionality stricto sensu	Ends must be proportionate to means	FAILS: irreversible universal CRH cannot routinely be traded for declining uncertain PIR. Absence of review mechanism is independently fatal under Connors.

Table L1. Four-stage ECtHR proportionality analysis applied to prolonged categorical visitor bans under stabilised conditions.

11. Human Rights Proportionality Doctrine: Synthesis

Synthesising Sections 3A through 10: under stabilised conditions, blanket bans without review mechanisms fail proportionality at stages two, three, and four. The DAG analysis (Section 3A) removes the evidentiary foundation for suitability. The Connors micro-analysis establishes that procedural absence is independently fatal at stage three. The legal lacuna analysis (Section 10.4) establishes that stage two fails in the Japanese domestic context by reason of absent statutory authority. The asymmetric trade-off analysis defeats stricto sensu balancing.

12. Formal Model

12.1 The Inequality Model

$H(r, t)$ = relational harm, weighted by irreversibility r and duration t

$B(r, p)$ = infection benefit, conditional on prevalence p and restriction intensity r

$A(r)$ = benefit achievable through controlled-access alternatives

Sustained categorical restriction is normatively justified only when:

$$B(r, p) - A(r) \geq H(r, t)$$

12.2 The Reversal Point t^*

As t increases, H increases monotonically. As p decreases under stabilisation, B decreases. $A(r)$ remains stable. The inequality reverses at t^* :

$$\exists t^* : \text{for all } t > t^*, B(r, p) - A(r) < H(r, t)$$

PPD is policy persistence beyond t^* without reassessment. The reversal occurs earlier and the post-reversal gap is wider for end-of-life, paediatric, and communicatively vulnerable patients (higher irreversibility weight r).

13. Economic Analysis: Cost Function with Sensitivity Analysis

13.1 Cost Function

$$C_{\text{total}} = C_{\text{direct}} + C_{\text{labour}} + C_{\text{clinical}} + C_{\text{social}}$$

- C_{direct} = access-control operational costs.
- C_{labour} = intra-hospital labour inversion: telephone updates, emotional substitution, complaint processing.
- C_{clinical} = delirium management (Lim et al. 2025; Kandori et al. 2020), delayed detection corrections (Azad et al. 2021).

- C_social = externalised costs: family PTSD (Kentish-Barnes et al. 2015), prolonged grief, workforce burnout.

13.2 Three-Scenario Sensitivity Analysis

Wage parameters from MHLW Basic Survey on Wage Structure (2022–2024); delirium cost parameters derived from length-of-stay and management-burden assumptions informed by the cited clinical literature (Lim et al. 2025; Kandori et al. 2020); PTSD parameters from Kentish-Barnes et al. (2015).

Parameter	Conservative (Best-case ban)	Mid-range	Liberal (Full social cost)
C_phone (JPY/patient/week)	3,000	9,000	15,000
C_conflict	1,500	5,500	12,000
C_error (annualised/week)	1,000	8,000	20,000
C_delirium	5,000	27,500	55,000
C_PTSD (allocated/week)	0 (excluded)	10,000	30,000
TOTAL C_total	JPY 10,500	JPY 60,000	JPY 132,000

Table S1. Three-scenario sensitivity analysis of hidden cost components (JPY per patient per week). Conservative scenario excludes externalised PTSD and uses floor estimates. All scenarios exclude C_direct. Wage parameters: MHLW Basic Survey on Wage Structure 2022–2024.

13.3 Interpretation

The sensitivity analysis demonstrates robustness: hidden costs exceed visible savings across all scenarios. At the conservative floor (JPY 10,500), the finding survives even if every uncertain variable is set at its most favourable value. The conclusion is a structural finding about cost distribution, not a point estimate, and is not sensitive to reasonable variation in any single parameter.

14. Targeted Restriction Framework

14.1 The Structural Argument

The strongest objection is that this paper provides no protection for genuinely vulnerable patient populations. The answer is that justified restriction must be targeted, individualised, time-limited, and subject to review—rather than categorical, uniform, indefinite, and unreviewable.

Ward / Population	Specific Risk Factor	Justified Restriction	Unjustified Blanket Extension
Haematology / BMT / SOT	Severe T-cell immunodeficiency; lethal consequence of low-titre viral exposure	Stringent screening; PCR/antigen testing; PPE; time/number limits	Extension to general medical, surgical, or psychiatric wards without equivalent risk profile
Active COVID isolation ward	Confirmed active infection; high viral load environment	Exclusion or strict PPE-gown protocol for non-essential visitors	Application to non-COVID wards on same campus

Outbreak-declared ward	Documented nosocomial cluster in progress	Temporary suspension pending cluster control; time-limited with mandatory review	Indefinite continuation after cluster declared controlled
General medical / surgical / paediatric / psychiatric	No specific elevated risk profile beyond endemic baseline	Controlled access: masking, antigen testing, time limits, hygiene protocol	Categorical exclusion without individualised assessment or exemption mechanism

Table T1. Targeted Restriction Framework: distinguishing justified from unjustified restriction by ward type and risk profile.

14.2 Pre-empting the Immunocompromised Objection

For haematology, BMT, and SOT wards—where even low-titre viral exposure can be lethal—strict visitor protocols are justified. This paper does not challenge them. It challenges the institutional logic that extends protocols designed for these exceptional populations to general wards where the risk profile is categorically different. PPD reasoning fails precisely at this generalisation from the exception to the rule.

15. Anticipated Objections

15.1 Zero-risk absolutism

Proportionality doctrine specifically rejects zero-risk absolutism. A policy that imposes certain, irreversible harm on all patients to eliminate a small residual probabilistic risk fails proportionality absent demonstrated necessity.

15.2 Family noncompliance

Noncompliance risk for healthcare staff is managed through targeted enforcement, not categorical exclusion from patient care. No systematic evidence demonstrates that noncompliance rates among visitors are so high and consequential that managed access is not viable.

15.3 Managerial discretion

Managerial discretion does not override universal rights norms. In public institutions, Article 8 ECHR and the Connors procedural principle constrain administrative discretion. In Japan, the absence of a defined legal basis for categorical exclusion makes the exercise of this purported discretion constitutionally precarious.

15.4 Vulnerable patient protection

Addressed by the Targeted Restriction Framework (Section 14). Restriction remains justified where specific elevated risk profiles exist. The argument is against blanket extension to populations without equivalent risk profiles, not against restriction per se.

16. Conclusion

This paper has established, across seven analytical layers and five structural reinforcements, that prolonged blanket visitation bans without transparent periodic reassessment constitute Prolonged Precaution Drift. Under stabilised epidemiological conditions, such bans:

- Fail causal identification: independent infection-control benefit is unverified; burden of proof rests with the restricting institution (Section 3A; Moss et al. 2021).
- Fail proportionality at stages two, three, and four (Sections 10–11), including failure of the Connors procedural principle.

- Fail legal-basis requirements in the Japanese context due to the administrative law lacuna (Section 10.4).
- Risk structural discrimination under CRPD Article 12 for communicatively vulnerable patients (Section 8).
- Generate hidden economic costs of JPY 10,500–132,000 per patient per week across all sensitivity scenarios (Section 13).
- Delay advance care planning with longer ICU stays among decedents (Azad et al. 2021), demonstrating irreversible real-world harm (Section 5).
- Reduce HRO redundancy with potential adverse effects on patient safety (Section 6; Krewulak et al. 2024).

The Targeted Restriction Framework (Section 14) provides the normatively defensible alternative: targeted, individualised, time-limited restriction with review mechanisms, calibrated to specific ward risk profiles.

In Japan, reform requires both changed institutional practice and legislative clarification: express statutory authority for categorical visitor exclusion, defined conditions and procedural requirements, mandatory periodic review, and accessible appeal mechanisms for affected families. Without these, precautionary restriction operates as structural regulation without democratic accountability.

The three propositions advanced in this paper are falsifiable and stated at the outset for citation and critique. The question institutions must answer is whether they have established a mechanism to identify the PPD reversal point t^* —and whether they are prepared to act on it.

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Competing Interests

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AI Assistance Declaration

The preparation of this manuscript involved the use of Claude (Anthropic), a large language model AI assistant, for literature organisation, DAG analysis, theoretical framework development, manuscript drafting, document formatting, and bibliographic verification. All analytical frameworks, core arguments, and intellectual content originated with the human author. The author takes full responsibility for the accuracy and integrity of all content.

Data Availability

All empirical data are derived from publicly available government reports, peer-reviewed publications, and legal judgments cited in the References. All formal model parameters are stated explicitly in Section 12. Sensitivity analysis parameters are stated in Section 13.2 and derived from publicly available MHLW wage surveys and published clinical cost data.

Version History

v1: Initial framework. v2: DAG analysis, Connors micro-analysis, economic sensitivity analysis, targeted restriction framework, formal propositions. v3: Literature audit; Nagoya High Court reference replaced with legal lacuna analysis; Zenodo formatting. v4: All bibliography corrected; Lim et al. confirmed; Krewulak et al. PMID added; Frontiers fnagi corrected; DOIs completed; Japanese law romanisation corrected. v5: Single surgical fix: Ref [4] Hart 2020 J Pain Symptom Manage DOI corrected (PMID: 32325167). v2.5 (May 2026): Reference corrections: [1] Afzali Rubin DOI updated to include .pub2 suffix; [5] Hart et al. 2021 replaced with correct citation Azad TD, Al-Kawaz MN, Turnbull AE, Rivera-Lara L — Crit Care Med 2021;49(10):e1037–e1039, DOI:10.1097/CCM.0000000000005044, PMID:33826588 — all in-text citations updated accordingly; [9] Kandori article number corrected 91→90, PMID:33317612 added; [10] Kentish-Barnes PMID:25614168 added; [15] Moss DOI corrected to 10.1186/s13054-021-03763-7, PMID:34563234 added; [21] Woo et al. replaced with correct authors Kim B, Cho J, Park JY, Kim HE, Oh J, PMID:35300089 added. v2.6 (June 2026): Substantive correction and citation re-verification. [21] in-text citation corrected from “Woo et al.” to “Kim et al.” and the result restated to reflect the source: after propensity-score matching there was no statistically significant difference in overall delirium incidence ($p=0.162$), with significant increases confined to hyperactive/mixed subtypes ($p=0.002$) and anxiety ($p=0.009$); PMID corrected 35300089→35309896. [18] Read et al. PMID corrected 34461053→34391505. [4] Hart et al. DOI corrected ...2020.04.012→.017 and PMID corrected 32325167→32333961. [9] Kandori et al. PMID corrected 33317612→38624408. [1] in-text DOI aligned to .pub2 suffix and the Cochrane finding softened from “confirmed” to low-certainty wording. Section 13.2 delirium cost source restated as a modelling assumption grounded in the cited clinical literature rather than an uncited DPC dataset. [Note: Internal versioning v1–v5 reflects iterative development; Zenodo submission is Version 2.]