

Shaping the Future Together: Innovation and Transformation – Q&A's

Wed 24 June, morning webinar

Question	Answer	Answered by
Many clinical records have lots of missing data, which can be a powerful cause of error in AI systems (which we will not know about as unable to look into the 'black box'). Does this mean that future AI methods will only ever be hypothesis forming? (ie still needing statistical analytical methods to check).	Missing data is a problem whether you're using traditional statistics or AI. AI doesn't magically fix poor quality data. If anything, it can reinforce problems that are already there if you're not careful. That's why getting the data right has to come first. There's no point building increasingly clever models on shaky foundations. I don't think AI will always just be used to generate hypotheses. I think it'll become a useful tool for supporting decisions. But when you're talking about things like implant surveillance or anything that could affect patient care, I'd still want to see the findings backed up by proper statistical analysis and clinical judgement. The black box issue is another reason I'm keen on explainable AI. We don't necessarily need to understand every line of code, but we do need to understand why a model is giving us a particular answer before we start relying on it.	Chris Boulton, Director of Operations, NJR
Q for Chris: You made a really good comment "potential to become" - bearing in mind the fragility around data security more generally and the ability to 'hack' into NHS datasets (e.g. TARN), do you envisage a point where we see AI being limited in analysing large scale data sets to	To the question as to whether AI itself should be restricted because of security concerns. Personally, I don't think AI is the issue. The issue is how we manage access to data. If the data are held in a secure environment with good governance and proper controls, AI is just another way of analysing them.	Chris Boulton, Director of Operations, NJR

ensure ongoing data security of data? How do you think the use of Palantir platforms in NHS data may affect developments (if at all)?	The second (more important) point is public confidence. Every time there's a well-publicised data breach, people understandably become more cautious. For the National Joint Registry where we are reliant on patients voluntarily trusting us with their data, that's a real worry. We've got to be open about how data are protected and how they're being used.	
Thank you, Chris, for presenting the NJR strategy for AI. This has potential for advancing analytics and improving workflow efficiency and data quality. From the NJR's perspective, what are the key building blocks needed to get started, and what do you expect will be the main implementation challenges to overcome in making AI an embedded and sustainable capability rather than a standalone innovation?	I think for registry data, everything starts with data quality. If the underlying data aren't good enough, AI analytics is going to generate flawed outcomes, but we can use AI tools to help address the DQ issues. The next thing is governance. We need clear rules around how models are developed, tested, approved and monitored over time. You also need the right people. This isn't just a technical exercise. You need clinicians, analysts, information governance specialists and technical teams all working together. And finally, people need to be comfortable using it. If nobody trusts the outputs, or understands what the system is doing, it won't become part of everyday practice. The biggest challenge is probably moving beyond pilots. Healthcare is really good at proving that something could work. We're not always as good at making it part of routine business.	Chris Boulton, Director of Operations, NJR
Chris, thank you for a very interesting presentation. How exactly do you think the oversight of AI models should be carried out to ensure their fairness and eliminate bias? Thank you.	I don't think it's realistic to say we'll eliminate bias completely. Healthcare data reflect the real world, and the real world isn't perfect. What we can do is look for bias, understand where it's coming from and make sure it isn't affecting decisions unfairly. That starts with making sure the data are representative, testing models properly before they're used and then continuing to monitor them afterwards. You can't just	Chris Boulton, Director of Operations, NJR

	switch an AI model on and assume it'll stay accurate forever. And ultimately, someone has to be accountable. AI should support people making decisions. It shouldn't replace responsibility.	
Thank you to both presenters for very insightful presentations. To link the two presentations, could AI play a role in accelerating the conversion of heterogeneous datasets into a common data model to enable more effective multicentre analysis—and are there already any examples of AI-facilitated OMOP conversion?	Chris: A lot of the work involved in converting datasets into something like OMOP is time-consuming and repetitive. My team spent over 6 months mapping just part of the National Joint Registry dataset to OMOP. AI could definitely help by suggesting mappings, recognising similar fields and doing a lot of the groundwork. Dani: Many examples exist, and lots of development is ongoing on this	Chris Boulton, Director of Operations, NJR & Professor Daniel Prieto-Alhambra, Professor of Pharmaco- and Device Epidemiology, University of Oxford, NDORMS
A question for Daniel: data protection and AI frameworks vary between EU countries and the UK. Do you think the UK struggles to comply with the EU legislation and is behind in some respects, such as regulations? For instance, the EU have the EU AI Act which is in its final stages for approval and the UK does not have an equivalent piece of legislation in the pipeline.	For now we have not observed major misalignments, but this is an area of concern for sure. EU AI Act and EHDS (European Health Data Space) are specific examples that might need action to continue the alignment	Professor Daniel Prieto-Alhambra, Professor of Pharmaco- and Device Epidemiology, University of Oxford, NDORMS
Really informative presentation, thanks Daniel. Is the EHDS data linking with the secure data environment (SDE)?	EHDS does not access any data. They just facilitate collaboration, but everything happens in a federated manner where no patient-level data is transferred across institutions	Professor Daniel Prieto-Alhambra, Professor of Pharmaco- and Device Epidemiology, University of Oxford, NDORMS

Thanks Dani -really interesting big model data. Does access to any data sets come via research projects, or are clinicians able to apply for data to look at treatment effectiveness and to undertake multi-country benchmarking of prescribing, etc?	Anyone is able to apply/collaborate. EHDEN is the obvious easiest way to access data partners in the network as they are a one-stop-shop from feasibility to engagement/contracting. But anyone can contact data partners directly. The EHDEN Portal includes information to do this	Professor Daniel Prieto-Alhambra, Professor of Pharmaco- and Device Epidemiology, University of Oxford, NDORMS
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