



# ARTICLE

## GARBAGE IN, LIABILITY OUT

*Why unverified data will become the next malpractice.*

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## THE NEW CHAIN OF CAUSATION

For centuries, malpractice was simple: a human erred, a patient suffered, a court assigned fault. AI has shattered that chain. When a model misdiagnoses, who is responsible – the developer, the clinician, or the data?

In truth, liability now begins upstream. Every data omission, every mislabeled record, every untracked transformation embeds risk directly into the algorithm. The model may carry a hospital's logo, but the error belongs to every unseen hand that shaped the data beneath it. The modern question is not *"Who pressed run?"* but *"Who governed what ran?"*

## WHEN DATA BECOMES A DEFECT

Courts and regulators are already redefining causation in algorithmic contexts. In traditional tort law, liability required a negligent act; in the age of automation, **defective data** may itself constitute negligence.

If an institution deploys a clinical model trained on unverifiable inputs, it is effectively practicing with a contaminated instrument. The injury may be digital, but the duty of care is physical.

"Garbage in, garbage out" has evolved into "garbage in, liability out."

## THE REGULATOR'S DILEMMA

Regulators once inspected devices; now they must inspect datasets. But inspection requires something most healthcare data still lacks: provenance. Without immutable lineage – a record of who entered what, when, and under which protocol – oversight becomes impossible.

Most existing EHR-derived datasets fail this test. They are statistical fossils: layers of undocumented adjustments and missing context. A regulator can only validate what is visible. Provenance transforms visibility from metaphor into metric.

## FEDERATION AS LIABILITY CONTAINMENT

Centralized data aggregation concentrates not only power but blame. A federated model distributes both. By keeping data at its source and standardizing governance locally, Circle Datasets minimize institutional exposure.

Each node retains control, applies harmonized protocols, and contributes only validated derivatives – ensuring that every partner’s risk remains proportional to its stewardship. This is not decentralization for convenience; it is decentralization for indemnification.

## REDEFINING DUE DILIGENCE

Investors and insurers will soon demand proof of data integrity as a condition of participation. Auditable provenance will move from ethical virtue to commercial requirement – the new “clean title” of digital assets.

Hospitals will ask vendors not just *“What does your model do?”* but *“Show us your lineage chain.”* In discovery, legal teams will request data passports, not just training logs. Due diligence will no longer mean reviewing documentation; it will mean verifying immutability.

## TOWARD A LIABILITY-RESILIENT ECOSYSTEM

A liability-resilient AI ecosystem is one where every prediction carries a traceable ancestry, every dataset has a custodial signature, and every model can be re-audited against its inputs.

Federated Circle Datasets make this possible – not by eliminating risk, but by **binding responsibility to evidence**.

They turn uncertainty into structure, structure into accountability, and accountability into trust. The future of medical AI will belong to systems that can not only think, but testify.

## SELECTED REFERENCES

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