7th ICINNA 2026 · Plenary Session 1

Practical Clinical Innovation and Patient Safety in Nursing Practice

20 November 2026 · 13:25–13:50 WIB

Evidence-Based Practical Innovation in Nursing

Improving Patient Safety and Clinical Outcomes Across Specialties

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From Clinical Nursing to Evidence and Policy

Clinical nurse
Musashino Red Cross Hospital

Health policy research
Evidence for policy decisions

Clinical statistics
Yokohama City University / UT

Women's health policy
Chief, NCCHD (since 2026)

130
publications listed in researchmap

Visiting Professor,
Shimonoseki City University
+ UTokyo Hospital RWD program etc.

Source: researchmap.jp/kazumikubota (count includes preprints and other items)

One Question, Four Research Frontiers

“How can we turn nursing evidence into care that is reliably safer for patients?”



International Collaboration and Nursing Policy

International Nursing Review, 2025–26: 7 published + 1 accepted

Workforce

APN work engagement
Midwives' Data Hub

AI governance

Generative AI in informatics
Migrant health literacy

Family & midwifery care

AI in family nursing
Tacit midwifery knowledge

Nursing policy intelligence

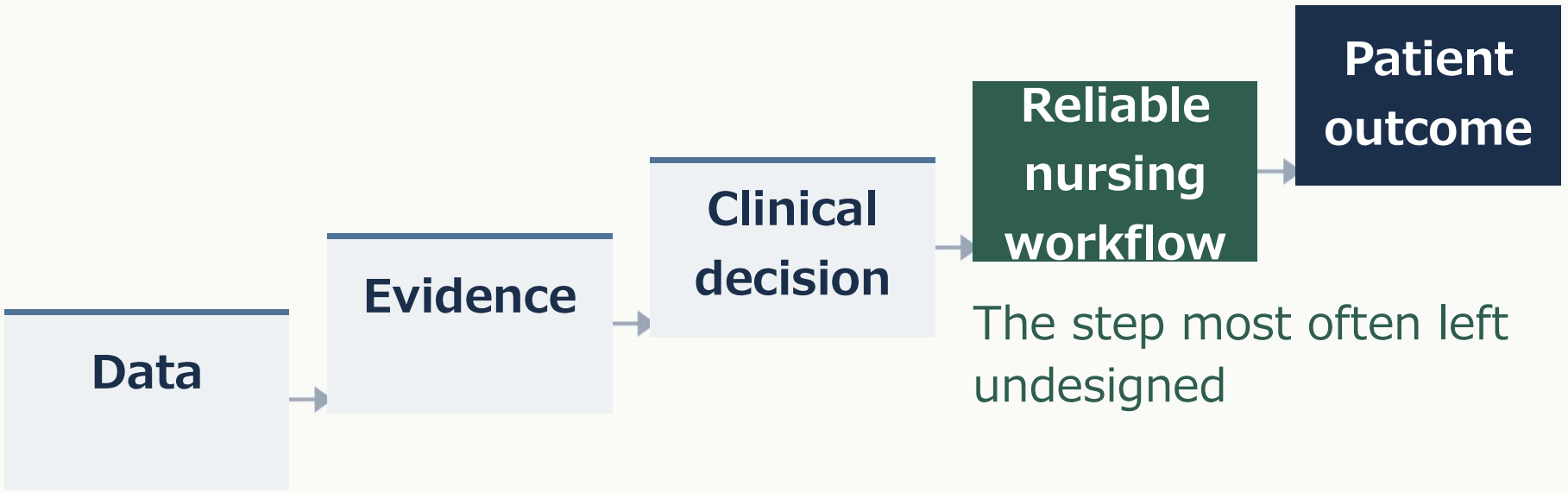
Policy intelligence for 2040
Dementia care policy

ICN Congress 2025, Helsinki: old colleagues, new collaborations.

Author roles vary by paper. Full bibliography: Backup B1–B2.

Evidence Does Not Automatically Become Safety

Every arrow is a step where safety can be lost.



Patient Safety Across Specialties

Different settings, different safety signals.

Surgery

In-hospital fractures

Postoperative complications

Emergency care

In-hospital mortality after triage

Older adults

Hospital-associated disability

Dementia care actually received

All five studies: Japanese real-world data, observational designs.

Morita 2017; Hirose 2022; Morita 2026; Morioka 2025; Morita 2021 (full citations on the next slides)

What Real-World Data Can Tell Us

What it offers

Nationwide scale

e.g., 770,373 patients, 1,074 hospitals

Care as it really happens

What to watch

Unmeasured confounding

Coding gaps; little nursing detail

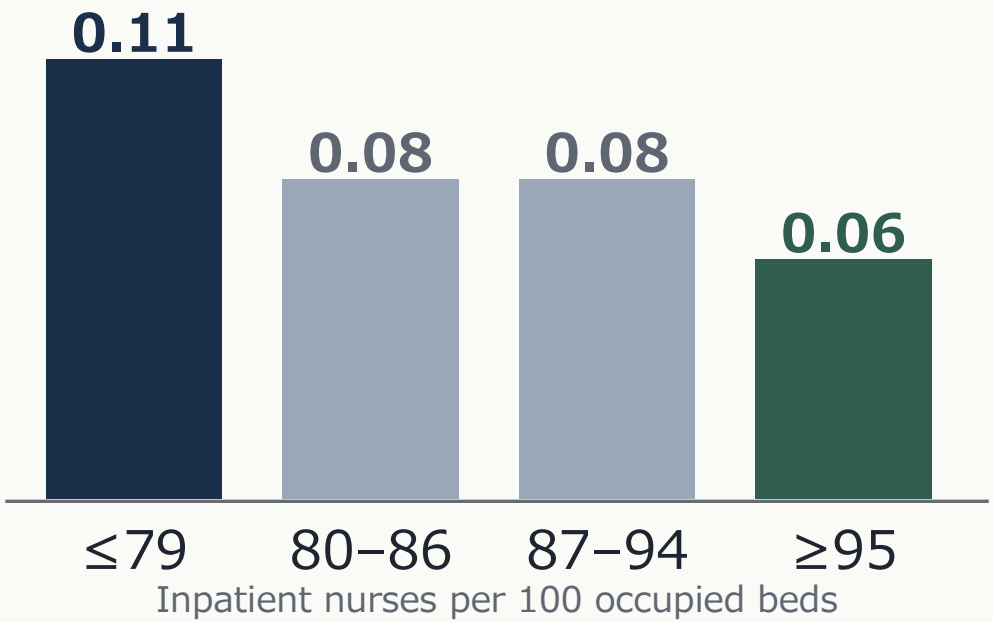
Association is not causation.

Example scale: Morita K, et al. Health Serv Res 2017;52(3):1005–23. doi:10.1111/1475-6773.12529

Staffing and In-Hospital Fractures

770,373 surgical patients · 1,074 hospitals · Japan

In-hospital fractures (%)



0.67

adjusted OR
highest vs lowest staffing
95% CI 0.44–0.99

Absolute risk reduction:
0.05%

Association, not cause.

Morita K, et al. Health Serv Res 2017;52(3):1005–23. doi:10.1111/1475-6773.12529

Staffing Is Not a Simple Linear Dose

645,687 patients · six major cancer surgeries · DPC 2010–2018

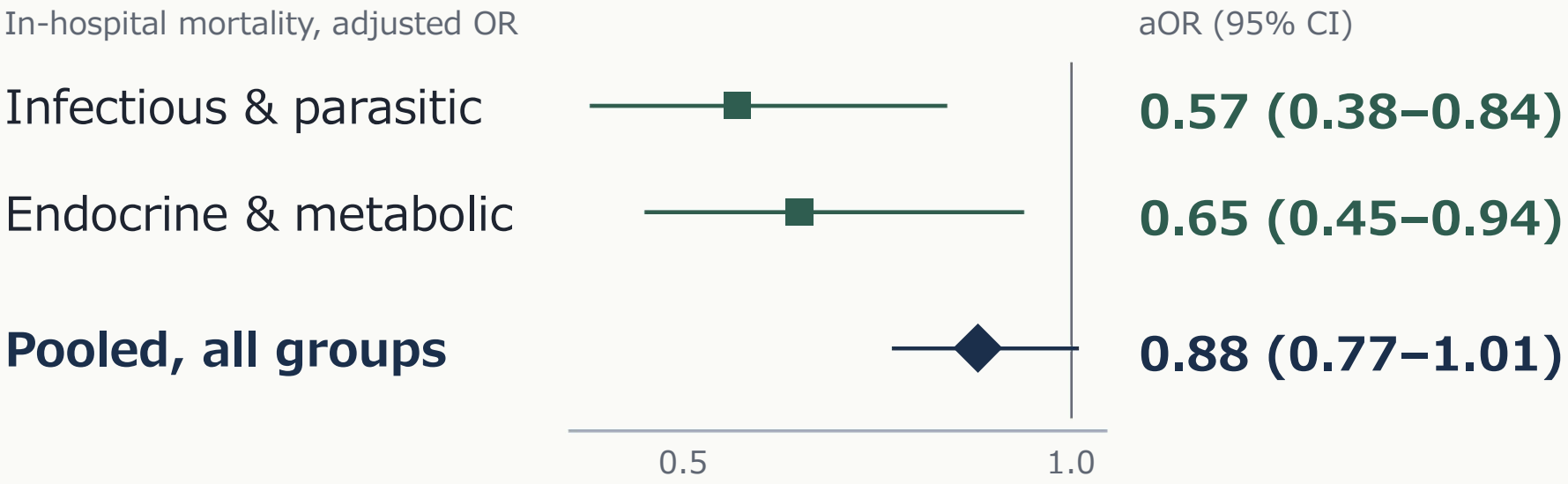
Postoperative complications	**Reverse J-shape** Benefit levels off at ~5.4 patients per nurse per shift
Failure to rescue	No significant association
30-day mortality	No significant association

The “right” staffing depends on the outcome.

Hirose N, Morita K, et al. J Clin Nurs 2022;31(17–18):2562–73. doi:10.1111/jocn.16075

Advanced Nursing Roles in Emergency Care

Certified nurses / CNSs in the ED · 440,420 adults · 1,012 hospitals



Pooled effect not significant: do not generalise to all patients.

Morita K, et al. Int J Nurs Stud 2026;177:105371. doi:10.1016/j.ijnurstu.2026.105371

Safety Changes by Shift

57,498 admissions aged ≥65 · 9 hospitals · 84 wards

Day shift · 8 h

3.70

patients per nurse (median)

aOR 1.065 (1.024–1.108)

Night shift · 16 h

9.38

patients per nurse (median)

aOR 1.024 (1.006–1.042)

aOR: odds of hospital-associated disability per +1 patient per nurse above the ward's usual level

A hospital-wide average cannot capture day- and night-shift conditions.

Morioka N, et al. Age Ageing 2025;54(8):afaf217. doi:10.1093/ageing/afaf217

A Policy Can Exist Without Reaching Patients

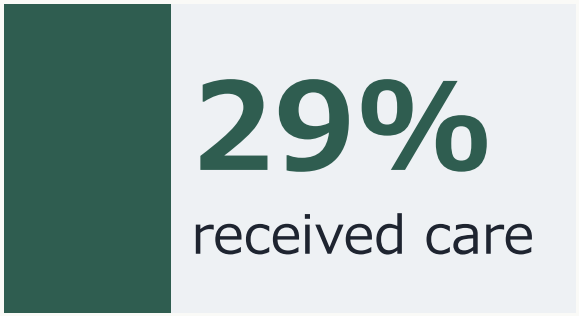
1 · POLICY

2016 dementia-team incentive

Adopted by 185 hospitals

2 · CARE DELIVERED

Patients who received it



3 · PATIENT OUTCOME

In-hospital mortality

Adoption alone:
aOR 0.97 (0.88–1.06)
Care received: lower mortality

Count care delivered, not policies adopted.

Morita K, et al. Int J Geriatr Psychiatry 2021;36(9):1386–97. doi:10.1002/gps.5537

Three Lessons from the Evidence

1 **Make risk visible**

e.g., shift-level staffing gaps, not annual averages

2 **Measure care as delivered**

e.g., only 29% received the incentivised care

3 **Design a response**

e.g., thresholds and benefits differ by outcome

What Today’s Data Still Miss

Usually recorded	Diagnoses, procedures, coded outcomes Staffing at ward or hospital level
Hard to measure	Nurses’ observations and early warnings Moment-to-moment workload Care actually delivered — or missed

Measurement questions — not a verdict on any single database.

Informed by limitations stated in Morita 2017, Morioka 2025 and Morita 2026

Japan’s Evolving Data Infrastructure

Amended Next-Generation Medical Infrastructure Act, 2024

NEW TRACK

Pseudonymized data

Keeps rare values

Certified users only

Not linkable to public DBs

SEPARATE TRACK

Anonymized data

Linkable with NDB, LTC and DPC databases

Separate approvals needed

A legal route is not guaranteed access for every study.

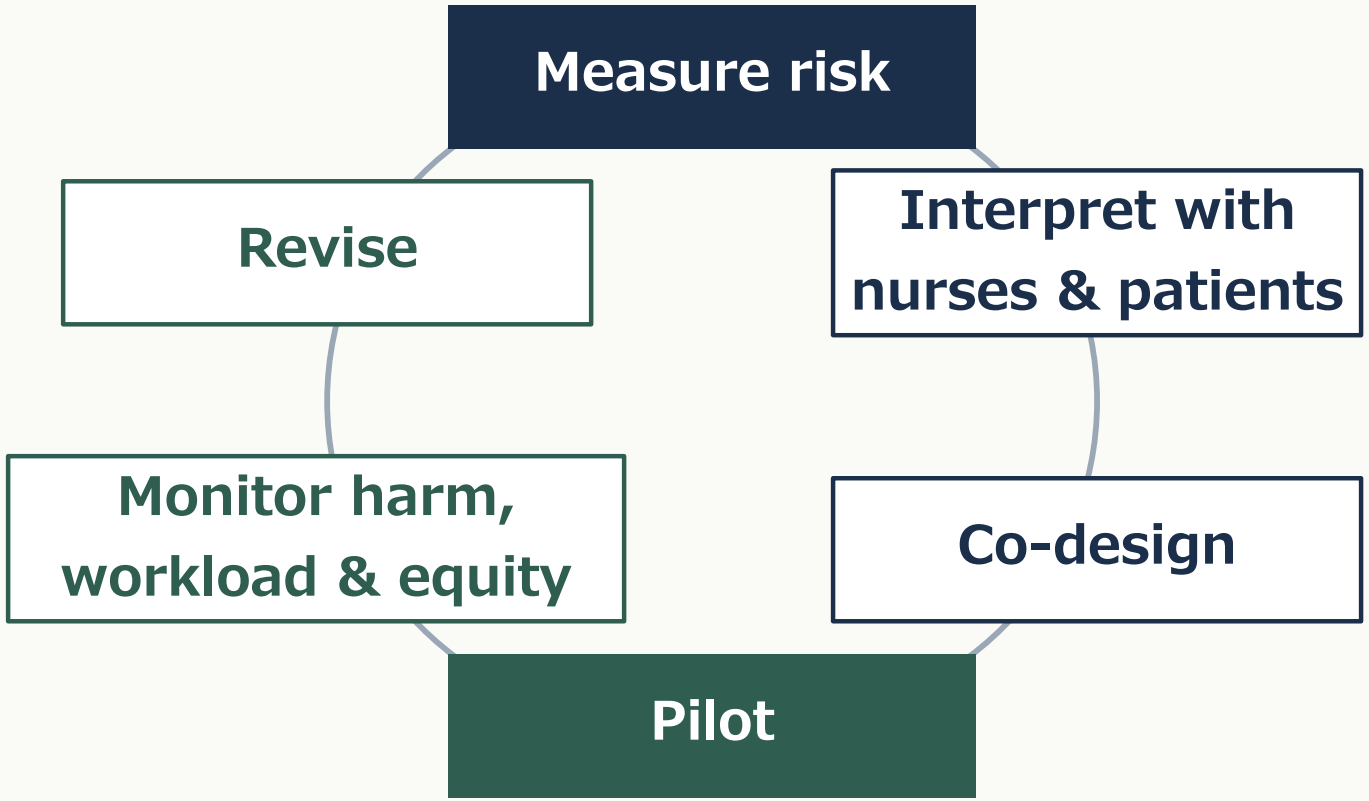
Cabinet Office, Japan. 改正次世代医療基盤法について（利活用編）, April 2024. Details: Backup B4 (in Japanese)

A Practical Safety Loop

MY PROPOSAL

- Evidence into routines that are watched and revised -

Not yet tested.



Why Space Nursing Belongs Here

What does patient safety require when help cannot arrive quickly?

Few staff, limited resources, delayed rescue.
Observation, prevention and response must be designed in advance.

Nursing as Mission Assurance

One continuous function, not after-the-fact first aid.

ANTICIPATE

Detect deterioration before events occur

SUSTAIN

Maintain daily living, relationships and dignity

ESCALATE

Hand decisions to the right pathway, on time

On Earth too: homebound older adults relying on remote support.

Conceptual framework (speaker's framing), not a validated intervention. Based on Kubota K. Life Sci Space Res 2026;50:60–62. doi:10.1016/j.lssr.2025.12.007

Three Take-Home Messages

1 **Make nursing-sensitive risks visible.**

2 **Translate evidence into reliable care.**

3 **Design nursing into future health systems.**

What Will We Leave for the 22nd Century?

The 22nd century begins in 2101.

Some of today's children and nursing students may see it.

What kind of safe, humane nursing will we leave for them?

Thank you so much for your attention!

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Backup B1

International Nursing Review, 2025 (1/2)

Kubota K, Aishima M, Fujita T. Harnessing Generative AI in Nursing Informatics: A Theoretical Critique and Policy Innovation Perspective From Japan.
Int Nurs Rev 2025;72(3):e70108. doi:10.1111/inr.70108 · first author

Takeuchi S, Kubota K, Nakamura S. Artificial Intelligence and Tacit Knowledge Integration in Midwifery: Policy Implications for Improving Healthcare Outcomes.
Int Nurs Rev 2025;72(3):e70092. doi:10.1111/inr.70092 · co-first author

Kubota K, Sato K, Suenaga Y. Work Engagement Among Advanced Practice Nurses (APNs) in Japan: The Role of Supervisory and Organizational Support.
Int Nurs Rev 2025;72(4):e70130. doi:10.1111/inr.70130 · first author

Cheong PL, Kubota K. Advancing Global Nursing Policy: AI-Driven Health Literacy Innovations for Migrant Domestic Workers.
Int Nurs Rev 2026;73(1):e70149. doi:10.1111/inr.70149 · co-first author

Author roles per PubMed. Retrieved 18 Nov 2026.

Backup B2

International Nursing Review, 2026 (2/2)

Kubota K. Designing Nursing Policy Intelligence for 2040: Japan as a Leading Case.
Int Nurs Rev 2026;73(3):e70215. doi:10.1111/inr.70215 · sole author

Honda J, Itoh S, Kubota K. Artificial Intelligence in Family Nursing: An Evidence-Informed Policy Framework for Safe and Equitable Integration.
Int Nurs Rev 2026;73(3):e70237. doi:10.1111/inr.70237 · co-first author

Kubota K, Shimpuku Y. The Midwives' Data Hub as Workforce Policy Intelligence for Staffing, Well-Being and Equity.
Int Nurs Rev 2026;73(3):e70240. doi:10.1111/inr.70240 · co-first author

Kubota K, et al. Cognitive Health and Dementia Care as Nursing Well-Being Policy: Data Linkage, Artificial Intelligence and Illustrative Insights from Japan.
Int Nurs Rev, accepted November 2026 (in press; DOI not yet assigned) · first author

Author roles per PubMed. Retrieved 18 Nov 2026.

Backup B3

Patient Safety Studies at a Glance

Study	Population	Main result	Key limitation
Morita 2017	770,373 surgical pts	Fractures aOR 0.67 (0.44–0.99)	No falls data
Hirose 2022	645,687 cancer surgery pts	Complications: reverse J, 5.4	Outcome-specific
Morita 2026	440,420 ED adults	Pooled aOR 0.88 (0.77–1.01)	Includes COVID years
Morioka 2025	57,498 admissions ≥65	Disability aOR 1.068 per +1 pt	Mean, not daily staffing
Morita 2021	180 matched hospital pairs	Adoption aOR 0.97; 29% got care	Hospital-level matching

All retrospective and observational, using Japanese data: associations only.

Morita K, et al. Health Serv Res 2017. doi:10.1111/1475-6773.12529 · Hirose N, et al. J Clin Nurs 2022. doi:10.1111/jocn.16075
Morita K, et al. Int J Nurs Stud 2026. doi:10.1016/j.ijnurstu.2026.105371 · Morioka N, et al. Age Ageing 2025. doi:10.1093/ageing/afaf217
Morita K, et al. Int J Geriatr Psychiatry 2021. doi:10.1002/gps.5537

Backup B4

Amended Next-Generation Medical Infrastructure Act

Promulgated 26 May 2023 · in force 1 April 2024

Pseudonymized medical information

Names and IDs removed; rare values and disease names may remain

Created by a nationally certified creator

Used only by certified users (legal-entity level)

Re-identification and third-party provision prohibited; PMDA submission allowed

Not linkable with public databases

Anonymized medical information

User certification not required

Can be provided linkable with NDB, long-term care DB, DPC DB

Separate application to MHLW plus each database's review

NDB-equivalent security management required

Cabinet Office, Japan. 改正次世代医療基盤法について（利活用編）. April 2024.(in Japanese)
www8.cao.go.jp/iryou/kouhou/pdf/kaisei_jisedaiiryou_rikatsuyou.pdf
See also: Kubota K, Ishibashi S. Jpn J Nurs Sci 2026;23(1):e70037. doi:10.1111/jjns.70037

Backup B5

Space Nursing: Related Papers (2026)

Conceptual and review work; none reports patient outcomes in space.

Concept	Journal · type	DOI
Mission assurance	Life Sci Space Res · Opinion	10.1016/j.lssr.2025.12.007
Historical mapping	Nurs Inq · Mapping review	10.1111/nin.70098
Fatigue readiness	Air Med J · Framework	10.1016/j.amj.2026.02.003
EINO (oral care)	Acta Astronaut · Framework	10.1016/j.actaastro.2026.04.016
Minimum care standard	Space Policy · Viewpoint	10.1016/j.spacepol.2026.101763
Aerospace midwife	New Space · Framework	10.1177/21680256261469106
Right to Float	New Space · Perspective	10.1177/21680256261465894

Kubota K is sole or first author on all seven. Sources: PubMed, Crossref, publisher pages (retrieved 18 Nov 2026).