Witness Name Vinod Diwakar Statement No. WITN7668001

Exhibits: WITN7668002-7668009

Dated: 14 March 2023

INFECTED BLOOD INQUIRY

WRITTEN STATEMENT OF VINOD DIWAKAR

I, VINOD DIWAKAR WILL SAY AS FOLLOWS:

- 1. My name is Vinod (Vin) Diwakar I work for NHS England and am based at Wellington House, 133-135 Waterloo Road, London SE1 8UG. My date of birth is GRO-c 1967.
- I am currently the Medical Director for Transformation and Secondary Care in the national Transformation Directorate for NHS England and have been in my current post since April 2022.
- 3. My qualifications are Bachelor of Medicine and Bachelor of Surgery (University of London), Member of the Royal Colleges of Physicians (MRCP) and Masters in Medical Education (University of Dundee). I am a Fellow of the Royal College of Paediatrics and Child Health and a Member of the Faculty of Medical Leadership and Management by subscription. I qualified in medicine in 1990 and was Medical Director of Birmingham Children's Hospital NHS Foundation Trust (2009-2015), Great Ormond Street Hospital for Children NHS Foundation Trust (2015-2017) and for the London Region of NHS England (2017 2019) and NHS Improvement (2019 2022).
- 4. Ahead of responding to your individual questions, it may be helpful if I set out our broad position on records management.

- 5. NHS England provides a non-statutory guidance function with respect to records management, and publishes the guidance you refer to at question 5, the *Records Management Code of Practice for Health and Social Care 2021* [RLIT0001284]. Further, we fund and deliver a wide number of programmes which support records digitisation and sharing, although that work is typically targeted to deliver wider-scale digital transformation and objectives such as improved patient care, rather than digitisation as an end in itself. That work acts in support of long-established policy objectives which are set out principally in the Long Term Plan (WITN7668002)¹, A Plan for Digital health and Social Care (WITN7668003)², and Data Saves Lives: Reshaping Health and Social Care with Data (WITN7668004)³.
- 6. NHS England does not enforce adherence to the Code we publish, and I am not aware that we collate any data or structured evidence with respect to digitisation of files specifically, their quality, or the operational processes individual trusts or NHS entities may pursue. NHS entities are legally separate bodies, and so are individually responsible for the management of their own records and compliance with relevant guidance and law. As such, questions regarding implementation will have to be addressed to them. The inquiry may also wish to note the responsibilities of the CQC with respect to good governance, including records management. These regulations are detailed in the Health and Social Care Act 2008 (Regulated Activities) Regulations 2014: Regulation 17⁴.
- 7. However, I will provide a view on behalf of NHS England where I can. In some cases these answers will be the views of myself and my team based on our collective and extensive experience, but may not be underpinned by robust evidence.
- This witness statement has been drafted on my behalf. The questions posed in the Rule
 9 Request of 1 December 2022 are broad in scope and reference issues and matters

¹ <u>https://www.longtermplan.nhs.uk/</u>

² <u>https://www.gov.uk/government/publications/a-plan-for-digital-health-and-social-care/a-plan-for-digital-health-and-social-care</u>

³ <u>https://www.gov.uk/government/publications/data-saves-lives-reshaping-health-and-social-care-with-data/data-</u> <u>saves-lives-reshaping-health-and-social-care-with-data</u> 4

https://www.legislation.gov.uk/uksi/2014/2936/regulation/17#:~:text=There%20are%20currently%20no%20know n%20outstanding%20effects%20for,ensure%20compliance%20with%20the%20requirements%20in%20this%20Par t.

which pre-date the creation of NHS England. However, where possible, responses have been provided. This statement is the product of drafting following numerous internal communications between a number of senior individuals within the organisation covering a number of different teams. The responses go beyond matters which are within my own personal knowledge but given the process here described, I can confirm that all the facts set out in this statement are true to the best of my knowledge and belief.

- 9. This statement also seeks to strike a balance between providing sufficient detail to assist the Inquiry with the questions it is investigating, and not providing so much information that the core assistance that the Inquiry has requested is obscured.
- 10. The questions asked are set out below together with my response.

Q2. What have been the historic weaknesses and challenges of medical record-keeping in the NHS? Please consider on- and off-site record keeping for both hard-copy and digital records. In relation to hard copy records, the presentation by Inquiry counsel [INQY0000378] may be of assistance but your views are sought as to whether there are further issues relating to hard copy records that may be identified and particularly in relation to weaknesses and challenges with digital records.

- 11. As detailed in response to Question 3 (below), the responsibilities for records management, including identifying and mitigating challenges associated with the storage and use of those records whether in hard copy or digital form, largely sits with individual NHS organisations. As such, NHS England is only able to provide a response with regard to our own internal records management procedures, the guidance we provide to the sector, and where we have digitisation programmes which result in the digitisation or use of records.
- 12. Records management is complex, as evidenced by the presentation from Inquiry Counsel, and over time records may well have moved through the management of multiple NHS entities due to restructures or as patients move address. Further, information governance expectations, standards, and technology have changed over time, meaning organisations will have had to consistently update their management processes over time.

- 13. NHS England was established by statute in April 2013 so does not have first-hand knowledge of the historic weaknesses and challenges of medical record-keeping in the NHS. I do not have evidence regarding the historic weaknesses and challenges of medical record-keeping in the NHS, but we do see weaknesses now in paper records which we are seeking to address through our digitisation programmes. To that end, the principal focus for NHS England at this time is in:
 - a. Driving greater digitisation across the NHS, which includes promoting digital record keeping primarily through greater use of Electronic Patient Record systems; and
 - b. Ensuring those records are linked together and readily accessible to those who need them – such as for direct patient care, or for patients themselves where it is safe to do so.
- 14. The shift to digital record keeping does offer several further significant benefits which are set out in the various documents I referred to in response to Question 1, although they are not without their own challenges and ongoing management requirements.

Q3. What are the respective roles and responsibilities of NHS England and the DHSC (with particular reference to NHS Digital and/or the Transformation Directorate) in relation to medical records management?

- 15. NHS England's Transformation Directorate incorporates the Digital Policy Unit, a joint unit of NHS England and the Department for Health and Social Care. The Directorate is broadly responsible for driving digitally-enabled transformation and improvement across the healthcare sector. That responsibility is discharged through the delivery of a number of policy, regulatory, communications, programmatic, and direct delivery interventions in partnership with organisations throughout the sector. While the funding and support associated with various programmes may come with criteria or obligations on the part of the recipient organisation, it is almost always a decision for individual NHS organisations to accept that support and to take part in the programme.
- 16. With regard to records management, the Transformation Directorate is responsible for:
 - a. Drafting, consulting upon, publishing and communicating the Records Management Code of Practice;

- b. Seeking approval from the Health and Care Panel for publishing the Code. The Panel includes representation from the Information Commissioner's Office, National Data Guardian, NHS England, Care Quality Commission and the Health Research Authority;
- c. Responding to queries on records management from the health and care system; and
- d. Ensuring compliance with the Data Security and Protection Toolkit⁵.
- 17. The Department of Health is responsible for managing the corporate records it holds as Controller and commissioning the Records Code of Practice. It also has the overall policy lead on data policy in the health space. The inquiry may note the provisions related to data in the Health & Care Act 2022 to that end.
- 18. NHS England's internal-facing Corporate Information Governance function is responsible for setting NHSE's internal records management policy and processes, which adhere to the Records Management Code of Practice.

Q4. Who has responsibility for deciding whether, when and how to

- a. move to digital records and
- b. digitise historic medical records?
- 19. Consistent with the Records Management Code of Practice for Health and Social Care 2021 (RLIT0001284), providers are encouraged to move away from paper records in favour of digital records. However, the responsibility for undertaking that work sits with individual providers.
- 20. It is for GP practices, NHS Trusts, pharmacists, or other such providers to make their own decisions with regard to both when and how to a) move to digital records, and b) digitise historic records.

⁵ <u>https://digital.nhs.uk/data-and-information/looking-after-information/data-security-and-information-governance/data-security-and-protection-toolkit</u>

21. NHS England (and DHSC) do however support a number of initiatives which encourage and facilitate the switch to digital record keeping. Such measures are referenced elsewhere in this response at greater length.

Q5. The Inquiry has been informed by several Trusts that the Records Management Code of Practice for Health and Social Care 2021 [RLIT0001284] is the main guidance document in records management for NHS England. The Code makes the following recommendation: "Wherever possible organisations should be moving away from paper towards digital records." (p.4)

- a. Please comment on the extent to which NHS Trusts follow this guidance, providing specific data where possible.
- 22. The Records Management Code does not have a statutory basis but is guidance to the NHS. As such, we do not monitor and enforce compliance with the Code and therefore do not hold any evidence to respond to this question.

b. Please set out the measures taken by NHS England and / or the DHSC to support and enable NHS Trusts to move towards digital records.

23. NHS England is investing approximately £2bn and supporting NHS trusts to reach a core level of digital capability by March 2025, in line with the commitment in the NHS Long Term Plan. Details of other initiatives in this space are detailed elsewhere in this response.

c. Is there an obligation or requirement for all NHS Trusts to digitise medical records within a particular time period?

24. As 5b above.

d. What are the barriers that continue to exist preventing all NHS Trusts having achieved a move to contemporaneous digital records?

25. The measures for successful digitisation are set out in the What Good Looks Like framework (WITN7668005)⁶. The barriers to achieving that, including to achieving a contemporaneous digital record, include the complex landscape for information

⁶ https://transform.england.nhs.uk/digitise-connect-transform/what-good-looks-like/

governance purposes (although we are making progress in clarifying this area⁷); and the financial cost of installing relevant systems and linking them together.

e. What are the barriers that continue to exist preventing the digitisation of historic records in all NHS Trusts?

26. As 5d above.

Q6. The Code states that "Managing electronic records presents a significant challenge, especially for typical health and social care organisations, where electronic records are stored in a large variety of databases, email and file systems (including shared drives), which have no standardisation in place. The risk of alteration or deletion makes this challenge even greater." [Paragraph 147] Please compare the relative risks of alteration or deletion of paper and electronic records. To what extent can digitisation of records minimise the risk of human error or deliberate tampering?

- 27. Paper records digitised at GP practices via the NHS England Continuity and Digitisation of Records programme are scanned to a national specification which includes the requirement that the scanning provider must be BS10008 accredited. This ensures that the scanned version of the paper record is legally admissible.
- 28. The digitisation of a paper record reduces the risk of tampering, misfiling or damage to the paper record. Once attached to the patient's structured digital record, either in a GP system, or stored in a digital repository or cloud storage, there is an audit trail of any access of the records. This audit trail is not possible to the same degree with a paper record storage system. Comparable audit capabilities exist for Electronic Patient Record systems within Trusts.
- 29. However, the precise means and extent of traceability will depend on the specific system and locally-made implementation decisions. While it is never entirely possible to eliminate the risk of unwarranted access, these systems significantly reduce the scope and make it easier to trace when needed.

⁷ Information governance - NHS Transformation Directorate (england.nhs.uk)

- 30. Further, internationally agreed standards such as ISO 16175 set the principles and functional requirements which underpin the creation and management of electronic records in office environments, and which can aid transparency.
- 31. To the best of our knowledge, comparison of the relative risks of alteration or deletion of paper and electronic records has not been undertaken to date by NHS England.

Q7. In a statement to the Inquiry [12th September 2022, WITN4665008] Suzanne Rankin, Chief Executive Officer of Cardiff and Vale University Health Board, described how digitisation enabled the destruction of hard copies, depending on the type of record: "Microfiche, scanned to CD, Digitally Scanned Records and Electronically Scanned' - some categories of these records no longer have the original copy available, others can be 'reconstituted on demand", while others are also still available in the original copy.

- a. How common is it for digitised records to completely supersede hard copies?
- 32. There is currently no digitisation of paper GP records for deceased or unregistered records held in NHS England's archives. For records of live patients held at GP practices, there is currently no complete data in respect of the extent of digitisation. However, by the end of 2023, following completion of the current digitisation pilots we expect there to be a minimum of 9 million (representing 15% of the total registered population in England), fully digitised patient GP records. For these records, the paper record will have been destroyed.
- 33. Beyond this, we do not hold data on the regularity with which digitised records fully supersede hard copies. Based on experiences to date, providers will typically scan and then shred the original document (provided it has been scanned to the appropriate legal standard for admissibility as evidence), given some of the business case benefits of scanning will result from savings in storage and handling costs.

b. Under what circumstances are hard copies still retained?

34. Hard copies are most likely to be retained where an organisation has not yet undertaken full digitisation, and so is still either partially or fully paper-based (the former being more common). 35. Provided the hard copy has been scanned to an appropriate quality the hard copy can usually be destroyed. It may be retained where it has historical value, although this is rare.

c. Is partial digitisation more common than full digitisation?

- 36. An exercise is currently underway to benchmark the digital maturity of NHS trusts against our What Good Looks Like framework, but we expect it to show that partial digitisation is significantly more common than full digitisation.
- 37. For instance, GP practices who have not completed digitisation of their legacy patient records will also hold coded digital records for their patient, and will be scanning into their records any current hard copy paperwork received for their patients.

Q8. In a statement to the Inquiry on behalf of University Hospitals Bristol and Weston NHS Trust, [7th September 2022, WITN7125001] Eric Sanders outlined how the Trust has gone through several stages of digitisation: "The Trust has a historic scanning system which was called 'Aurora', later to become Document 1. The records held in this repository are available via our internet portal and will soon be incorporated into our Electronic Document System... The Trust also historically commissioned an external scanning contractor and also used a company called Gateway. These records are all available on our Casenote tracking system." What are the specific challenges of such repeated migrations of records?

38. As stated above, NHS England is not responsible for the operational delivery of record digitisation; this remains the purview of individual trusts and NHS entities. As such, we are unable to provide an evidenced response to this question.

Q9. In a statement to the Inquiry on behalf of Chelsea and Westminster Hospital NHS Foundation Trust, Roger Chinn, Chief Medical Officer of the Trust, [3rd October 2022, WITN7266001] described how many of the Trust's medical records were destroyed in a serious fire at an Iron Mountain storage facility in East London where the "the bulk of the Trust's medical records" were held. As a result of the incident, the Trust's action plan involved "ultimately a consideration of deploying a digital solution for future records."

Would you say that individual moves towards digitisation have been reactive rather than proactive?

- 39. While NHS England cannot comment on behalf of individual entities who may have specific motivations or drivers unique to their circumstances, as in this case, our view is that on the whole moves toward digitisation have been proactive because of the substantial benefits they hold. However, digitisation is not without its challenges and organisations must weigh the benefits and costs of digitisation against their other priorities.
- 40. NHS England policy is supportive of digitisation and we actively encourage providers to take a proactive approach. As stated elsewhere, we have directly supported digitisation through programmes including:
 - a. The NHS England Continuity and Digitisation of Records programme;
 - b. Frontline Digitisation;
 - c. GP IT Futures;
 - d. The Records Management Code of Practice for Health and Social Care 2021.
- 41. These programmes act in support of long-established policy objectives, including those set out in the Long Term Plan (WITN7668002)⁸, A Plan for Digital health and Social Care (WITN7668003)⁹, and Data Saves Lives: Reshaping Health and Social Care with Data (WITN7668004)¹⁰. Those objectives are based on well-established improvements to patient safety, patient care and outcomes, patient and staff experience, productivity, etc., which arise from digitisation and the opportunities for service transformation which digitisation affords.

Q10. What are the difficulties that continue to exist with maintaining medical records and providing access to them across the NHS? Please explain in particular any ongoing issues relating to the following:

⁸ <u>https://www.longtermplan.nhs.uk/</u>

⁹ <u>https://www.gov.uk/government/publications/a-plan-for-digital-health-and-social-care/a-plan-for-digital-health-and-social-care</u>

¹⁰ <u>https://www.gov.uk/government/publications/data-saves-lives-reshaping-health-and-social-care-with-data/data-saves-lives-reshaping-health-and-social-care-with-data</u>

- a. Destruction of records, for example by flood, fire, sewage leaks or server malfunction;
- b. Patients having difficulty obtaining medical records, for example due to the hospital they were originally treated at being closed;
- c. Requests for medical records being ignored;
- d. Delay in obtaining records;
- e. Patients being told no records were held for them but records subsequently found;
- f. Issues with the veracity or quality of medical records, for example inconsistency between oral information and what is recorded in medical records, inconsistencies between records, or inaccuracy;
- g. Missing records, for example a specific procedure or appointment, a specific time period or specific types of records missing;
- h. Ability of different NHS Trusts to access patient records from another NHS trust;
- i. Ability of primary care providers in accessing hospital clinical records.
- 42. It is for individual NHS organisations to identify and address the challenges they face in maintaining medical records, and we would expect them to appropriately mitigate relevant risks. It is also the responsibility of individual organisations to provide patients with access to their records as appropriate, in line with their responsibilities, including those set out in our Code and in statute; and to ensure that records are accurate and comprehensive.
- 43. With respect to subsection B, NHS England provides guidance to patients on how they can access their records¹¹, and we have taken steps to improve direct access. For instance, we are ensuring that the vast majority of patients will have access to all new information added to their GP record via the NHS App by default. As of 24 January over 600 practices (2.3 million patients) had already switched on access for new data to be available direct to patients¹². Several hundred more practices will follow in the coming months.

¹¹ https://www.nhs.uk/using-the-nhs/about-the-nhs/how-to-get-your-medical-records/),

¹² <u>https://www.england.nhs.uk/blog/online-access-to-gp-records-realising-opportunities-and-overcoming-challenges/</u>

- 44. Regarding subsections H and I of your question, the need of different NHS organisations to access each other's records is also well recognised. Sharing records between multiple organisations, each of which is a data controller in its own right, is a legally and technically complex area. These challenges and our approach to them is set out fully in our publication *Data Saves Lives* (WITN7668004)¹³, and our primary programme in this space is the rollout of Shared Care Records, which is creating shared records across Integrated Care Boards which can then be shared nationally amongst appropriate partners. Shared Care Records now cover 100% of England, although work continues to increase connectedness to each local organisation and to improve uptake of that shared record. The *Information Governance Framework: Shared Care Records* may also be of help to you (WITN7668006)¹⁴ as may be the Core Information Standard, produced by the Professional Record Standards Body¹⁵.
- 45. Further, while the NHS England is not responsible for the records of patients held by medical providers in the private sector and currently does not have access to these, provisions have been made in Section 98 of the Health & Care Act 2022 to enable better access to records between the NHS and the private sector¹⁶ in the interests of patient safety.

Q11. What actions are already being taken or might be taken to address any ongoing difficulties?

- 46. As set out in response to Question 10, most of the challenges you specify are for individual NHS organisations to address. At the national level, we continue to invest heavily in the digitisation and digitally-enabled transformation of the NHS, and to support local implementation of these initiatives.
- 47. Key initiatives in this space include:

¹³ Data saves lives: reshaping health and social care with data - GOV.UK (www.gov.uk)

¹⁴ Information Governance Framework: Shared Care Records - NHS Transformation Directorate (england.nhs.uk)

¹⁵ <u>Core information standard – PRSB (theprsb.org)</u>

¹⁶ Health and Care Act 2022 (legislation.gov.uk)

- a. The <u>NHS England Shared Care Records programme</u>, which is ensuring every Integrated Care Board has a basic Shared Care Record solution to link and share core information contained in patient records held by NHS Trusts and primary care. There is still variable use of the shared record, based largely on the levels of digital maturity in the provider organisations associated with a Shared Care Record. The most mature shared care record solutions are being accessed on average once every 2.5 seconds. The next stage of development is twofold:
 - i. Firstly, to enable interoperability between the local shared care records to create a federated network which support direct care and ensure that authorised health and care professionals have safe, secure, and ready access to the patient information that they need to deliver high quality integrated care regardless of where that patient lives.
 - ii. Secondly, to extend the participation in local shared care records to other providers of direct health and care services. These include – but are not limited to – social care providers, other parts of primary care such as community pharmacy, local authority social services, hospices, etc. the exact scope and timing of this extension will depend on local priorities. In time we anticipate that patients and authorised carers will be provided with access to their shared care record.
- b. The <u>Continuity and Digitisation of Records programme</u> in Primary Care is working to strengthen and complete the digital infrastructure required to support digital records within the primary care space. This includes the digital records transfer system and digital repositories for storage of records. The programme is managing several local pilot areas where scanning of historic paper records is underway and setting national standards for digitisation of paper records. Once the supporting infrastructure projects are completed, further digitisation of historic paper records will commence.
- c. Further, NHS England is investing approximately £2bn and supporting NHS trusts to reach a core level of digital capability by March 2025 via the <u>Frontline Digitisation</u> <u>programme</u>, in line with the commitment in the NHS Long Term Plan and

consistent with the frameworks set out in What Good Looks Like (WITN7668005) (as at Q5d).

Q12. How may developments in and use of data analysis and artificial intelligence products have assisted either:

a. Earlier identification of the link between receiving blood products and receiving a diagnosis of Hepatitis C and/or HIV; or

b. A comprehensive 'look back' exercise to identify those who may have received contaminated blood or blood products through the course of NHS treatment.

- 48. Artificial intelligence and data science are widely publicised for their ability to better diagnose certain diseases. The earlier identification of the link between receiving blood products and receiving a diagnosis of Hepatitis C and/or HIV could in principle be supported by these techniques in several ways:
 - a. Predictive modelling: Predictive models can analyse historical data on blood product recipients, including demographics, medical history, and lab test results to identify potential risk factors and predict the likelihood of a diagnosis of Hepatitis C and/or HIV.
 - b. Data visualization: Data visualization tools can be used to graphically represent data, providing insights into patterns and relationships that may not be immediately apparent. This could help identify correlations between receiving blood products and a diagnosis of Hepatitis C and/or HIV.
 - c. Natural Language Processing: NLP can be applied to medical records, allowing for the extraction and analysis of relevant information, such as symptoms and diagnoses, to identify at-risk patients.
 - d. Machine learning: Machine learning algorithms can be trained on large datasets to identify patterns and relationships in data and could help identify patients who are at risk for Hepatitis C and/or HIV, and prioritize them for further testing.

49. However, the challenges associated with the development and deployment of AI tools mean artificial intelligence / machine learning was not used as part of the Hepatitis C Elimination programme. The Patient Search Identification (PSI) software developed by the pharmaceutical firm MSD (WITN7668007)¹⁷ uses key risk factors to prepare a list of high-risk patients, but then presents that list to clinicians. It does not perform any analysis or clinical judgement to determine testing itself. This tool has been piloted and is being rolled out across England. We are not aware of any AI solution currently in operation for this purpose.

50. We are aware of the following studies which may be of interest:

- a. A similar related piece has been developed in Tel Aviv where researchers trained the AI program to study the electronic medical records of about 8,000 patients at Tel Aviv's Ichilov Hospital who were found to be positive for blood infections. These records included demographic data, blood test results, medical history and diagnosis. The models used were gradient boosted tree based learning algorithms called LightGBM. The work has been quoted to have an accuracy of 82% even when ignoring obvious factors such as the age of the patients and the number of hospitalizations they had endured (WITN7668008)¹⁸.
- b. A Nigeria study used an ensemble model for predicting hepatitis C through a multilayer perception technique compared to a Bayesian network (WITN7668009)¹⁹.
- c. An IQVIA study looking at US data on medical claims linked to prescription data capturing demographics, risk factors, symptoms, treatments, and procedures used a logistics regression, gradient boosted trees and a stacked ensemble. These models were compared for precision and recall with the stacked ensemble performing at 97% precision and >50% recall.

¹⁷ https://www.msd-uk.com/stories/msd-the-fight-against-hepatitis-c/

¹⁸ https://www.nature.com/articles/s41598-021-99105-2

¹⁹ https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9092454/

- d. There are a range of predictive models for in-hospital Sepsis with transferable learning. A more general review of the use of AI in infectious diseases can be found at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7153335/.
- 51. As ever with any form of machine learning the quality of prediction is dependent on the data with the above examples having access to large datasets of medical history, demographics and key-risk factors at an individual level.
- 52. With robust data architecture and standards, and sufficiently advanced data science skills within the workforce, the NHS could potentially improve the identification of links between receiving blood products and receiving a diagnosis of Hepatitis C and/or HIV much earlier, allowing for earlier interventions and treatment. Utilising the above AI and data science techniques, a comprehensive "look back" exercise could in principle be performed, allowing for potential earlier identification of those who may have received contaminated blood or blood products. However, more research is required in this space and the view set out here is only indicative.

Q13. Please provide any further comment that you wish to provide about matters of relevance to the Inquiry's Terms of Reference, in particular Terms 1, 5, 6, 7, 9 and 10.

53. We have no further comments.

Statement of Truth

I believe the facts stated in this Witness Statement are true.

Signed	GRO-C: Vinod Diwakar
Dated	14 th March 2023

Table of exhibits:

Document	Unique ID	Date
The NHS Long Term Plan	WITN7668002	02/08/2019
Policy paper: A plan for digital health and social care	WITN7668003	29/06/2022
Policy paper; Data saves lives: reshaping health and social care with data	WITN7668004	15/06/2022
What Good Looks Like	WITN7668005	03/08/2021 (updated on 04/10/21)
Information Governance Framework: Shared Care Records	WITN7668006	02/02/2022
MSD The fight against hepatitis C	WITN7668007	April 2022
Predicting bloodstream infection outcome using machine learning	WITN7668008	Published online 11/10/21
Artificial Intelligence-Based Ensemble Learning Model for Prediction of Hepatitis C Disease	WITN7668009	Published online 27/04/22