

EDITION 4 OF 5 · ACADEMIC AND DOCTORAL EDITION

The Missing Middle — How the Tri-Alliance Model Bridges Technical AI Safety and Regulatory Framework Research

A Research Contribution to the Governance of Algorithmic Risk in Public Care Sectors

Huibert H.W. Arnold · Global Integrated Care International and The Tri-Alliance · Ottawa, Canada · 2026 · <https://globalintegrated.care>

The academic literature on AI governance in health has two well-developed branches and one critical gap. Technical AI safety research tells us how to build safe systems. Regulatory framework research tells us how governments should legislate them. Neither addresses the institutional governance layer that sits between them. This is the gap the Tri-Alliance model fills. This edition is the invitation to the academic community to study it.

THE RESEARCH QUESTION — M.6.1

FORMAL RESEARCH QUESTION

"How do multi-stakeholder governance frameworks mitigate algorithmic risk in public care sectors? A mixed-methods analysis of the Tri-Alliance model applied to AI-mediated health and eldercare navigation."

Positioned at the intersection of AI safety engineering · institutional governance theory · public health systems research · regulatory enforcement mechanisms

This research question is original — no empirical study of a deployed multi-stakeholder AI governance architecture in public health at population scale exists in the literature. It is timely — the EU AI Act and G7 governance commitments are arriving simultaneously between 2026 and 2028. And it is cross-disciplinary — simultaneously publishable in computer science, public administration, health policy, and law.

WHY THIS FILLS THE MISSING MIDDLE

Technical AI safety research	WHAT EXISTS Well-developed · model architecture · safety envelopes · testing · alignment · the "how to build a safe system" question extensively studied	WHAT IS MISSING Does not address: who governs the system once built · how accountability is distributed · what institutional design prevents single-party capture
Regulatory framework research	WHAT EXISTS Growing · EU AI Act design · national AI legislation · enforcement mechanisms · liability frameworks · the "how should governments legislate AI" question actively studied	WHAT IS MISSING Does not address: the operational governance layer between regulation and deployment · how multi-stakeholder bodies translate regulatory intent into daily operational standards
THE GAP — Institutional governance layer	WHAT THE TRI-ALLIANCE PROVIDES The space between technical safety and regulatory framework · how multi-stakeholder governance bodies operationalise safety in public care systems · how accountability is distributed across parties	UNIQUE EMPIRICAL CONTRIBUTION NO PRIOR EMPIRICAL STUDY at deployment scale in public health · Tri-Alliance model is the first · white paper is the first empirical dataset · research question is the invitation

"You have the empirical case that every researcher in this space is seeking and none has found."

THE TRI-ALLIANCE MODEL — THE EMPIRICAL CASE

THREE-PARTY ARCHITECTURE — NO SINGLE PARTY CAN OVERRIDE THE OTHERS

Party 1 Technology Developer Provides technical capability · builds to governance specification · cannot modify safety boundary without governance body approval · subject to independent audit	Party 2 Multi-Stakeholder Governance Body Sets operational standards · represents health system · clinicians · carers · citizens · regulators · cannot deploy without technical compliance · cannot override regulator	Party 3 Independent Regulator Independently verifies compliance · accesses tamper-resistant audit trail without operator intermediation · can suspend deployment · cannot be overridden
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The governance principle: no single party controls the system · accountability is distributed · the architecture prevents capture by any one interest · safety is structurally enforced not aspirationally committed

FOUR PUBLICATION PATHWAYS

Systematic evidence paper	Quantitative outcomes · safety rates 0.8% vs 9.4% · equity metrics 437M vs 120M · economic values \$2.47T · regulatory compliance 92% · population-scale dataset unique in literature	JAMIA · npj Digital Medicine
Governance theory paper	Institutional design of Tri-Alliance · three-party accountability distribution · no single-party capture · comparison with existing multi-stakeholder frameworks in public policy	AI & Society · Government Information Quarterly
Regulatory alignment paper	92% compliance across six major frameworks simultaneously · designed-in vs retrofit cost evidence · first empirical demonstration at deployment scale	Health Policy · Computer Law and Security Review
Case study monograph	White paper as primary academic reference · complete empirical case study · first deployed multi-stakeholder health AI governance architecture · primary source globally	Book · WHO technical report · OECD working paper

THE DOCTORAL PATHWAY

Proposed doctoral thesis title: "Multi-Stakeholder Governance Frameworks and the Mitigation of Algorithmic Risk in Public Care Sectors: An Empirical Analysis of the Tri-Alliance Model in AI-Mediated Health and Eldercare Navigation" — submitted for PhD in Health Informatics, Public Administration, or AI Governance at McGill University, University of Amsterdam, Oxford, or Johns Hopkins Bloomberg School of Public Health.

The doctoral programme comprises four components: a systematic literature review establishing the missing middle gap; a methodology chapter describing the Tri-Alliance multi-stakeholder governance architecture as a case study; a results chapter reporting the quantitative outcome evidence from Sections F, K, and L; and a discussion chapter positioning the findings within AI governance theory. The white paper constitutes the primary empirical reference dataset for all four components.

GRANT FUNDING ELIGIBILITY

EU Horizon Health AI
 Highest-priority funding · governance-aligned research required · Tri-Alliance qualifies as primary empirical partner

CIHR — Canada
 Digital health governance · AI safety · population-scale evidence · McGill partnership natural

NWO — Netherlands
 AI governance · digital health · UvA partnership · EEC citizenship · European Integration expertise

WHO TDR
 Health AI safety · equity in digital health · multilingual access · governance model exportable globally

Wellcome Trust

G7 Health AI Grants

Health systems research · AI and health equity · population-scale evidence · societal benefit demonstrated

Governance-first AI · safety standards · international collaboration · standard-setting contribution

The academic community has been asking the research question this edition poses for a decade. What institutional governance architecture actually works in health AI deployment? How is accountability distributed? What does multi-stakeholder governance look like when it is built into the architecture rather than stated in a policy document?

The Tri-Alliance model is the empirical answer. The white paper is the evidence base. The research question is the invitation.

The missing middle has been filled. The academic community is invited to study it, challenge it, build on it, and publish it — in the spirit of the same governance principles the framework advocates: transparency, accountability, and the honest pursuit of what works.

— Huibert H.W. Arnold · Founder, Global Integrated Care International and The Tri-Alliance · Ottawa, Canada · 2026
Full white paper, governance standard, and empirical dataset: <https://globalintegrated.care>

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This edition forms part of the complete white paper: A Governance and Technical Standard for Safe, Governed, Multilingual AI in Health and Eldercare. By Huibert H.W. Arnold, Founder, Global Integrated Care International and The Tri-Alliance, Ottawa, Canada, 2026.

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