

## GP2GP: Ensuring clinical safety guidance

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Endorsed by:

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## Introduction

The main aim of the GP2GP project has been to enable the safe and timely transfer of electronic health records. Clinical safety has been a key priority at all stages of GP2GP development and testing.

The purpose of this guidance is to:

- Inform users of the large amount of work and effort that has gone into ensuring GP2GP is as safe as possible.
- Familiarise users with some of the characteristics of imported records which may otherwise appear unfamiliar.
- Explain why certain actions may be expected of users soon after a record has been imported.
- Provide advice to users to increase their confidence so that they can use GP2GP safely and effectively.

This guidance is for any member of the practice team who may have to handle patient records that have been, or are likely to be, transferred between practices via GP2GP. It has an emphasis on clinical safety and therefore some parts may be particularly relevant to clinical users.

### GP2GP clinical safety assurance

The GP2GP project has placed a strong emphasis on ensuring patient safety and, from the outset, has involved experienced clinicians, technicians and the NHS CFH GP2GP clinical safety testing team in extensive clinical safety testing. This has been carried out with involvement from the Joint GP IT Committee (JGPITC) of the Royal College of General Practitioners (RCGP) and the General Practice Committee of the British Medical Association (BMA). Endorsement of all GP2GP products by the JGPITC is a mandatory step on the path towards achieving “clinical authority to release (CATR)”.

In line with the requirements set out by the NHS Connecting for Health (NHS CFH) clinical safety approach, GP2GP clinical safety testing has followed a robust methodology with strong clinical involvement.

The clinical safety approach mandates three stages:

- End to end hazard workshop - identifies hazards to be ‘mitigated’.
- Development of safety case - determines what must be done to ‘mitigate’ the hazards.
- Safety closure - provides proof that all necessary ‘mitigations’ have been performed to the satisfaction of clinical safety testing team.

Once the safety closure stage has been reached, the clinical safety testing team must first seek endorsement of the products by JGPITC. All safety closure evidence must then be submitted to the NHS CFH clinical safety group for review.

The NHS CFH clinical safety group has the final authority to determine whether or not a product has suitably completed clinical safety testing. If satisfied, the NHS



CFH clinical safety officer will issue a CATR. A product cannot be deployed unless it successfully completes this NHS CFH-mandated clinical safety testing process and obtains CATR.

### **GP2GP clinical safety testing**

The clinical safety testing process involves exhaustive side-by-side comparison of the electronic health record as it appeared before transfer in the sending system and as it later appears in the receiving system. The respective GP systems are projected on to side-by-side screens. The record content is then compared line by line to check that information is not lost, inappropriately altered or added by the transfer process. This often involves navigating to different parts of sending and receiving systems.

In the early stages, specially crafted artificial patient records are always used when testing new products. These are designed to incorporate various kinds of clinical information structured in different ways in order to test for predictable transfer problems.

As time has gone on, these records have been further developed - the aim being to subject the transfer process to more testing. In later stages, real records that have gone through 'live' GP2GP record transfer have been subjected to the same careful testing using the same side-by-side comparative method.

The testing has looked at records transferred between practices running the same GP system, referred to as "same system" transfers, and also between practices running different GP systems, referred to as heterogeneous system transfers. In the case of heterogeneous transfers, extensive testing has also been done of records that have traversed three practices (i.e. from a practice running GP system type A, to a practice running GP system type B, to a third practice running GP system type A) and involving three screens side-by-side.

### **Hazards and mitigations**

The GP2GP [end to end hazard workshop](#) identified 45 potential clinical safety hazards. Broadly these hazards were open to two classes of '[mitigation](#)' – or a combination of the two. Risks to patients were minimised through testing to ensure that certain technical rules and guidelines had been rigorously applied providing 'best practice' guidance to users. The first class of mitigation, which is about machine behaviour, is much more concrete and amenable to testing than the second, which is about human behaviour.

[The clinical safety testing team](#) concentrated its efforts on rigorous testing to assure the more tangible mitigations related to machine behaviour. However, in a few cases these mitigations did lead to solutions that deliberately constrained user behaviour. The remainder of the mitigations were highlighted as being dependent on the provision of appropriate guidance, training and education. 21 of the original 45 potential clinical safety hazards originally identified fitted into this class. In addition, the clinical safety testing process identified some further issues.



It is important to emphasise that no clinical system can ever be rendered completely safe no matter how thoroughly it has been tested. The GP2GP project has worked to the principle where the reduction of risks is considered to be 'as low as reasonably possible' (ALARP). As in any other circumstance, users are responsible to adhering as closely as possible to 'best practice', which includes being aware that all electronic health records have their limitations.

In summary, the clinical safety assurance process can carry out rigorous testing for machine behaviour but it cannot test for user behaviour. The best that it can do is to identify user needs for guidance, training, and education and make this as accessible to all users as possible.

The aim of this document is to provide guidance to help deal with situations where:

- hazards are dependent on human behaviour;
- the transfer process:
  - results in the need for user intervention;
  - causes the record to look unfamiliar;
  - degrades information to human (but not machine) readable text;
  - places items in unexpected locations;
  - does not support business processes.



## *Topics covered in this guidance:*

- **Validation of the incoming record**
- **Deliberate exclusions**
- **Record import and workflow/preview and warning features**
- **Medication management**
- **Drug allergies/adverse drug reactions**
- **Business process/continuity of care**
- **General structural differences**
- **SOAP/consultation types**
- **Pathology/test results**
- **Attachments**
- **Form/template interoperability**
- **Qualifier interoperability**
- **Message/transport limitations**
- **Degrade handling**
- **Provenance/attribution**
- **Problem orientation**
- **System specific features and effects**
- **Referrals**
- **Recall/review issues**
- **Date handling**
- **Sending practice considerations**
- **Audit trails**



## **Validation of the incoming record**

At the GP2GP hazards workshop it was strongly felt that users should be given clear guidance about the importance of validating the record at the receiving practice. This is predominantly a clinical responsibility. In particular, it was recommended that the following checks are considered:

- Verification of patient identity: does the record on the screen belong to the patient sitting in the consulting room?
- A review of the general quality of record:
  - Be aware of the possibility that the data on the sending system may be inaccurate.
  - Look out for distinctive data entry conventions – the use of terms that seem meaningless in the new practice but which may have had hidden meaning in a previous practice. In some cases, these terms may involve the use of read codes whose literal meaning is entirely different from that originally intended.
- [Look for adverse drug reaction \(ADR\) degrades](#) and carry out the procedures appropriate to the GP system to ensure that they are correctly entered and will interact with prescribing decision support.
- [Reauthorise medications and take on prescribing responsibility](#) - medications will have been deliberately deactivated by the transfer process.
- [Review business functions](#) e.g.:
  - [Recalls](#)
  - Audits
  - [Any other degrades](#) that may impact support systems. There may be a need to add appropriate coded entries in certain cases so that patients can be picked up by [machine searches](#).

Lloyd George or A4 paper records will continue to be returned to the local primary care support services for onward transfer to the new practice. This can sometimes take up to three months after the patient has re-registered and visited the practice for medical care or issues of repeat prescriptions. It is therefore strongly advised that the various record validation steps indicated above are not delayed.

Practices are still expected to provide a full printout of the electronic record (including all attachments) when the patient leaves. However, regulations may change in the future so that such printouts are no longer mandatory where patients' records have been forwarded by GP2GP.

## **Deliberate exclusions**

GP2GP aims to achieve transfer of the 'whole record'. It effectively captures a 'snapshot' of the whole patient record as it was at the precise point in time when it was extracted from the sending practice. The record will therefore include all of the information recorded up to the time of transfer.

The record is only sent once in response to the request generated at the 'new' practice as the patient registers. Therefore anything added after that time will not



later be transferred electronically (see [sending practice considerations](#) for more information about this).

However, there are some deliberate and very specific exclusions from the record transfer. These include:

- test requests;
- diarised medication reviews/repeat issue reminders;
- practice workflows ...
  - EMIS LV patient notes, RF module activity;
  - INPS Vision action dates on referrals
- out of record warnings/alerts:
  - INPS Vision 'Post It';
  - EMIS LV alerts/warnings.

### ***Record import and workflow/preview and warning features***

This section relates to events that occur around the time that the electronic health record is imported into the receiving practice's system. There are diverse approaches across systems.

In all cases there will be an **import mechanism**. As records are imported through this mechanism '**filing exception**' messages may be displayed. Attempts have been made to keep these messages to a minimum and only to warn in circumstances when serious problems are encountered during the record importing process. For further details, or if serious problems are encountered, contact the relevant GP system supplier.

All systems provide a **preview facility** which allows the user to preview the record before integrating it into the practice system. Depending on the system supplier, there may be facilities for filtered views of the record. These may be useful for reviewing whether and what incoming information has been degraded to text.

In some circumstances **warnings** or **triggering of workflow** may appear. For example, this may occur where [adverse drug reaction information](#) has been degraded and user intervention is required prior to authorising or prescribing medications.

### ***Medication management***

Active repeat medications are deliberately deactivated when the record is imported. These must be re-authorised before any medication can be issued. Medication review dates as set by the previous practice are of no relevance and so are deliberately not transferred.

This is done in order to ensure an orderly transfer of responsibility for prescribing. Repeat medications will normally have been authorised by a responsible member of the previous practice with prescribing rights. Once the record has been transferred, that person should not continue to be responsible for any issues of medication made at the new practice.



By enforcing the need to re-authorise medications within the new practice the GP2GP process ensures that responsibility for prescribing is explicitly transferred to the 'new' practice. Ideally this re-authorisation process would form part of a review of the patient's medication - preferably wherever possible involving the patient. The means for performing this re-authorisation will vary according to the GP system.

For example:

- EMIS LV provides work flow features to support re-authorisation.
- INPS Vision re-authorisation can be achieved by using the 'copy' facility.

Occasionally, medications may become [degraded to text](#). This should only happen if for some reason the coding for the medication on the 'sending' GP system could not be meaningfully translated into coding on the 'receiving' GP system. For example, this may happen with some 'mixtures' originating on EMIS LV systems. The 'degrade' should appear on the medications screen, clearly annotated as such. It may be possible for a user with prescribing rights to make an appropriate medication entry and then delete the degraded entry.

Practices may wish to consider developing a protocol to determine how they will handle re-authorisations. It would make sense to also consider the handling of [degraded drug allergies](#) – such as who will be responsible, and when and where the necessary work will be done. It might be helpful to alert clinicians to the fact that medication requires re-authorisation or that drug allergy degrades need attention so that they can consider doing this with the patient when the opportunity arises.

### **[Drug allergies/adverse drug reactions](#)**

This section deals with drug allergies, adverse drug reactions (ADRs) and drug sensitivities. In this section we will use the term 'drug allergy'. This section relates only to drug allergy information which has been appropriately entered on to the GP system to correctly trigger prescribing decision support system warnings.

Drug allergies are not interoperable between different types of system ('heterogeneous'), however, they should be fully interoperable for 'same system' transfers. This is a major patient safety issue. Much work has gone into developing and testing the solution that has been adopted. The GP2GP clinical safety response has been to:

- Ensure, as far as possible, that this information is not lost but will always be presented in [human readable form](#) to the user and;
- Take appropriate action to reinstate the drug allergies on the receiving GP system before any medication can be prescribed.

The difficulty arises where different GP systems employ different structures, using different terminology and drug dictionaries, and implement prescribing decision support in different ways. The GP2GP clinical safety team has focused on making the transfer process safe despite these major interoperability limitations.



So, for heterogeneous system record transfers:

- Drug allergies/ADRs are [degraded](#) on import.
- Warnings and workflow processes are in place to identify presence of drug allergies.
- All prescribing is prevented until every drug allergy degrade has been processed by a user – either recoded into an appropriate local equivalent or simply deleted.

All drug allergy degrades must be deleted in order for the restriction on prescribing to be lifted. It should be clear that, in the interest of patient safety, users should recode these drug allergies into the appropriate local equivalent before deleting drug allergy degrades. It should be noted that the system audit trail will record any actions taken, including time, date and identity of user. This includes any situations where a user deletes a drug allergy degrade without making an appropriate recoded entry. If, as a result of this kind of omission, a patient should later come to harm then this sequence of events will be retrievable from the audit trail.

When recoding drug allergy degrades users may find that they have to accept default settings for qualifiers such as severity and certainty because the [human readable text](#) does not provide this kind of information.

For example in the case of a GP2GP transfer from EMIS LV to INPS Vision:

- INPS Vision will automatically populate default qualifiers on the data entry form as:
  - severity – moderate
  - certainty – likely
- Information about severity and certainty will not normally be contained in the degrade text originating from EMIS LV.

It may be possible to find more information by reviewing the electronic health record for associated text/information or by asking the patient. Other sources might be the paper record, or even the previous practice.

Practices may wish to consider developing protocols for handling drug allergy degrades along with [repeat medication authorisations](#)

It is important to clarify that non-drug allergies are interoperable between different GP clinical systems (depending on terminology).

### ***Business process/continuity of care***

Business processes and workflows are activities that take place within the practice to ensure patient records are handled safely, within the recognised legal framework and the practice's own guidelines and protocols. They may also be an integral part of clinical guidelines. For example, a call and recall system and/or audit for patients with chronic disease may result in, and depend upon, specific



coded entries in a patient record. In this context, different practices may use different sets of codes for the same or similar business process.

GP2GP deliberately terminates on-going business processes. It does this explicitly, e.g. [medication deactivation](#).

For example:

- Through breaking the automatic triggering of recalls/screening.
- Where sending and receiving practices use different sets of codes for the same business process. The coded entries will transfer successfully but they may not match those being used in the receiving practice's call/recall or audit systems.

This may result in the need to work on imported records to ensure that appropriate entries are made using the appropriate codes and recall dates. Coded entries received from a previous practice form part of the clinical record and should therefore be subject to the usual rules concerning amendments and deletions.

### **General structural differences**

The appearance of records can be affected when they are transferred between different types of GP system. For example, items may not be ordered as expected under usual headings. Information of particular types might also be displayed in unusual parts of the record.

### **Subjective, Objective, Action and Planned (SOAP)/consultation types**

Consultation sub headings are partially interoperable. Many of the INPS Vision sub headings 'characteristic type' will end up under the 'additional' sub heading on EMIS LV. On the other hand, INPS Vision automatically assigns a characteristic type to incoming records based on system defaults/read code chapter and hierarchy. This may lead to re-ordering effects, although these will be minimal if the original consultation follows logical SOAP order.

### **Consultation types**

These are partially interoperable, whilst some consultation types common to sending and receiving systems are interoperable. The remainder will otherwise become grouped as 'other'. This is because there may be some degrading of information depending on what is recorded.

### **EMIS LV summary record entry**

EMIS LV supports the addition of single record entries outside of consultations whereas in INPS Vision everything is a consultation. This leads to 'non consultation' data and medication data in INPS Vision. Some EMIS LV concepts are also always out of consultation such as 'follow-up' and 'medication issue'



## **Pathology/test results**

Pathology message implementation project results are fully interoperable. Work has been carried out to ensure that units, ranges, abnormality indicators and text formatting are all preserved. Essentially, in GP2GP the 'original report' as received from the laboratory is preserved. There are some restrictions on dates owing to limitations in the number of different dates that can currently be carried by the GP2GP HL7 message. Currently, only one date is sent as mandatory via the GP2GP message for pathology results - this is the date on which the pathology lab originally received the specimen. This may cause some of the date fields to be empty or to contain odd looking dates.

Pathology reports that are not filed (or unseen) at the time that the record is transmitted to the 'new' practice are automatically sent. For more details see [unfiled/unread pathology results](#).

For hand entered results INPS Vision result operators, and result qualifiers are interoperable as text. These have originated as drop down options from an INPS Vision form (otherwise known as a structured data array – SDA). Because other systems such as EMIS LV do not have any structure equivalent to the INPS Vision SDA they can only display this information as text.

## **Attachments**

Attachments include scanned documents, internally generated letters such as referral letters, images, diagrams, electrocardiogram reports, some pathology reports such as full blood count profiles, and video and sound files.

Attachments are interoperable between heterogeneous systems but with some loss of context (title, type) due to a combination of GP system differences and GP2GP message design restrictions. Unfortunately, where patient records have many attachments there may be situations where the receiving practice may have to go through the attachments one by one to rename them in a more meaningful way.

There are two potential issues that need specific attention. Firstly, where some third party document management systems (DMS) are in use, such as those not provided by the GP system supplier, a problem has been identified with retrieval of attachments. In this case, the link embedded in the patient record is successfully transferred but the GP2GP software is unable to retrieve the relevant document from the DMS at the time that the record is extracted from the 'sending' system. This is because it cannot interface with the third party software to locate the document. The receiving practice will see an empty 'placeholder' on attempting to open the attachment. This has been experienced at sites using certain versions of 'DocMan' DMS and a solution has since been developed. For up to date information practices should contact their GP system supplier and/or DMS supplier.

Secondly, some practices use filing systems in which there are no explicit links between patient records and associated documents. Since these documents are not true attachments it is not possible for GP2GP to extract them. The solution lies



in changing to a system that creates explicit links. If practices are in any doubt about this they should contact their GP system supplier and/or DMS supplier.

### **Form/template interoperability**

This relates to forms and templates used in some systems. For example, INPS Vision uses a number of forms or structured data arrays (SDAs). Clinical information held in these can be successfully transferred for same system transfers but not for heterogeneous system transfers because the receiving system cannot copy the same structured form. As a result, template/form concepts are not interoperable between different systems. The information held in INPS Vision SDAs is interoperable between different systems as a series of individual statements but the linkage and grouping between these statements is lost in transfer.

### **Qualifier interoperability**

Common clinical qualifiers are not interoperable other than as text. Typical examples are laterality, certainty, and episodicity.

There is an important distinction to be made between ‘qualifiers’ and ‘modifiers’. Qualifiers add specificity to the parent concept while maintaining its original generic meaning. Modifiers change the meaning so that it can no longer be grouped with the original concept. For example:

Example of qualifier:

Measles/mumps/rubella vaccine  
Administration site L thigh  
Read code 65M1.00

In this example the read coded entry for the measles/mumps/rubella vaccine is **qualified** by the statement “administration site L thigh”. The qualifying statement may be represented as a drop down element in an INPS Vision SDA which may then be transferred as text to an EMIS LV system. In either system, the machine will correctly interpret this as a “measles/mumps/rubella vaccine” that has been given. A [human reader](#) should make the same interpretation but in addition will know the administration site.

Example of modifier:

Measles/mumps/rubella vaccine.  
Not given  
Read code 65M1.00

In this case, the read coded entry for measles/mumps/rubella vaccine is **modified** by the statement “not given”. This modifying statement may be represented as a drop down element in an INPS Vision SDA. Within the INPS Vision system both human and machine readers will interpret this correctly – i.e. that no vaccination has been given in this case. However, if this information were to be conveyed to another system such as EMIS LV in the same way as for the qualifier above then the results would be very misleading. To a [human reader](#) the resulting entry would appear to be ambiguous. It would contain a coded entry indicating that the



vaccination been given but also a contradictory text statement “not given”. The machine would read this as “measles/mumps/rubella vaccine” given because it would not be able to process the text statement “not given”.

In summary, where modifiers cannot be made fully interoperable, entries may become unclear to human readers and they may be wrongly interpreted by machine readers. Human and machine readers may read such entries to mean quite different things.

GP2GP clinical safety testing has been concentrated on identifying all instances of modifiers and then ensuring that all modified concepts are transmitted in such a way that the resulting entry in the receiving GP system will be correctly and safely interpreted by both human and machine readers. In some cases this may result in the human reader being able to see an explicit text entry while the machine is unable to read anything because the entry contains no coded information.

### ***Message/transport limitations***

At present there are upper limits on the total size of a GP2GP message and also the maximum number of attachments that can be included. These limitations are a function of the Spine and not of the GP2GP message or process. There is a clear rule in place. If, in attempting to transmit an electronic health record, one or both of these restrictions is breached then the transfer will fail. The system has been designed to work on an ‘all or nothing’ basis. Unless the whole record can be sent nothing will be sent. Under no circumstances should it be possible to send or receive incomplete records. The current limits are 5Mb total message size and a maximum of 100 attachments.

The Spine also currently operates ‘attachment type restrictions’. If an ‘illegal’ file type is sent then the transmission will fail completely

In the medium term, these restrictions are scheduled to be withdrawn.

### ***Degrade handling***

Degrades occur when the receiving system ‘does not understand’ the code for an incoming record entry. A degrade includes ‘human readable’ text which is **not** ‘machine readable’. This distinction between ‘human’ and ‘machine’ readers is important as there will be situations where a patient may have certain attributes represented by text which are very clear to a ‘human reader’ but which are invisible to a ‘machine reader’ because the information is not coded and the machine is unable to process textual entries.

To help avoid confusion degrades are clearly identified in the imported record. [It is then the user’s responsibility to add a coded entry if appropriate.](#)

Degrades are handled in the following ways:

- [Explicitly identified in import/workflow.](#)
- Explicitly identified in record.
- Original text, notes and other information is always preserved.



- Transmitted onward in later record transfers as ‘degrades’ to achieve stability in serial transfers (A > B > C ...).

The following are common examples of information that is likely to be degraded, especially in heterogeneous system transfers:

- [Allergies/adverse drug reactions](#).
- EGTON codes (EMIS LV templates, recalls).
- A read code drawn from the latest version of the read code dictionary arriving at a practice using the previous version of the dictionary.
- A local practice code.
- A local coding scheme.
- Medication records which carry drug codes which are unrecognised by the receiving system.

### **Provenance/attribution**

This section relates to the attributes that indicate ownership, authorship and responsibility in record entries.

GP2GP record transfer maintains the ‘responsible doctor’ in transfer. For example, where a summariser makes entries on behalf of a clinician, it is the clinician’s details that will be shown in transfer:

- INPS Vision – consultation clinician
- EMIS LV – Dr in date/doctor/place

Imported records are imported as ‘out of practice’ events.

### **Problem orientation**

Problem concepts and use of linkages are significantly different between systems. For example, EMIS LV has a broken up style while INPS Vision has a heading/title style, linked with status, significance and priority. As a result, there can only be limited problem interoperability. Problem status and also use of the problem ‘as a heading’ are interoperable. EMIS LV users can subdivide problem headings into categories ‘active’, ‘significant past’ and ‘minor past. INPS Vision users can subdivide the status of problem headings into categories ‘active and ‘inactive’. For same system electronic health record transfers problem headings should retain their original categorisation.

For heterogeneous system transfers the problem heading categories are handled as follows:

EMIS LV to INPS Vision transfers:

- ‘Active’ goes to ‘active’.
- ‘Significant’ past goes to ‘inactive’.
- ‘Minor past’ goes to ‘inactive’.

INPS Vision to EMIS LV transfers:

- ‘Active’ goes to ‘active’.
- ‘Inactive’ goes to ‘minor past’.



Points to note:

- INPS Vision priorities are **not** interoperable.
- The above handling of problem headings is intended to be capable of accommodating other GP systems as they become GP2GP-enabled.
- Different systems implement problem linkages in different ways. The GP2GP electronic health record extract message is designed to carry information about all linkages, regardless of GP system, in a standardised way as 'linksets'. Receiving systems can therefore use these 'linksets' to regenerate linkages as far as they are able without creating false duplicate entries.

### **System specific features and effects**

EMIS LV consultations in 'narrative style' can support sequences of text, code, text, code. This structuring is supported by the GP2GP record transfer message, but INPS Vision and most other systems do not 'natively' support text which precedes codes. The fix for this, coupled with re-ordering effects due to SOAP heading interoperability, can sometimes lead to significant re-ordering of the content of consultations along with odd-looking sentence structures.

EMIS LV mixtures are not interoperable and so have to be degraded.

### **Referrals**

Referral information is interoperable. However, in INPS Vision to EMIS LV transfers, provider information which is present in the INPS Vision record does not appear in EMIS LV. All referral qualifiers are fully interoperable as text.

### **Recall/review issues**

There is a possibility of duplication between the auto-generated recalls/reviews on each system.

Different systems have different recall concepts. For example, the staging of immunisations is built into the INPS Vision immunisations concept but in EMIS LV it is diarised.

### **Date handling**

There are typically three kinds of date associated with a piece of clinical information:

- System date
- Date of when a piece of information first becomes available (often the date of recording).
- Effective date - sometimes referred to as the 'clinically relevant' date.

Some GP systems such as INPS Vision can clearly contextualise more than one date while others such as EMIS LV are generally limited to a single date which is not contextualised. Some INPS Vision forms support the concept of the 'clinically



relevant' date, such as date of last fit or various pregnancy dates. In contrast, EMIS LV can only support a single date.

In transfers from INPS Vision to EMIS LV the clinically relevant date from INPS Vision is displayed in EMIS LV.

In transfers from EMIS LV to INPS Vision the single date from EMIS LV is displayed in INPS Vision as the date of recording.

## ***Sending practice considerations***

### **Keeping up to date with filing**

There is no justification for delaying the despatch of the electronic health record simply on the basis of waiting for the results of recent tests, or to allow time for practice staff to file back logs of received results and letters. There are many advantages to patients and practices in keeping filing as up to date as possible. The profession has opted for the electronic health record to be automatically sent in response to the request generated from the 'new' practice as the patient registers.

Therefore, there will be no opportunity to 'catch up' with filing back logs before a patient's record is sent on. Any un-filed information will have to be forwarded separately to the 'new' practice. See below for 'late arriving information' and also the arrangements in place for handling unseen and un-filed pathology results.

### **Un-filed/unread pathology results**

There are special arrangements for handling pathology laboratory results which have been received but not yet seen or filed. These results will be automatically transferred to the new practice. However, two important conditions are compulsory:

- These results will appear as seen and filed in the 'receiving' practice.
- They will continue to show in the 'sending' system as unseen or un-filed.

This information must be made available to the 'receiving' practice along with the patient's record whether it has first been viewed at the 'sending' practice or not. However, it is important to emphasise that the requesting clinician at the 'sending' practice still retains responsibility for ensuring that any necessary action has been taken following receipt of the result. Any clinician in this position is entitled to know the contact details of the patient's new practice and alert the patient's new GP if necessary.

Practices are advised, if they have not already done so, to develop procedures to make sure that pathology results are filed on a daily basis. This will help to reduce the chances of unseen and un-filed results awaiting action at the time when a patient's record is requested via GP2GP.

### **Late arriving information**

The record is only sent **once** in response to the request generated at the 'new' practice as the patient registers. There is currently no mechanism whereby anything added after that time can be transferred electronically. Any additional



information must be forwarded to the 'new' practice using the same mechanisms that are currently in place for paper records.

### **Audit trails**

System audit trails are not transferred by GP2GP. They remain within the originating system. Each time the record is transferred a new message folder is generated and all previous folders are forwarded with the record. These folders are constant and remain unaltered.

When an electronic health record is edited, the clinical system records the date and time of any addition, change or deletion, along with the identity of the person altering the record, into the system audit trail. Using the information stored in the system audit trail it is possible to 'roll-back' all changes to the record and restore it to its state at any point of time in the past.

The system audit trail is not accessible by users and so cannot be modified by them. This is a vital part of the design of any modern clinical information system and very important from a medico-legal perspective.

During the GP2GP transfer process, a snap shot of the whole record is extracted and transmitted to the next practice. There is no attempt to include the system audit trail in the extract. This remains at the originating practice. At the 'new' practice, as each element of the record is imported, information is laid down in a new system audit trail. The system audit trail cannot be rolled back any further than the time of the record import in this instance.

Each time a record is transferred by GP2GP the message is stored in a folder on the receiving system and this folder forwarded. With each subsequent transfer the record is sent along with all previous folders. In other words, the originating system keeps a copy therefore providing a complete audit trail of transfer activity.

Should any medico-legal issue arise, it would be required to work out which point in the chain of transfers was relevant. It would then be necessary to visit the relevant practice in order to use the system audit trail to roll back the record to the appropriate time. In theory, the message folders could also be used to help in identifying the chain of events.

