

AI at the forefront of efforts to treat coronavirus patients

- AI imaging database will improve diagnosis of patients presenting with COVID-19 symptoms
- Increased speed and accuracy in diagnosis can lead to early medical intervention and save lives

NHSX, a unit tasked with driving the digital transformation of care in the NHS, has brought together over 40,000 CT scans, MRIs and X-rays from more than 10,000 patients across the UK during the course of the pandemic.

Access to this National COVID-19 Chest Imaging Database (NCCID) has now been extended to hospitals and universities across the country who are using the images to track patterns and markers of illness. The database can speed up diagnosis of COVID-19, leading to a quick treatment plan and greater understanding of whether the patient may end up in a critical condition.

Matt Hancock, Secretary of State for Health and Social Care, said:

The use of artificial intelligence is already beginning to transform patient care by making the NHS a more predictive, preventive and personalised health and care service.

It is vital we always search for new ways to improve care, especially as we fight the pandemic with the recovery beyond. This excellent work is testament to how technology can help to save lives in the UK.

Clinicians at Addenbrooke's Hospital in Cambridge are developing an algorithm based on the NCCID images to help inform a more accurate diagnosis of patients when they present to hospital with potential COVID-19 symptoms and have not yet had a confirmed test. Using visual signatures of the virus, as they appear in chest scans, they are able to compare the patterns in the patient's imaging with those seen previously in the NCCID to get a more accurate diagnosis and prognosis.

Understanding the earlier stages of disease means that clinicians are more easily able to implement appropriate, early medical interventions, reducing the potential for later complications. This includes giving patients oxygen and medication before they reach a critical stage, and predicting the need for additional ICU capacity, enabling the management of beds and staff resource in those settings.

Carola-Bibiane Schönlieb, Professor of Applied Mathematics and head of the [Cambridge Image Analysis](#) group at the University of Cambridge, said:

The NCCID has been invaluable in accelerating our research and provided us with a diverse, well-curated, dataset of UK patients to use in our algorithm development.

The ability to access the data for 18 different trusts centrally has increased our efficiency and ensures we can focus most of our time on designing and implementing the algorithms for use in the clinic for the benefit of patients.

By understanding in the early stages of disease, whether a patient is likely to deteriorate, we can intervene earlier to change the course of their disease and potentially save lives as a result.

The NCCID is also helping researchers from universities in London (University College London), and Bradford, to develop AI tools that could help doctors improve the treatment for patients with COVID-19.

The database is helping to inform the development of a potential national AI imaging platform to safely collect and share data, developing AI technologies to address a number of other conditions such as heart disease and cancers.

The NCCID is one workstream taken forward by the NHS AI Lab at NHSX. The NHS AI Lab has also set up and launched a £140 million AI award this year in collaboration with the Accelerated Access Collaborative (AAC) and National Institute for Health Research (NIHR), which aims to bring the benefits of AI technologies to patients and staff across health and care. Initial bids were awarded to 42 organisations in September 2020 with a further round of bids closing last month.

Dominic Cushnan, Head of AI Imaging at NHSX, said:

We are applying the power of artificial intelligence to quickly detect disease patterns and develop new treatments for patients. There is huge potential for patient care, whether through quicker analysis of chest images or better identification of abnormalities.

The industrial scale collaboration of the NHS, research and innovators on this project alone has demonstrated the huge potential and benefits of technology in transforming care.

Evis Sala, Professor of Oncological Imaging at the [University of Cambridge](#), said:

The NCCID team have been extremely knowledgeable, helpful and responsive to our questions throughout the process. This is precisely the initiative we need to ensure we are better prepared and more responsive for future pandemics.

Dr Joe Jacob, consultant radiologist and research lead at BSTI, said:

The National COVID-19 Chest Imaging Database was developed with the support and enthusiasm of chest radiologists and healthcare professionals from around the United Kingdom.

Their efforts have helped to provide a resource that will help the NHS in the management of the healthcare emergency engendered by COVID-19.

NHSX was able to quickly establish the project during the spring by working closely with Royal Surrey NHS Foundation Trust to scale up an existing data collection process.

Dr Mark Halling-Brown, Head of Scientific Computing at Royal Surrey County Hospital, said:

Royal Surrey NHS Foundation Trust has led the way in creating and sharing research imaging databases that have enabled the development of AI tools, and has more recently specialised in the evaluation and validation of AI radiology products within a range of specialties supporting their safe deployment into the clinic.

Our expertise allowed us to help build the National COVID-19 Chest Imaging Database and we are excited by the potential of the AI solutions being developed and the research underway that will use this dataset.

Led by NHSX, the NCCID is a collaborative effort with the British Society of Thoracic Imaging (BSTI), Royal Surrey NHS Foundation Trust and Faculty, a London-based AI specialist.

All of the scans in the library are stripped of any identifying patient details by each hospital trust before they are submitted to the national collection, ensuring researchers are only able to access pseudonymised information.

To deliver technology for use in health and care, the NHS AI Lab has also this week published [A guide to good practice for digital and data-driven health technologies](#), setting out what the NHS is looking for when it buys digital and data-driven technology for use in health and care.

[Find out more about the NCCID and see a full list of research projects](#)

The full list of NHS trusts submitting data is below and we actively encourage more trusts to send in their data to continue to grow the database:

1. Royal United Hospitals Bath NHS Foundation Trust
2. Brighton and Sussex University Hospitals NHS Trust

3. London North West University Healthcare NHS Trust
4. George Eliot Hospital NHS Trust
5. Cwm Taf Morgannwg University Health Board
6. Hampshire Hospitals NHS Foundation Trust
7. Betsi Cadwaladr University Health Board
8. Ashford and St Peter's Hospitals
9. Royal Cornwall Hospitals NHS Trust
10. Sheffield Children's NHS Foundation Trust
11. Liverpool Heart and Chest Hospital NHS Foundation Trust
12. Norfolk and Norwich University Hospitals NHS Foundation Trust
13. Royal Surrey NHS Foundation Trust
14. Sandwell and West Birmingham NHS Trust
15. West Suffolk NHS Foundation Trust
16. Somerset NHS Foundation Trust
17. Cambridge University Hospitals NHS Foundation Trust
18. Imperial College Healthcare NHS Trust
19. Oxford University Hospitals NHS Foundation Trust
20. Sheffield Teaching Hospitals NHS Foundation Trust

See a list of [AI in Health and Care Award winners](#)

British public urged to play their part in historic vaccine roll out

- Public urged to join the national effort by helping family and friends aged 80 and over to get their life-saving jabs
- Government calls on the public to commit to 3 pledges to support the roll out of COVID-19 vaccines
- Around 45% of people aged 80 and over have now been vaccinated and over one million have been offered a jab at an NHS vaccination centre

The NHS has vaccinated around 45% of those aged 80 and over in England and is encouraging people who have been offered a vaccine to book their appointments as soon as possible. Over one million people aged 80 and over have now been invited to book their jab at one of England's NHS vaccination centres.

Helping vulnerable people to get their vaccinations is one of three pledges the government has asked the public to make to support the largest vaccination programme in British history.

The 3 pledges are:

- Help out – help those aged 80 and over by supporting friends, family and loved ones with their appointments, as well as volunteering to help those in the community

- Join up – sign up to clinical trials for COVID-19 vaccines and treatments
- Stay informed – keep up to date with accurate and trusted NHS advice and make sure to share facts with friends and family

By taking part in one or more of these pledges, members of the public can join the national effort and support the NHS as the vaccination programme continues to expand.

Health and Social Care Secretary Matt Hancock said:

Throughout this pandemic, I have been in awe of how much the British public has contributed to the fight against the virus. I want to thank everyone for the time, effort and patience they have put in to keep themselves and others safe.

We recognise that so many people want to support our NHS so health and care workers can continue to save lives, and now is your chance to get involved by helping the remaining people aged 80 and over get their jabs.

I urge everyone, no matter who you are, what you do or where you're from, to come forward and take on our three pledges. Everyone has a part to play in this national effort – to protect our NHS, our loved ones and other people's loved ones too.

The 3 pledges are:

Help out

The NHS is working tirelessly to offer vaccinations to the most vulnerable as quickly as possible, and remains on track to reach the government's target of vaccinating the top four cohorts – those over the age of 70, care home residents and staff, NHS workers and clinically extremely vulnerable individuals – by 15 February.

People eligible for vaccination will be contacted by letter or text, inviting them to their appointments, and the NHS has stood up vaccination sites in local communities across the country – from GP surgeries and hospitals, to pharmacies and large-scale vaccination centres. It has also worked to deliver vaccines to thousands of care homes.

The single most important thing everyone should do is stay at home and follow the current national restrictions – by doing this, people will help stop the spread, protect the NHS and, therefore, save lives.

The public can help with vaccination efforts by encouraging relatives, friends and neighbours aged 80 and over to book their vaccination

appointments and helping them with forward planning. For those who live with people getting their vaccinations, they can also support with transport to and from the vaccination sites. It is essential strict social distancing is maintained at all times and people follow Hands, Face, Space.

There are also a number of opportunities to support at-risk people in the community and help ease pressures on local NHS services while it continues to rollout the programme. This includes the [NHS Volunteer Responder](#) scheme, delivered by the Royal Voluntary Service in partnership with NHS England and GoodSAM. Through the scheme, people can undertake a range of tasks, including shopping and prescription collection, supportive 'check in and chat calls' and transport to and from vital medical appointments.

NHS Volunteer Responders will also be supporting the vaccination programme as Steward Volunteers. Volunteers who have already offered their support will be contacted when they are needed.

Case study

Liz Parry, an NHS Volunteer Responder, has so far completed 490 shopping and prescription collections for vulnerable people in her community. She said:

We all need to pull together to keep our communities safe and defeat this virus.

Volunteering is without a doubt the most rewarding thing I have ever done and it's so humbling to be part of the team making a difference to people in need.

Join up

There are a number of [ongoing clinical trials](#) for both vaccines in development and promising treatments for COVID-19 which the government urges people to take part in to support the pandemic response.

Clinical trial volunteers have played a crucial part in the pandemic response so far, helping the NHS roll out both of its vaccines quickly and safely, as well as treatments already saving lives across the NHS – such as dexamethasone and tocilizumab.

Case study

Yusuf, a Transport for London worker, volunteered to take part in the Novavax vaccine study after losing a close colleague and a member of his family to the disease. He said:

Once you know someone who's been affected by COVID-19, it makes a difference.

I didn't have an opportunity to volunteer during the first

lockdown, so this is my way to be a part of the efforts to help London and to help Britain get through this.

He called volunteering for the trial a 'really positive experience' and urged other people to 'step up', particularly those who are also from the Caribbean community who, evidence shows, are disproportionately impacted by the virus.

Stay informed

One of the most important things people can do to support the vaccine effort is to make sure they and the people around them are fully equipped with the latest NHS vaccine advice. People can keep up to date through the official NHS website and if a family member, close friend or acquaintance is offered their vaccine, encourage them to take it and make sure they have access to official advice.

The public should also watch out for COVID-19 vaccine email scams, reporting any suspect emails to the Suspicious Email Reporting Service. This is following reports of cyber criminals using the vaccine to lure people into sharing personal details.

Chief Executive of Royal Voluntary Service, Catherine Johnstone CBE said:

We are incredibly thankful to all of the volunteers who have stepped forward so far to help us keep communities safe through the pandemic. With vulnerable people once again being asked to stay at home and shield, we have seen an increase in requests for support and now, more than ever need more volunteers to join us.

We would like to urge anyone who can to please support your community with vital tasks such as shopping and prescription collection and medical transport so we can keep people safe and support the NHS.

Background

Links on how to get involved in the three pledges can be found below:

- Help out
- Join up
- Stay informed
 - read the [latest NHS vaccine advice](#)
 - people can report suspect emails they've received but not acted upon to the Suspicious Email Reporting Service (SERS), by forwarding them to report@phishing.gov.uk
 - those who have provided personal or financial details, or transferred any money as a result of a suspicious email, should report what has happened to Action Fraud as soon as possible by calling 0300 123 2040 or through the Action Fraud [website](#)

Since the start of the pandemic, Royal Voluntary Service partnered with NHS England and GoodSAM to deliver the NHS Volunteer Responder scheme.

NHS Volunteer Responders provides essential support to vulnerable people across England and since March volunteers have delivered 1.4million tasks for those in need in the community.

The NHS scheme, delivered in partnership with Royal Voluntary Service and GoodSAM has so far enabled 360,000 on-duty volunteers to complete 1.4 million vital tasks for those needing help in the community.

[Presidential elections in Uganda 2021: UK statement](#)

Press release

Minister for Africa James Duddridge has given a statement following the presidential elections in Uganda.



Minister for Africa, James Duddridge, said:

The UK Government welcomes the relatively calm passing of the elections in Uganda and notes the re-election of H.E. Yoweri Museveni as President.

Many in Uganda and beyond have expressed concerns about the overall political climate in the run up to the elections as well as the electoral process. It is important these concerns are raised, investigated and resolved in a peaceful, legal and constitutional manner. We ask that all parties, including the security services, but also all of Uganda's political movements, act with restraint to ensure the peaceful resolution of disputes.

We commend the role of the media, observers and civil society

throughout the elections. The UK is concerned by the national internet shutdown, which clearly limited the transparency of the elections, and constrained the freedoms that Ugandans are entitled to.

The UK is a steadfast advocate for Ugandan democracy and we will continue to work to achieve inclusive democratic progress that delivers for future generations. As a longstanding partner, we urge Uganda to continue to strive to meet its own international human rights commitments, including respecting the right to freedom of opinion, freedom of expression and freedom of the media.

ENDS

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[Home Office working to restore Police National Computer data](#)

Press release

Home Office engineers work to restore data lost from the Police National Computer



Home Secretary Priti Patel and Policing Minister Kit Malthouse have today thanked Home Office engineers working throughout the weekend to restore data lost from the Police National Computer as a result of human error during a routine housekeeping data update earlier this week.

Working with the NPCC and other policing partners, data engineers within the Home Office Digital, Data and Technology function continue to develop and test new code with the ultimate aim of restoring the data. Both the Home Secretary and Policing Minister are being kept regularly updated on this

process.

A fast time review identified the problem and corrected it so it cannot happen again.

Home Secretary Priti Patel said:

Home Office engineers continue to work to restore data lost as a result of human error during a routine housekeeping process earlier this week.

Public safety is the number one priority of everyone within the Home Office, and I would like to thank the data engineers working to restore these records.

I continue to be in regular contact with the team, and working with our policing partners, we will provide an update as soon as we can.

Policing Minister Kit Malthouse said:

We continue to work closely with the police to rectify this issue and I want to thank both Home Office staff and policing partners for their ongoing efforts.

As I've said, the affected records apply to cases where individuals were arrested and then released with no further action, and we are working to recover the affected records as a priority.

While we do so, the Police National Computer is functioning and the police are taking steps to mitigate any impact.

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[E3 Statement on the JCPoA: 16 January 2021](#)



Statement by the governments of France, Germany and the United Kingdom:

“We, the governments of France, Germany and the United Kingdom, are deeply concerned by Iran’s announcement that it is preparing to produce uranium metal.

Iran has no credible civilian use for uranium metal. The production of uranium metal has potentially grave military implications. Under the Joint Comprehensive Plan of Action (JCPOA), Iran committed to not engaging in production of uranium metal or conducting research and development on uranium metallurgy for 15 years.

We strongly urge Iran to halt this activity, and return to compliance with its JCPOA commitments without further delay if it is serious about preserving the deal”.

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