Empowered Voices Essay Competition

By Zahra

Q1.) If you could uninvent one thing, what would it be – and what would we lose by losing it?

Uninventing something is not as simple as erasing it. It means confronting the values buried inside it. Artificial intelligence in medicine spans diagnostic algorithms, drug discovery engines, large language models, and robotic surgery, and it promises what the NHS has always struggled to deliver: reaching every patient, catching every disease, never burning out. My answer to this question is unambiguous: I would not uninvent AI in medicine. But I would uninvent the dangerous complacency with which we have adopted it because that complacency, more than any algorithm, is actively costing lives.

The evidence for AI revolutionising medicine is not speculative. Drug development traditionally takes ten to fifteen years and costs nearly three billion pounds per compound, leaving patients with rare diseases waiting for treatments that may never arrive. AI has begun to dismantle this: one generative model identified a viable therapeutic compound in just twenty-one days. Studying organic chemistry gives me real appreciation of why this matters as molecular structures are vast, and human-speed screening is fundamentally inadequate for the scale of human disease. Within the NHS, a £21 million investment in AI tools for lung cancer diagnosis across 64 trusts targets a system where false negative diagnoses currently cost £16.7 million annually and cause 858 avoidable deaths. With over 600,000 chest X-rays performed every month in England alone, the scale of impact is undeniable. These are not marginal gains. For many patients, they represent survival which is precisely why the failures that follow demand a conversation that takes AI's genuine promise seriously, rather than dismissing it. AI must be kept precisely because surrendering it would therefore be a moral failure.

But keeping AI is not the same as trusting it blindly, and that distinction is where medicine is currently failing. The most serious charge against AI in healthcare is algorithmic bias; not because bias is unique to AI, but because AI scales it beyond anything a human clinician could achieve. A doctor's prejudice harms one patient. An algorithm's harms millions, simultaneously, disguised behind the false authority of mathematics. A landmark study found that a widely used algorithm systematically disadvantaged Black patients by predicting healthcare costs rather than illness: since structural inequality means less is historically spent on Black patients, the system read lower spending as better health. Correcting that single flaw would have increased the proportion of Black patients receiving additional care from 17.7% to 46.5% which could have nearly tripled access. This is not an anomaly. Imperial College London's Institute of Global Health Innovation found that AI tools in the NHS actively risk worsening health inequalities for minority ethnic groups because training datasets do not represent Britain's diverse population. Oxford researchers found that one in ten NHS patients lack ethnicity records, and 12% have

conflicting codes meaning these systems are built on incomplete foundations before a single algorithm runs. When AI amplifies the institutional racism that ethnic minorities already experience in healthcare, it does not merely fail those patients. It subjects ethnic minority patients to more inferior care than their white counterparts, which is a failure to one of medicine's foundation principles: equal care for all. An AI that performs worst for the patients it most needs to help is not a neutral tool. It is an active source of harm, and treating it as a technical inconvenience rather than an ethical emergency is a choice medicine cannot keep making.

The second failure is one of accountability and it is arguably more structurally dangerous. Most deep learning systems cannot explain their outputs. They identify patterns without being able to narrate their reasoning in terms a clinician or patient can examine, which directly undermines informed consent: a patient cannot consent to a pathway they cannot understand, and a doctor cannot responsibly endorse a recommendation they cannot explain. AI is also capable of hallucination by producing outputs that are clinically plausible, confidently delivered, and factually wrong. In medicine, a convincing error is far more dangerous than an obvious one precisely because it escapes scrutiny. A 2025 House of Lords Library briefing confirmed that no clear legal framework yet determines liability when AI causes patient harm in the NHS. The developer, hospital, and clinician can each point elsewhere. Medicine has always demanded that someone answer for harm done to a patient. AI has quietly made that demand almost impossible to enforce.

None of this is an argument for uninventing AI but rather it is an argument for treating its failures as the medical emergencies they are. The NHS lung cancer programme, powered partly by AI, is expected to diagnose up to 50,000 cancers by 2035, catching at least 23,000 at an earlier and more treatable stage. AI accelerated the COVID-19 vaccine development that saved millions of lives. The potential of AI as medicine's great equaliser by delivering specialist-level diagnosis to clinics that will never see a specialist which remains one of the most important healthcare opportunities of this century. These gains are too significant, and the diseases too urgent, to sacrifice. However, imagining a world without AI in medicine demands that we state plainly what medicine is for: equity, dignity, accountability and measure where we are against those values. The question is not whether to keep AI. It is whether we are yet capable enough to handle it.

Medicine runs on faith where that knowledge will be trusted to be used with care, and that no patient will be made invisible by the systems built to serve them. That obligation does not disappear because an algorithm is making the decision. As a future doctor, I will inherit these tools - trained on data that carries the imprint of every injustice medicine has not yet corrected. I refuse to use them uncritically. The most dangerous thing about AI in medicine is not that it will fail. It is that we will not notice when it already has and that in our uncritical reliance on it, we quietly erode the very thing medicine cannot function without: the trust, judgement, and moral responsibility of the person standing in front of the patient.

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