

## Policy for prevention of duplicate electronic patient records (including Merging and Unmerging of records)

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### REVIEW DATES AND DETAILS OF CHANGES MADE DURING THE REVIEW

December 2021:

- Removal of references to the Exeter system (NHAIS platform) in England which has now been retired and no longer available for use by UHL Data Quality staff.
- Removal of references to a historic process to manage frequent duplicate registrations made by some system users. It is now normal for most outpatients to be referred electronically and Nervecentre in the Emergency Department has Spine connectivity.
- Merges of records for current inpatients must retain the record for the currently admitted patient to preserve eMeds prescribing.
- Inclusion of plans to develop Nervecentre as the Trusts Electronic Patient Record.

### KEY WORDS

Merge, Unmerge, Patient Master Index, PMI, demographic, NHS Number, tracing, redaction, never event

## 1. INTRODUCTION AND OVERVIEW

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- 1.1. In managing electronic patient records it is important that only one record exists for each patient. This ensures that all relevant clinical and administrative information is available and referenced from a single record. This document sets out the UHL policy for ensuring that only one electronic record exists for each patient. Where electronic records require merging or unmerging (when previously merged in error) strict controls are in place to minimise clinical risk.
- 1.2. At the University Hospitals of Leicester NHS Trust (UHL) the Patient Administration System (known locally as HISS or PatientCentre) is the primary source of unique identification for electronic patient records. Data from this system is integrated via automated messaging with many other electronic clinical systems throughout the Trust. Notably this includes Nervecentre, which is being developed to become the Trust's Electronic Patient Record (EPR). A common local patient identifier is shared for all patient records including those where the NHS number (the national patient identifier) is not yet provided.
- 1.3. The policy is designed to enforce competent searching of the system to prevent unnecessary duplicate registrations occurring or the details of one patient being overwritten with another.
- 1.4. The policy contributes to the maintenance of Blood transfusion records in line with legislation. Blood Safety and Quality Regulations require that traceability on transfusions is maintained for 30 years. It is therefore essential that the Blood Transfusion Department at UHL are notified of all patient merges. This is managed by an automated system process with the Trust.

## 2. POLICY SCOPE

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- 2.1. This policy applies to all staff working within UHL, including the Alliance, who have responsibility for managing electronic patient records (e.g. registering new patients or demographic updates).
- 2.2. Duplicate management applies to all records held on the HISS Patient Master Index, whether current or historic.
- 2.3. Merging of paper case-note volumes is outside of the scope of this document (see [Track IT Document Management Guide](#) MR-TrackIT-5 on INsite).
- 2.4. Within scope is the unmerging of paper case-notes when patients have been incorrectly merged. This is undertaken by the Data Quality Team as part of the thorough identification and disentanglement of distinct patient records.

## 3. DEFINITIONS AND ABBREVIATIONS

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### 3.1. HISS / PatientCentre

HISS (Hospital Information Support System), also known as PatientCentre, is currently the Patient Administration System used at UHL. Plans are in progress to transfer equivalent functionality onto Nervecentre.

### 3.2. Nervecentre

Currently used in the Emergency Department and increasingly for clinical data capture, prescribing and assessments in ward areas. This system is currently undergoing widespread develop to become the Trust's Electronic Patient Record (EPR).

### 3.3. **NHS Number**

- 3.3.1. The NHS Number is the mandated National Unique Identifier for patients and must be used alongside other demographic information to identify and link the correct records to a particular patient.
- 3.3.2. Everyone registered with the NHS in England and Wales has their own unique NHS Number. Patients who have not registered with a GP practice will not have a number. Overseas visitors and patients not eligible for free NHS treatment may have been issued with a number. Babies born in England and Wales are issued with NHS Numbers immediately after birth.
- 3.3.3. A patient's NHS number (where known) must be included on all patient correspondence. This includes all test requests and letters such as outpatient appointments and discharge summaries. The NHS number should also be included in electronic data flows between hospital computer systems.

### 3.4. **Summary Care Record**

Summary Care Record is the national electronic patient record, held on a central database for the whole of England. The system was introduced as part of the NHS National Programme for IT and access to patient demographics is provided via Smartcard. This system holds patients' demographic and GP history and is widely used across the trust as an external reference in managing accuracy of records.

### 3.5. **System Number**

Every patient registered on the UHL Patient Administration System is automatically given a unique reference number (format Snnnnnnn – where “n” is a digit). This is the unique local identifier for patients and is shared as the primary identifier between Trust systems.

### 3.6. **Track-IT**

This is the Medical records electronic requesting and case-note tracking system

### 3.7. **Winpath**

This is the Pathology Blood Transfusion administration system holding patient records.

## **4 ROLES AND RESPONSIBILITIES**

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### **4.1 Executive Responsibility**

Since the health and safety of patients relies on accurate patient identification, the Chief Executive has executive responsibility for this policy.

### **4.2 Applications Support (provided by the IT Managed Business Partner)**

Applications Support (undertaking the role of system administrators of computer systems) will control merge and unmerge system functionality in line with this policy.

Merge functionality on HISS will only be supplied to members of the UHL Data Quality Team as notified by the Data Quality Service Manager. No other staff will be permitted to undertake patient merges on HISS without written authorisation from the Data Quality Service Manager.

### **4.3 Data Integration and Business Intelligence (provided by IT Managed Business Partner)**

- 4.3.1 Responsibility for the management of data passed between sending and receiving systems as transactional messages.
- 4.3.2 Ensuring that data is stored and messaged in the correct format (suitable to the data item itself and compatible between systems that share the data).
- 4.3.3 Ensure that data from disparate sources is integrated to create a central repository. The data is securely and reliably stored (warehoused) and is easily available for reporting and analysis.

#### **4.4 Blood Transfusion Service Manager**

Ensure patients with any blood transfusion history are merged in line with their documented process. Any blood transfusion does not move automatically and requires review by the Bloods Transfusion team.

#### **4.5 Data Quality Service Manager**

4.5.1 Authorise designated users (members of the Data Quality team) to have merge functionality on HISS.

4.5.2 Manage, document and retain all records relating to unmerging of patient electronic records. See Appendix 4. Records for merges can be obtained electronically if required.

4.5.3 Manage the processing of merges within the Data Quality team and ensure that quality standards are maintained.

4.5.4 Ensure that errors found on the Summary Care Record (e.g. 2 patients with the same NHS number) are notified to the National "Back Office" at NHS Digital for resolution.

#### **4.6 Data Quality Team**

4.6.1 Merge patient electronic records promptly when required in line with this policy (methods described in Appendices 1, 2 & 3)

4.6.2 Maintain the integrity of the Patient Master Index by processing merges as identified via NHS number tracing and other local reports according to the strict criteria identified (see sections 5.1.1 and 5.1.2 of this policy). Ensure the retained patient is always labelled with the correct NHS Number as per the Summary Care Record.

4.6.3 Process the Potential Duplication report daily.

4.6.4 Respond to email notifications of system demographic updates (see section 5.2.2 of this policy). Assess the risk level for each of these and take the required actions.

4.6.5 Promote good practice for accurate searching for patient records on the patient master index.

#### **4.7 Administrative Team Leaders and Supervisors**

4.7.1 Ensure that all staff are adequately trained prior to managing patient demographics on electronic systems (e.g. registering new patients, updating existing records).

4.7.2 Ensure that staff identified as requiring re-training attend as soon as practically possible.

4.7.3 Ensure front-line staff routinely undertake a 3-point check to correctly identify patients (e.g. match on name, date of birth, NHS number)

#### **4.8 Clerical and Administrative staff**

4.8.1 Follow trust guidelines when searching for patient electronic records ([see HISS Introduction Guide on Insite](#))

4.8.2 Ensure accurate identification of the patient by confirming 3 points of identification and asking open ended questions (e.g. "what is your date of birth?" rather than "is your date of birth xxx?")

4.8.3 Notify the Data Quality team if duplicate electronic records are identified.

## **5 POLICY IMPLEMENTATION AND ASSOCIATED DOCUMENTS**

### **5.1 Monitoring of new patient registrations**

**5.1.1** At individual user identification level, all new patient registrations on the patient administration system are reviewed on a daily basis. A daily report is compiled of all registrations over the previous 24 hours (or weekend) where key demographic information appears to match with another existing record. The possible match criteria are as follows:

Local Type code	Full Surname	First 3 characters of forename	Sex	Date of birth	Postcode or first 5 characters of address line 1
4A	✓	✓	✓	✓	✓
4B	✓	✓	✓	✓	
4C	✓	✓	✓		✓
4D	✓	✓		✓	✓
4E	✓		✓	✓	✓
4F		✓	✓	✓	✓

Type 4A matches will always be merged where there is a safe match (see Appendix 1).

**5.1.2** Other match types will be researched by the Data Quality Team using the Summary Care Record system prior to records being electronically merged as follows (see Appendix 2)

### **5.2 Identification of demographic over-type**

**5.2.1** A significant risk has been recognised within the Trust of system users overtyping the details of one patient with another. This arises when a user has a current set of patient details and assumes that an existing electronic patient record relates to the same patient. They incorrectly overwrite the existing record with the new details.

**5.2.2** Comprehensive use of the NHS Number helps to prevent this error occurring. The Trust has also implemented an automatic notification email to the Data Quality Team when significant changes to patient demographics are applied. Emails to the Data Quality Team are immediately generated after any of the following record updates on HISS/PatientCentre:

- Significant name changes (e.g. Forename and Surname)
- Changes to the NHS Number
- Change to gender of patient
- Date of Birth changes greater than 10 years (older or younger)
- Where the patient postcode is changed from ZZ.

**5.2.3** These changes are acted upon immediately. A member of the Data Quality team will validate the change and can contact the user who recorded the update as necessary to resolve any confusion.

**5.2.4** Where invalid changes are confirmed, every effort will be made to immediately correct the error.

**5.2.5** If there is any chance that incorrect information has been forwarded to other departments, all “un-merge actions” must be undertaken by the Data Quality Team

### **5.3 Demographic change history**

**5.3.1** All changes to patient demographics on HISS are stored for future reference. This information is available to the Data Quality Team and is used in validation of current and historic changes. Merge history of records are also kept.

**5.3.2** For individual System numbers, whether a merge exists in the patient history is also maintained. This is maintained outside of HISS via the IM&T Data Integration platform.

### **5.4 Preventing incorrect merges**

**5.4.1** Patients with different NHS Numbers must be comprehensively validated by the Data Quality team prior to any potential merge. Potentially invalid matches such as twins of similar name are annotated on HISS to highlight similarity between records and prevent future confusion.

**5.4.2** Comprehensive NHS Numbering is essential for accurate identification of individual patients. Automated NHS Number tracing is undertaken on a continuous rolling scheduled programme by submitting HISS demographic files to the Demographics Batch Service (DBS). Resulting reports are processed by the Data Quality Team. Automatic death-notifications are received for any patients for whom a death is registered within 2 years of tracing.

**5.4.3** Baby names (provided by NHS Number tracing) are also updated as resource allows on a continuous process, so that if patient re-present they can be easily identified.

### **5.5 Permissions for merging electronic records**

#### **5.5.1 HISS / PatientCentre**

Since HISS/Patientcentre is the core generator of local unique patient identification, any required merges must always be undertaken on this primary system. Access to the merge function is restricted to the Data Quality Team only via appropriate password access. Any identified unauthorised merges (e.g. untaken by System Administrators) are logged on the Trust electronic incident reporting system (Datix) and thoroughly investigated.

#### **5.5.2 Other systems**

Duplicate management and merging of records on departmental systems must be managed according to the standards described in this policy. As standard, the expectation of the trust for any new IT systems implemented is that they are capable of automated processing of patient merge messages, eliminating the need for multiple manual patient merge processes across systems.

### **5.6 Merging patient electronic records (see appendices 1, 2 and 3)**

**5.6.1** Where duplicate electronic patient records exist on HISS/Patientcentre the Trust authorises the Data Quality Team to merge the records. System users identifying duplicate records must notify the Data Quality team via email:

Data.quality@uhl-tr.nhs.uk

**5.6.2** Unless the records are exact copies, they are cross-checked against Summary Care prior to the merge being requested.

**5.6.3** If one record is marked as deceased – both will be checked. If a death is too recent to be marked on national systems, the GP will be contacted to validate the information.

**5.6.4** Merging of casenotes will be undertaken by administrative staff who identify duplicate sets. Merging of casenote numbers (outside of the scope of this policy) is undertaken by the Medical Records Department.

**5.6.5** All merges undertaken are notified to the Blood Transfusion department. Merge information is passed automatically from the trust's Patient Administration System through to the WinPath system. If the patient has no history of transfusion and no products have been issued against them, then the merge is automatic in Winpath. If the patient does have a history of transfusion then potential merges are notified to laboratory

staff for checking. These records are then merged manually as appropriate by the laboratory staff according to their documented procedure.

## **5.7 Un-Merging patient electronic records**

**5.7.1** Unmerges are required if two records have been incorrectly merged historically or if a user has overtyped one patient record with another (which effectively turns one patient into another so that the histories are confused).

**5.7.2** It is very rare that a required unmerge is found by the Data Quality Team. Most are raised by administrative staff who have casenotes that do not match HISS or there are notes for more than one patient identified within a single set. HISS and SCR will be searched to ascertain whether the records require unmerging or whether the demographic changes are correct.

**5.7.3** Processing of an unmerge cannot be guaranteed as comprehensive due to the diversity and number of systems in use. In some systems it is not possible to completely disassociate one patient identifier from another.

**5.7.4** All casenotes for an incorrect merge are reviewed in detail by the Data Quality Team and separated into individual patient records. For paper records, there can be no guarantees that all documents containing wrong patient identifiers have been redacted. These wrong identifiers can also potentially be re-used e.g. a GP has a letter with an incorrect hospital casenote number on, and re-uses this number when the patient is next referred in. The onus is therefore on all front-line staff to ensure that new referrals are validated for patient identity via a 3-point check e.g. name, date of birth, NHS Number and patient identity is checked and validated with the patient themselves at every attendance.

### **5.7.5 Un-merge actions (see Appendices 4 & 5 for checklists)**

- a. Where 'unmerging' of HISS/Patientcentre records is necessary, this is undertaken by the Data Quality Team with reference to other clinical systems. All instances where unmerging of electronic records is required are logged individually on the Trust electronic incident reporting system (Datix) and thoroughly investigated. All efforts will be made to identify via system transaction logs how the error was originally made and the system users who contributed to the error.
- b. Initial unmerging comprises of checks for the following systems: HISS/PatientCentre, Nervecentre, ICE, CITO (document management), iLab (Pathology), E3 (Maternity), eCRIS (Radiology), ORMIS (Theatres), eMeds (Prescribing) and Winpath (Blood transfusion). This is always done in writing via email.
- c. If it is noted that a patient is on a HISS waiting list, the specialty admin department will be contacted to see if they also hold manual records locally (waiting list cards etc.).
- d. When unmerging activity the case notes are reviewed to identify any other less obvious departments that may hold data on the patient. This includes systems such as Physiotherapy, Occupational therapy, Audit databases, local letter systems, and device logs where kept (e.g. replacement joints, pacemakers).
- e. When any changes are found to be necessary, contact is made (by the Data Quality Team) with the departments to ensure that relevant databases are updated or amended. Confirmation emails are required as assurance activity has been corrected.
- f. All HISS and Alliance activity is checked and corrected as required. Any incorrect data in physical casenotes is redacted with black markers (incorrect system numbers, NHS numbers, Next of Kin etc). Front sheets and labels are destroyed where necessary, and new labels created for the casenotes. All UHL and Alliance current casenotes are requested and updated/amended as appropriate.
- g. All activity is kept in hard copy form with details of what has been amended, (including the Appendix 5 checklist). This information is retained as an information asset within the Data Quality Team and will be kept until the patients involved have died.



- h. For patient confusions (e.g. patient admitted on incorrect system number) all system checks are as for unmerging. Any affected activity is checked and corrected as above. A log is kept on a spreadsheet of activity undertaken. No hard copy information is routinely kept for these instances.

## **6 EDUCATION AND TRAINING REQUIREMENTS**

- 6.1** Training on HISS and PatientCentre is provided by the IT Training and Development Team. Training can be booked on Helm.
- 6.2** For use of other departmental systems, it is the responsibility of individual departments to ensure that all frontline staff are adequately trained in use of systems. The importance of accurate data collection is incorporated into this training.

## **7.0 PROCESS FOR MONITORING COMPLIANCE**

<b>Element to be monitored</b>	<b>Lead</b>	<b>Tool</b>	<b>Frequency</b>	<b>Reporting arrangements</b>
Daily duplicate referrals	Data Quality team	Duplicate report and correspondence managed on the Duplicates database	Daily	Emails to users and their managers
NHS tracing records	Data Quality Service Manager	NHS tracing reports are actioned and HISS updated	Daily	Data Quality Team meetings
Demographic overtypes	Data Quality team	Email notifications of changes	Daily	Communication with users as soon as error is identified
Prevalence of un-merges required	Data Quality Service Manager	HISS, manual records	Each time unmerge identified	Log on Datix incident reporting tool

## **8 EQUALITY IMPACT ASSESSMENT**

- 8.1** The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.
- 8.2** As part of its development, this Policy and its impact on equality have been reviewed and no detriment was identified.

## **9 SUPPORTING REFERENCES, EVIDENCE BASE AND RELATED POLICIES**

[Information Quality Policy B18/2003](#)

[Checking Patient Demographic Details UHL Guideline B10/2014](#)

[Track IT Document Management Guide MR-TrackIT-5](#)

<http://www.transfusionguidelines.org.uk/regulations/clarification/it/merging-patient-records>

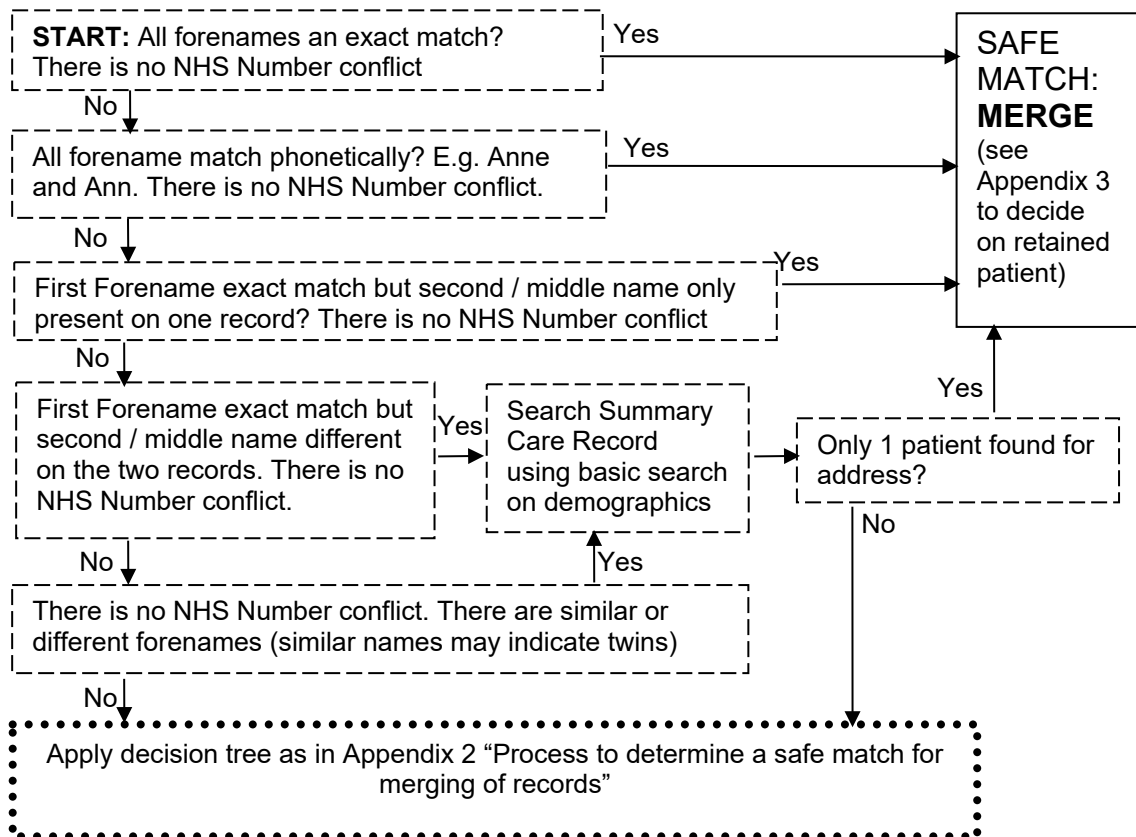
[HISS Introduction course - including searching for a patient](#)

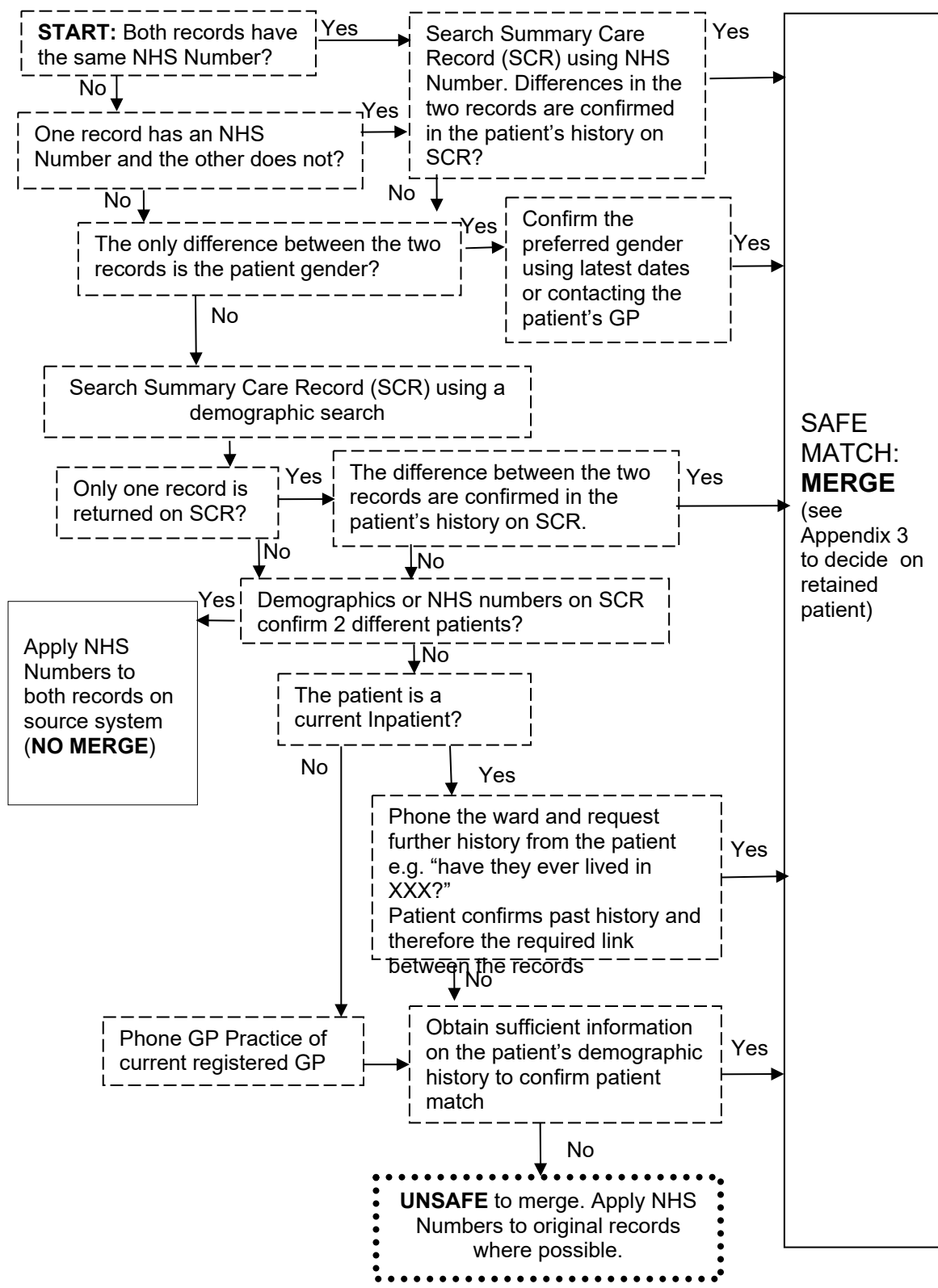
Patient Safety Alert – unknown or unidentified patients NHS/PSA/RE/2018/008 – 5<sup>th</sup> Dec 2018

## **10 PROCESS FOR VERSION CONTROL, DOCUMENT ARCHIVING AND REVIEW**

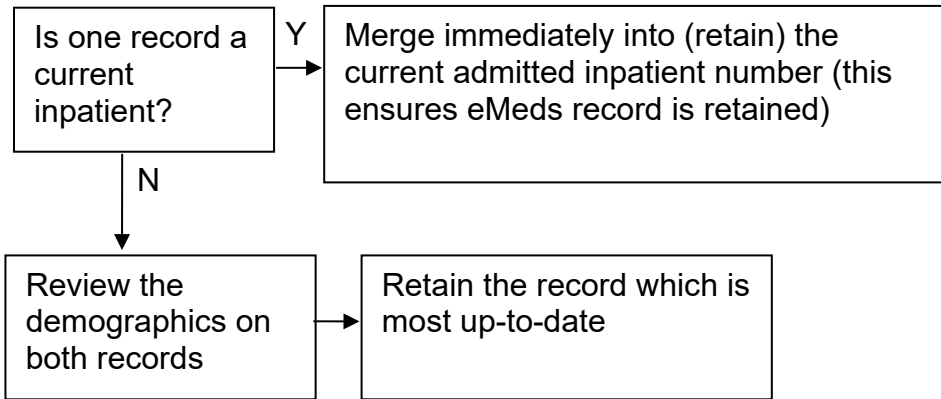
The current version of this procedure will be held on INsite and available to all staff via Sharepoint. The policy will be reviewed every 3 years or during the intervening period if national or local requirements change.

Type 4A matches will always be merged where there is a safe match as follows:





To identify which record to retain:



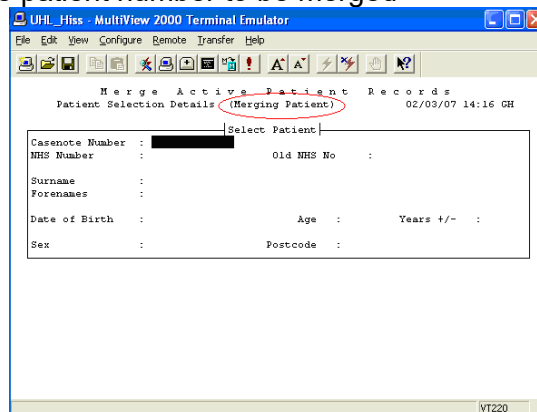
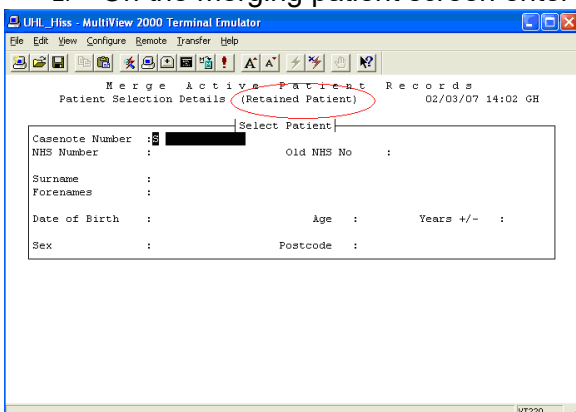
1. Bring both records up in independent sessions of HISS.
2. If both records match exactly no further checks are necessary and the records can be merged.
3. If there are differences, SCR will be thoroughly checked to see if the history contains the details shown. If possible, merge records ensuring the record with the most recent address is kept as the retained patient.
4. If the differences cannot be verified using the various systems available it may be necessary to request the casenotes (if available) to establish if the records are the same patient.
5. If one record has a consistent episodic history and has been used fairly recently and the other has not been used for many years, the recently used record will be retained.
6. If SCR is using a new gender then we should amend our systems to reflect this as per current legislation.

If there is *any* remaining question whether a merge would be deemed safe, it must not be undertaken.

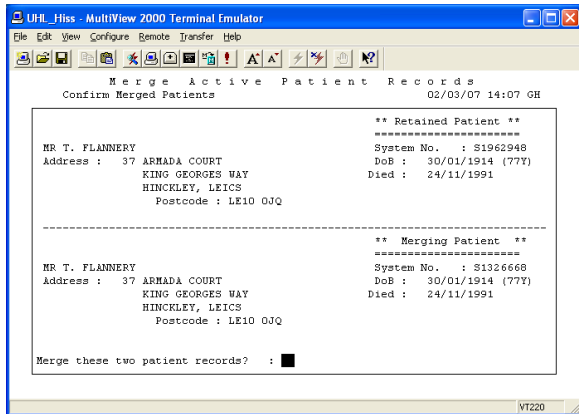
**How to merge:**

Select function MER.\*

1. On the retained patient screen enter the patient number to be retained
2. On the merging patient screen enter the patient number to be merged



Check that the patient details match and enter 'yes' if they do or 'no' not to merge.



If the system crashes on merge (a black screen with an error message and automatic log out of HISS) inform the Data Quality Manager or log on the IM&T Service Desk (x18000). Communicate the two system numbers and an incident will be logged with the HISS suppliers to complete the merge manually in the background of the system. If merges are prevented due to identical outpatient activity, identify the active appointment to retain and delete the other (normally a cancelled appointment). The records will then merge successfully.

A basic outline of the unmerge procedure:

1. Establish if merge is just HISS or case notes as well.
2. Print HISS PMI demographic screen(s).
3. Print all EPI screens.
4. Request all case-note sets
5. Print SCR patient details
6. For all OP episodes, print episodic activity screen, referral screen, appt screens and discharge.
7. For all IP episodes, print episodic activity screen, admission, transfer, discharge, preadmission and WL screens.
8. Identify via casenotes or hospital numbers the 'owner' (the correct patient) for each episode and record this by highlighting
9. The 'merged' record keeps the merge system number that has the most activity. Bear in mind that old activity preceding the migration to HISS (pre 2003) cannot be deleted.
10. For the new/unmerged patient allocate a new system number/case-note number allocated, all relevant activity re-input.
11. Check for alerts/special registers in casenotes and on HISS, verify and reallocate as appropriate.
12. If necessary, new folder allocated and 'unmerged' patients physical notes placed into it.
13. All paperwork checked and any reference to any incorrect numbers/names crossed out.
14. Identify any other departments with an interest in the patient within casenotes (pathology, imaging, endoscopy etc) and contact them. Give them clear details of what needs to be moved/changed.
15. Stickers placed on all sets of notes advising not to remerge with relevant U number.
16. Withdraw case-note numbers as appropriate via HISS.
17. Merge physical sets of casenotes as necessary (e.g. where there are several thin sets) and email Medical Records to have any relevant case-note merges completed on Track IT.
18. New ID stickers printed if necessary.
19. Trust incident logged on Datix
20. All paperwork relating to the unmerge is retained in the secure Data Quality filing system for any future reference required.

Correct patient details PATIENT A	Surname		Forename	
	NHS Number		System Number	
	Date of Birth		Sex	M/F
	Address			
	GP			

Overtyped patient details PATIENT B	Surname		Forename	
	NHS Number		System Number	
	Date of Birth		Sex	M/F
	Address			
	GP			

**Checks made to minimise impact of incorrect information**

	Action required?	Action complete by (name/dept)	Action date
Separate physical casenotes			
HISS Patient Master Index corrected			
Physical paperwork recalled (paper generated and sent to other dept with wrong information on)			
Referral letter			
Waiting list slip			
Waiting list card			
Diagnostic test request (e.g. ECG, resp lab)			
Other departments notified to update clinical systems			
Nervecentre			
Pathology			
Imaging (eCRIS & PACS)			
Pathology (iLAB)			
Pharmacy (eMeds)			
Maternity (E3)			
Blood bank (if x-match done)			
External providers			
Audit system			
ORMIS/Theatres			
Physiotherapy			
OT			
Correspondence – recall or follow-up with system manager to have letter deleted/moved.			
Paper clinic letter			
Electronic clinic letter			
CITO documents			
ICE letter			
Local letter storage			