Public Health in the Age of Data Digital Infrastructures and the Production of Dependency Lessons from the UK and Brazil | Summary of Case Study

Joyce Souza Maldonado
Matheus Falcão
Lauren Paremoer

1 Background and Context-Setting

This case study examines how the digital transformation of public health systems is unfolding in two contrasting contexts—the United Kingdom and Brazil—under neoliberal, data-driven paradigms. It interrogates the expanding role of data infrastructures, algorithmic systems, and public–private partnerships in reorganising healthcare governance, and probes their consequences for equity, sovereignty, and democratic participation.

In the UK, the National Health Service (NHS) has seen increasing reliance on private technology vendors for data platforms, cloud services, and analytics. Contracts with corporations (e.g., Palantir) and the deployment of algorithmic tools have been justified through narratives of efficiency, predictability, and modernisation. Civil society actors—especially Keep Our NHS Public (KONP)—have responded with campaigns that spotlight risks to patient privacy, algorithmic bias, democratic accountability, and the erosion of public control.

In Brazil, the Unified Health System (SUS) navigates digitalisation amid territorial inequality, underfunding, and persistent infrastructural gaps. The civil society coalition Coalizão Direitos na Rede convened stakeholders to propose an 'Agenda for Digital Health', centring public-interest digital infrastructures, robust data governance, open technologies, territorial justice, and participatory oversight. While the initiative is recent, it is shaping debates with the Ministry of Health and surfacing concerns about dependence on foreign cloud providers and opaque contracting.

Across both settings, the promise of "smart" health and big-data solutions often obscures structural asymmetries in power, knowledge, and capacity. This study therefor,e advances a rights-based and territorially grounded lens—data justice—to evaluate harms and articulate pathways that reorient digital health toward collective care, democratic governance, and technological sovereignty.

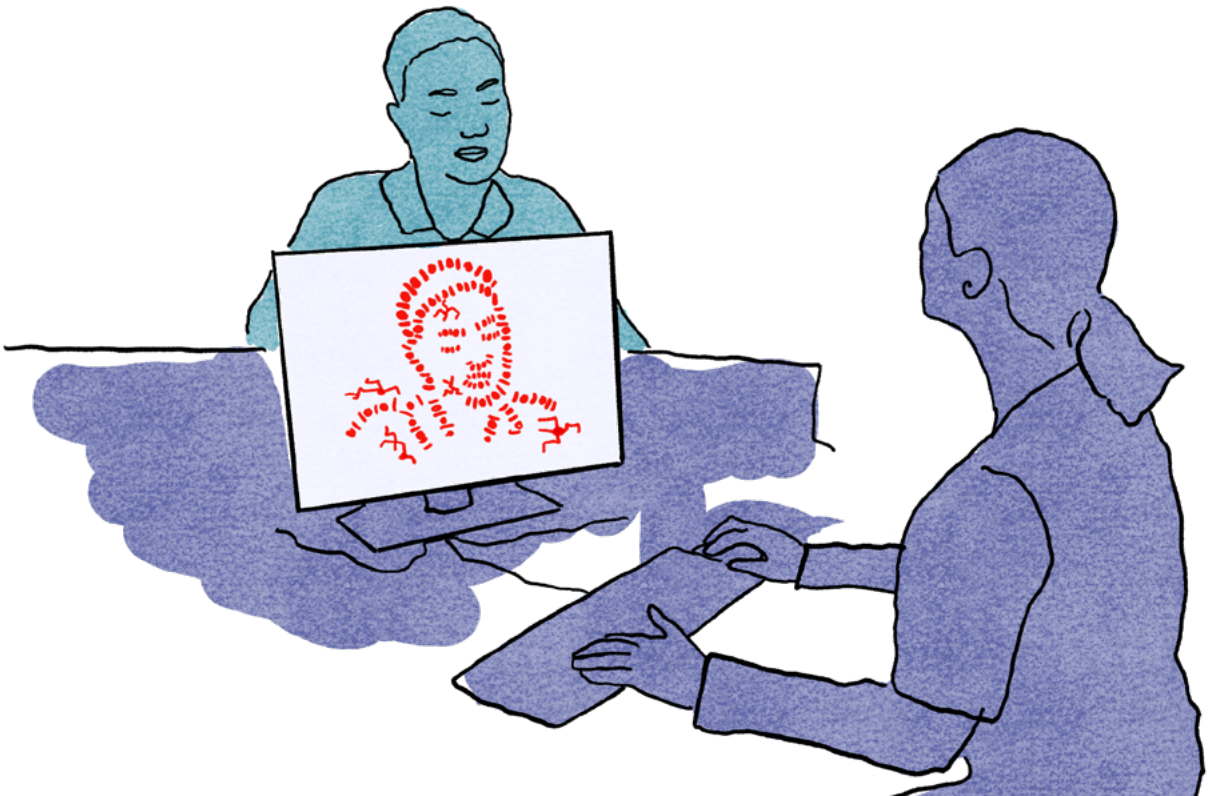
2 Implications for Data Justice and Economic, Social, and Cultural Rights (ESCR)

2.1 Data Injustices

- **Opaque public–private arrangements and corporate capture;** Digital infrastructure and data platforms are frequently procured through contracts with limited transparency, weak accountability, and minimal public input. Vendor lock-in and proprietary architectures constrain public stewardship, generate fiscal dependencies, and weaken digital sovereignty.
- **Commodification and extractivism of health data;** Clinical, biometric, and behavioural data are increasingly treated as economic assets. Data-sharing and secondary reuse occur under vague consent models, elevating risks of commercial exploitation and mission creep while undermining trust in public systems.
- **Algorithmic governance without accountability;** Decision-support systems and risk stratification tools are deployed with insufficient auditability, explainability or bias testing. Such opacity can reinforce discrimination along lines of class, race, gender, and geography, and may displace clinical judgment.
- **Displacement of collective responsibility;** Techno-solutionist narratives recast health as an individual optimisation problem. Self-monitoring regimes, apps and wearables shift risk and cost burdens to patients and workers, diluting the public ethos of care and erasing social determinants of health.
- **Territorial inequality and digital exclusion;** Uneven connectivity, constrained institutional capacity and low digital literacy limit equitable access to digital services, particularly in rural, Indigenous and marginalised urban territories—turning digitalisation into a new layer of exclusion.
- **Weak participatory governance;** Decisions on data architecture, partnerships and algorithmic use proceed without meaningful involvement of users, communities and frontline workers. Opportunities for collective consent, contestation and redress are scarce.
- **Environmental externalities;** The energy and material footprint of cloud and AI systems is rarely problematised in procurement and evaluation, shifting ecological costs onto communities least responsible for them.

2.2 Key ESCR Implications

- **Right to health (availability, accessibility, acceptability, quality;** Fragmented, proprietary systems and market-led priorities jeopardise universality and continuity of care. Digital exclusion undermines equitable access to services; unaccountable algorithms risk quality and safety.
- **Right to privacy and data protection;** Bulk data transfers and secondary reuse without clear safeguards, granular purpose limitation or independent oversight erode informational self-determination and patient confidentiality.
- **Right to participation and information;** Opaque contracts and closed technical decision-making limit the public's ability to know, deliberate and shape digital health agendas. A public right to participation—akin to Aarhus-style guarantees in environmental governance—is needed, including proactive disclosure of partnerships, algorithmic use cases and impact assessments.
- **Right to non-discrimination and equality;** Poorly governed algorithmic systems can encode and amplify structural inequities, with disparate impacts on racialised, low-income, disabled and geographically remote populations.
- **Right to science and benefits of progress;** When innovation is locked into proprietary ecosystems, public value is privatised. Open, auditable and interoperable infrastructures are essential for fair distribution of knowledge and benefits.
- **Collective rights and sovereignty;** Transnational data infrastructures without public stewardship threaten tecnological sovereignty, frustrate domestic accountability and weaken the ability of states and communities to set public-interest terms for health data use.
- **Freedom from harm;** ESCR-compliant digitalisation requires ex ante human-rights and equity impact assessments, ongoing monitoring, accessible redress mechanisms and enforceable obligations for vendors to prevent and remediate harm.



3 Sector-Specific Pathways for Data and Development Justice

3.1 Public-interest digital infrastructures

Adopt open (with adequate guardrails), technically interoperable and publicly governed architectures for data storage, integration and analytics. Prioritise sovereign hosting options and public clouds where feasible; design against vendor lock-in with open standards, portability and modularity. Ensure that everyone has reliable internet access as a basic requirement for the right to health. Invest in local infrastructure and community networks to close digital and territorial gaps.

3.2 Democratic health data governance

Establish stewardship models that embed fiduciary duties to the public—e.g., public data trusts and multi-stakeholder oversight bodies with statutory powers. Mandate proactive transparency: publish contracts, Data Protection Impact Assessments (DPIAs), as well as Human Rights and Equity Impact Assessments (HREIAs), algorithm registers, audit results and performance metrics.

3.3 Algorithmic accountability in care

Before deployment, require clinical validation, bias and safety testing, explainability standards and human-in-the-loop protocols. Establish routine post-deployment audits and public reporting of errors, disparate impacts and remediation steps. Where clinical allocation or triage is involved, prohibit fully automated decision-making and guarantee patient and worker contestation rights.

3.4 Territorial justice and capacity building

Invest in public sector capacity—digital literacy for health workers; technical training for public managers; support for local developers and public labs. Fund place-based pilots that co-design tools with communities (rural, Indigenous, peri-urban) and scale only after equity and usability benchmarks are met. Tie infrastructure roll-outs to inclusive service redesign, not mere digitisation of legacy bottlenecks.

3.5 Participation and collective consent

Institutionalise citizen juries, health councils and algorithmic accountability forums to deliberate on technologies, data uses and trade-offs. Move from narrow individual consent to layered, collective participation for population-level data uses; ensure representation of historically marginalised groups and frontline workers.

3.6 Law, regulation and enforceability

Update sectoral law to centre the right to health and freedom from harm in digital policies. Require human-rights and equity impact assessments ex ante; mandate procurement clauses on transparency, auditability, interoperability and termination rights; empower independent regulators with sanction powers; enable class actions and public-interest litigation for redress.

3.7 International cooperation and anti-dependency

Advance South–North collaboration on open technologies, shared audit tools, and rights-based standards. Negotiate public-interest terms with cloud and platform providers; cooperate on cross-border enforcement, including limits on exploitative secondary markets for health data. Support knowledge commons, open documentation and reproducible public algorithms.

3.8 Plural epistemologies and feminist/Indigenous lenses

Resource community-led research and design; integrate plural knowledges into requirements of engineering and evaluation. Recognise care work and community infrastructures as data-producing capacities; measure success beyond throughput (e.g., dignity, trust, inclusivity, democratic participation and equity outcomes).

Joyce Maldonado - Researcher and consultant on digital health, data governance and social justice in Global South; PhD in Human and Social Sciences (UFABC/Brazil), based in London.

Lauren Paremoer - Associate Professor, Department of Political Studies, University of Cape Town and Steering Council Representative for the Global Health Governance Programme of the People's Health Movement

Matheus Falcão - holds a PhD in Law from the University of São Paulo, Brazil. His work focuses on Global Health. He is a member of the People's Health Movement (PHM), director of the Brazilian Centre for Health Studies (Cebes), and associate researcher at the Health Law Research Centre of the University of São Paulo.

Read the full report here

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