

Hybrid intelligence in care: what Artificial Intelligence can and cannot replace

HIGHLIGHTS

1. AI expands care but does not replace the nurse.
2. AI expands care but does not replace the nurse.
3. Touch and ethics remain irreducible to automation.
4. Nursing should participate in the governance of AI in health.

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The question that circulates the most in the corridors of hospitals, congresses and graduate programs in nursing, “will artificial intelligence (AI) replace nurses?”, is poorly formulated. Not because it is naïve, but because it presupposes a dispute that science has already overcome. Artificial intelligence systems detect clinical deterioration, can reduce in-hospital mortality, and anticipate the diagnosis of sepsis. These are real, measurable gains that save lives. And yet, no algorithm consoled a patient at three in the morning, recognized, in the silence of a family member, the weight of an impossible decision, or translated, with the right touch at the right time, that someone was present. The relevant question is not what AI replaces, but how AI and the nurse strengthen each other.

In this context, the concept of Hybrid Intelligence¹ emerges, the ability to achieve complex goals, combining human and artificial intelligence, producing results superior to those that each would achieve alone, through continuous mutual learning. In addition, there was a refinement² of the concept with the CARE-IA (Collaborative, Adaptive, Responsible and Explainable) framework, reaffirming that augmentation, not replacement, is the productive horizon.

In nursing, this increase is already robust evidence: decision support systems with AI reduced readmissions from 22.2% to 9.4%; automated documentation tools give nurses up to 2.5 hours per shift back to direct care; Screening algorithms outperform traditional scores in consistency and accuracy³. AI expands the ability to perceive, predict, and act, which has undeniable clinical and ethical weight.

However, what AI does not achieve is not residual, it is constitutive of caring. Specialist nurses operate through intuitive apprehension and tacit knowledge built from embodied experience, which is not reduced to rules or statistical standards⁴. For some authors⁴, nursing touch is an irreducible component of care⁵, not because of the gesture itself, but because of the situated recognition it carries. Others⁶ go further: algorithms are ‘moral zombies’, absent of the sentience necessary for genuine ethical accountability. Aristotelian phronesis, the practical wisdom that emerges from encountering the contingency of life, is, by definition, what no computer model can simulate. Data without judgment is noise; judgment without data is short-sightedness. Hybrid intelligence is precisely the refusal of this false choice.

In Brazil, this tension takes on structural dimensions that nursing research cannot ignore. Models trained predominantly in populations from the Global North perform poorly on dark skin, which is a critical problem in a country where 56% of the population declares itself black or brown. The digital divide between the SUS and the private sector threatens to make AI another vector of health inequality. The dependence on data produced here, but controlled by external platforms, configures a digital colonialism that needs to be named and confronted. Nursing, the largest professional category in health and the main generator of clinical data⁷, runs the risk of not participating in the conversations that most affect it. This risk is avoidable, but it requires active choice.

Brazilian nursing needs to answer at least three questions that this field has not yet answered: how to integrate AI into the SUS without reproducing inequalities? How to train professionals who are critical agents and not just users of algorithmic systems? How to ensure the effective participation of the profession in the governance of AI in health? Answering them is not the task of technologists. It is the task of those who, on a daily basis, translate numbers into lives.

REFERENCES

1. Dellermann D, Ebel P, Söllner M, Leimeister JM. Hybrid intelligence. *Bus Inf Syst Eng* [Internet]. 2019 [cited 2026 Apr 23];61(5):637-43. Available from: <https://doi.org/10.1007/s12599-019-00595-2>
2. Akata Z, Balliet D, de Rijke M, Dignum F, Dignum V, Eiben G, et al. A research agenda for hybrid intelligence: augmenting human intellect with collaborative, adaptive, responsible, and explainable artificial intelligence. *Computer* [Internet]. 2020 [cited 2026 Apr 23];53(8):18-28. Available from: <https://doi.org/10.1109/MC.2020.2996587>
3. Mikkonen K, Tuunainen S, Oikarinen A, Jansson M, Woo B, Zhou W, et al. Artificial intelligence technologies supporting nurses' clinical decision-making: a systematic review. *J Clin Nurs* [Internet]. 2026 [cited 2026 Apr 23];35(4):1525-40. Available from: <https://doi.org/10.1111/jocn.70156>
4. Benner P. From novice to expert: excellence and power in clinical nursing practice. Commemorative edition. Upper Saddle River: Prentice Hall; 2000. 310 p.
5. Pepito JAT, Babate RSG, Dator WLT. The nurses' touch: an irreplaceable component of caring. *Nurs Open* [Internet]. 2023 [cited 2026 Apr 23];10(9):5838-42. Available from: <https://doi.org/10.1002/nop2.1860>
6. Ulrich CM, Oh O, Bin You S, Topaz M, Rahemi Z, Stokes L, et al. What does moral agency mean for nurses in the era of artificial intelligence? *Hastings Cent Rep* [Internet]. 2026 [cited 2026 Apr 23];56(1):18-23. Available from: <https://doi.org/10.1002/hast.70030>
7. Ronquillo CE, Peltonen, LM., Pruinelli L, Chu CH., FAAN SB, Beduschi A, et al. Artificial intelligence in nursing: priorities and opportunities from an international invitational think-tank of the Nursing and Artificial Intelligence Leadership Collaborative. *J Adv Nurs* [Internet]. 2021 [cited 2026 Apr 23];77(9):3707-17. Available from: <https://doi.org/10.1111/jan.14855>

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Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - **Limongi R.** Drafting the work or revising it critically for important intellectual content - **Limongi R.** Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - **Limongi R.** All authors approved the final version of the text.

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