

# EHR Audit Trail Report Generation & Review

NJRO-QA-WI-001

## Relates to SOP:

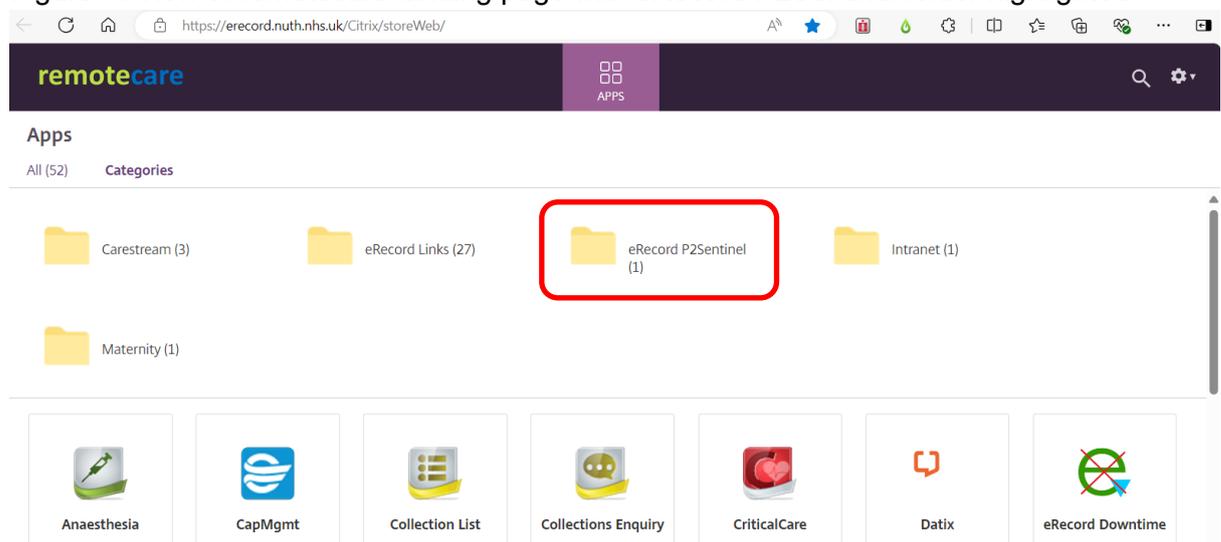
[NJRO-QA-SOP-001](#) – GCP Auditing of Research Studies

[DLV-GEN-SOP-001](#) – Access to eRecord, BadgerNet Maternity, BadgerNet Neonatal and Document Store or Monitors, Auditors and Regulatory Inspections

## Accessing the Electronic Health Record Audit Trail

1. Access the Electronic Health Record ([EHR](#)) via the Trust web browser
2. Select the **eRecord P2Sentinel** folder as shown in Fig 1.

Figure 1: View of remotecare landing page with eRecord P2Sentinel folder highlighted



3. Select the **P2Sentinel Console** and use the specific account credentials provided by IT. These are different to your network username and password
4. From the window that opens, select the Cerner – Access by User ID 5.0.4 by clicking on the play button as shown in Fig 2.

Figure 2: View of report module with the tool selection highlighted

	Actions	Report Definition	Latest Report Run	Reports for Viewing	Disk Use	Created By	Description	Last Modified By
		Cerner - Number of Chart Opens by Patient 5.0.4	<never>	0	0.00 MB	administr...	This repo...	administr...
		Cerner - VIP Chart Access 5.0.4	<never>	0	0.00 MB	administr...	This repo...	administr...
		Cerner - Nosy Neighbor 5.0.4	<never>	0	0.00 MB	administr...	This repo...	administr...
		Cerner - Multiple Failed Logon Attempts Within a Minute 5.0.4	<never>	0	0.00 MB	administr...	This repo...	administr...
		Cerner - Multiple Device Access 5.0.4	<never>	0	0.00 MB	administr...	This repo...	administr...
		Cerner - Access by Role 5.0.4	Mon, Sept...	22	7,440.16 ...	administr...	This repo...	richardso
		Cerner - Access by Personnel Name 5.0.4	Thu, July ...	3	0.02 MB	administr...	This repo...	administr...
		Cerner - Access by MRN and User ID 5.0.4	<never>	0	0.00 MB	administr...	This repo...	administr...
		Cerner - Access by Device 5.0.4	<never>	0	0.00 MB	administr...	This repo...	administr...
		Cerner - User Activity Detail Summary 5.0.4	Fri, August...	1	0.02 MB	administr...	This repo...	administr...
		Cerner - System Load Details Table 5.0.4	<never>	0	0.00 MB	administr...	System L...	administr...
		Cerner - Simple Chart Access 5.0.4	<never>	0	0.00 MB	administr...	The purp...	administr...
		Cerner - Security Activity Detail 5.0.4	<never>	0	0.00 MB	administr...	This repo...	administr...
		Cerner - Same Name as Patient 5.0.4	<never>	0	0.00 MB	administr...	This repo...	administr...
		Cerner - Same Last Name as Patient 5.0.4	<never>	0	0.00 MB	administr...	This repo...	administr...
		Cerner - Person Search Activity Hourly Summary 5.0.4	<never>	0	0.00 MB	administr...	This repo...	administr...
		Cerner - Access by User ID 5.0.4	Wed, Sep...	151	1,026.59 ...	administr...	This repo...	richardso

- A report parameters window will open so that you can define the time period and details of the user under review
- Set the date to 'is between' and enter the date of the period you wish to review. This should cover no more than one month
- Enter the Cerner user ID. This is the same as the users network ID
- Set the namespace as 'newc\_uk'
- Select 'Run'. This will open a Report Status window which will show that the report is in progress. The report may take several minutes to process
- Once the report is finished, the viewing icon will appear in the left-hand column. Click on this viewing icon to open the report. See Fig 3 for reference

Figure 3: Run report status window

Run Report Status				
	Status	Report	Start Time	Duration
	Finished	Cerner - Access by User ID 5.0.4	1:22:34 PM	0:00:30

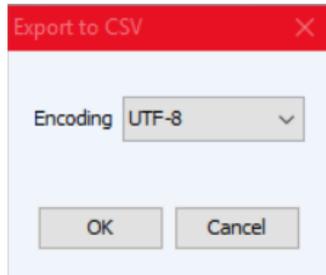
- Extract the report by clicking on the cog icon and selecting export as CSV as shown in Fig 4

Figure 4: Extracting report as CSV

Cerner - Access by User ID 5.0.4								Export	
AUDIT_SOURCE	DATE	TIME	TIMEZONE	USER_ID	PRSNL_NAME	ROLE	PATIENT_L	PDF...	HTML...
N1PRD	01/11/2024	09:17:56	Europe/London	OLIVERJ3			-		
N1PRD	01/11/2024	09:17:56	Europe/London	OLIVERJ3			-		
n1prd.n1.nuth.nhs.uk	01/11/2024	09:18:00	Europe/London	OLIVERJ3	Oliver, Jack Dean	Clinical Coder	-		
n1prd.n1.nuth.nhs.uk	01/11/2024	09:18:00	Europe/London	OLIVERJ3	Oliver, Jack Dean	Clinical Coder	-		
n1prd.n1.nuth.nhs.uk	01/11/2024	09:18:00	Europe/London	OLIVERJ3	Oliver, Jack Dean	Clinical Coder	-		
n1prd.n1.nuth.nhs.uk	01/11/2024	09:18:00	Europe/London	OLIVERJ3	Oliver, Jack Dean	Clinical Coder	-		

12. The 'Export to CSV' window will appear. Ensure the encoding option is set to 'UTF-8' and select 'OK' as per Fig 5

Figure 5: Encoding settings



13. From the new window that opens, select the location to save the audit trail report. For QA audit trail reviews, set the file name to the below network folder and select 'OK'.  
*\\nuth-rnas01\dept35\research & development*
14. This will bring up the R&D shared drive where QA retain documentation. Use the following folders to drill down to the appropriate storage location.  
*QA/Audit/EHR – Audit Trail Review*
15. Click on the folder that specifies the user ID under review or right click in the window and create a new folder naming it with the user ID under review and then select that folder
16. Update the file name so that it is named using the following format with dates written as YYYYMMDD and then select 'OK'.  
*Date from-Date to\_User ID\_Date of report generation.CSV*
17. A report will now be saved in the desired location in a format that can be opened by Excel

## Reviewing an Electronic Health Record Audit Trail Produced in P2Sentinel

1. Open the .CSV file using Excel  
**NB:** If the file is not recognised, rename it to have '.CSV' at the end of its name. This should define the file type
2. The report will display several columns of data. Do not delete or alter data in the report. Altering column with for ease of review may be required. See Appendix A below for clarification of what each of these columns represents and Fig 6 for an example report with highlighted areas of interest
3. Review the audit trail spreadsheet against the monitor request form and study participant ID list to ensure that;
  - a. Monitor/ Regulatory Inspector access falls within the expected timeframes
  - b. View only access has been granted to the records
  - c. Only patients as defined on the study specific participant ID log have had their records accessed
  - d. How access has been achieved (on site or remote) and that this matches the request forms

Figure 6: Highlighted example report

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	AUD	DATE	TIME	TIME	USER_ID	PF	ROLE	PATIENT_LA	PATIENT_FIR	MRN	VIP	FA	NUF	DEVICE_NAME	CI
20	n1p	01/11/2024	09:19:33	Euro	OLIVERJ3	OI	View Only	-	-					n1prd07(160.163.240	n:
21	N1P	01/11/2024	09:19:34	Euro	OLIVERJ3	OI	View Only	ZZZZZZZZ	TEST	91652108			RVI	PF37JL1V	PI
22	n1p	01/11/2024	09:19:34	Euro	OLIVERJ3	OI	View Only	-	-					n1prd07(160.163.240	n:
23	N1P	01/11/2024	09:19:36	Euro	OLIVERJ3	OI	View Only	ZZZZZZZZ	TEST	91652108			RVI	PF37JL1V	PI
24	N1P	01/11/2024	09:19:36	Euro	OLIVERJ3	OI	View Only	-	-					PF37JL1V	PI
25	N1P	01/11/2024	09:19:36	Euro	OLIVERJ3	OI	View Only	-	-					PF37JL1V	PI
26	N1P	01/11/2024	09:19:36	Euro	OLIVERJ3	OI	View Only	ZZZZZZZZ	TEST	91652108			RVI	PF37JL1V	PI

## Appendix A: Report Column Descriptor/ Applicability to Audit Trail Review

Column ID	Description	Trail Review Comment
Audit_Source	Denotes organisational identifier	Not needed for the review. This should always be connected to NuTH
Date	Date as MM/DD/YYYY	To be confirmed as expected according to access forms
Time	Time as HH:MM:SS in 24 hour format	To be confirmed as expected according to access forms. Can be used to confirm how the system was navigated in instances of inappropriate participant access
Timezone	Confirmation of time zone of user	Used in conjunction with time details
User_ID	Network user ID	To be confirmed as expected according to access forms
PRSNL_Name	User surname, first and where applicable middle names	To be confirmed as expected according to access forms
Role	Role as defined in the EHR	This should be defined as 'View Only' for Monitors and Inspectors
Patient_Lastname	Shows patient surname where a record has been accessed	To be confirmed as expected according to study specific participant ID list
Patient_Firstname	Shows patient first name where a record has been accessed	To be confirmed as expected according to study specific participant ID list
MRN	Medical Record Number. The unique number assigned at NuTH	To be confirmed as expected according to study specific participant ID list
VIP_Display	Shows if a flag is present and has been accessed	Not needed for the review. Does not specify type of flag present
Facility	Shows hospital where participant is receiving treatment	Not needed for review
Nurse_Unit	Denotes the area the record is connect to	Not needed for the review. This can be very general i.e. General Medicine, of Freeman Research
Device Name	ID of the device used. At NuTH this will be the ID assigned by IT and is usually 8 characters long	This can be used to clarify if onsite or remote access has been used to enter the system. NB: It is common for the ID confirmations to be interspersed with IP addresses
Citrix_Server	IP address or Citrix used ID displayed here	Not needed for the review.
Application	Will show which Cerner application was accessed	Not needed for review. F the most part, this should state 'PowerChart'
Event_Name	Denotes activity in the system	Can be used to confirm how the system was navigated in instances of inappropriate participant access
Event_Type	Denotes activity in the system	Can be used to confirm how the system was navigated in instances of inappropriate participant access
Participant_Name	System descriptor that may not have relevance to	Not needed for the review. Descriptors are unhelpful and would be used by IT if a further review/ investigation was required
Participant_ID	Can be used to denote encounter ID but may also include other IDs	Not needed for the review. Descriptors are unhelpful and would be used by IT if a further review/ investigation was required