

Good Practice Guideline Supplement

Appendix 2 – GP to GP record transfer

This appendix is a supplement to the Good Practice Guidelines and particularly to the section on Data Transfer whose general provisions and discussion provide throughout the following part. The appendix was constructed on the basis of the experience of the GP2GP record transfer project validation exercises and the clinical involvement therein. It is to be expected that this appendix will form a core part of the good practice guidelines (following any necessary modifications) after the actual introduction of widespread GP electronic record transfer. Specific advice on GP to GP transfer will be made available as a supplement to these guidelines at

<http://www.connectingforhealth.nhs.uk/systemsandservices/gpsupport/gp2gp/goodpractice>

A2.1 The rationale for electronic GP-GP record transfer

The overwhelming majority of U.K. general practices (>96%) are computerised in some way or other. A sizeable proportion of these practices (probably the majority – but there is no evidence more recent than 1996) use their computer systems for recording patient record information in whole or in part. The GP electronic record was "legitimised" in 2000 following the construction of a previous version of these Good Practice Guidelines.

Paradoxically, the widespread use of electronic patient records has resulted in deterioration in the completeness and integrity of patient record information at the point of transfer of care between practices. This results from a variety of causes whose main headings are;

- Patient records that are an unpredictable mix between paper and electronic.
- The inability to transfer the electronic part of the record except as a print-out and the consequent need to re-key information (with its associated error factors).
- Variable professional skills and assiduity in recording information within both paper and electronic versions of the record.

The net effect of the above is to place difficulties on new practices in identifying salient information in transferred records and in incorporating that information within the new record. This is to known to have significant (but unquantified) resource implications for practices. There is also widespread anecdotal evidence of resulting adverse effects on patient care. The rationale for the electronic transfer of records is therefore;

- As a support for electronic records in general practice and their general benefits in terms of decision support and audit/governance abilities.
- To obviate the need, as far as possible, for re-keying of paper-based information for new patients and thus reduce resource implications
- To reduce the risks to patients arising from the transfer of confusing records

A2.2 The nature of electronic GP-GP record transfer

Electronic patient record systems in general practice in England are provided by the commercial sector. At the time of writing this annex to the Good Practice Guidelines, six different commercial suppliers are known to be involved in this provision.

<http://www.connectingforhealth.nhs.uk/systemsandservices/gpsupport/gpsoc/systems>

Each of the systems so provided is designed differently and, until recently, none of the systems was constructed with the requirements of clinical data interchange in mind. In consequence, the data structures and data views are heterogeneous (see discussion in the Data Transfer chapter) and so there is no single simple mechanism that can be constructed that will allow the passage of structured clinical data of 100% accuracy and integrity between these different systems.

GP-GP record transfer is carried out using an electronic message which specifies a common "architecture" into which the various systems concerned may map their data structures in a form which is mutually comprehensible. What this means in simple terms is that there is a common convention for the representation of;

- Record Encounters; what constitutes a single transaction with the record such as a surgery consultation, a letter received from outside the practice, an investigation result etc
- Names for these encounters; e.g. Home Visit, OOH Consultation, Surgery Consultation etc.
- Headings within these encounters
- Complex clinical constructs; e.g. Investigation batteries, Blood Pressure Results etc.
- Code mappings; e.g. from various sets of medication codes
- Codes and associated text
- Major modifiers of clinical meaning; e.g. Uncertainty, Allergy, Family History

In addition, there are rules which require the degradation of structured clinical information to text where, in any instance of a record transfer, it is not possible for a system to safely map into or out of this common structure.

The net effect of the above is to allow records to be transferred in a form which is 100% human readable and preserves as much of the structure of the record as possible thus reducing the need to re-key information.

There remain, however, some elements of current electronic records which cannot currently be transferred in completely structured form in every case because of different conventions for describing them on different systems or different coding schemes used.

A2.3 The limits of electronic GP-GP record transfer

There are four particular aspects of current GP-GP records where the transfer process of that record information needs to be supported by additional rules or processes if fully safe and usable records are to be reconstituted on receiving systems

A2.3.1 Medication information

There are currently three different coding schemes for the representation of medication information on G.P. systems. Transfer of that information can be achieved by adherence to a combination of rigorous mapping rules and associated automated machine checks against those rules. Experience within the GP-GP record transfer project showed that adherence to those rules allows for a very high degree of reliability of transfer – approaching 100% but, crucially, not actually reaching that point.

The principal reasons for failure to reach 100% reliability are;

- The multiple coding schemes used and
- Failure of previous code mapping exercises (see Data Transfer chapter)

The multiple coding scheme problem cannot be overcome until the NHS implements a common coding scheme for drug information on all electronic record systems. Even then, however, there can probably never be a guarantee that legacy medication information held on computer systems was always reliably coded, particularly when those codes resulted from a historical code mapping exercise. While this is a problem that will reduce over time following the introduction of a common coding scheme, it has effects on record transfer expectations and associated good practice which are discussed below.

A2.3.2 Allergy information

Partly as a result of the multiple medication coding scheme problem and partly because different suppliers represent medication allergies differently for the purpose of prescribing decision support, it is not currently possible to exchange this information in every case in a way which allows for different systems to mutually understand it.

Within the GP-GP record transfer project a set of rules have been constructed which allow for every instance of a recorded allergy to be clearly identified as such and, when the associated information cannot be incorporated directly into a different receiving system, for this information to be presented to the user so that they can modify it into a form which conforms to that on their own system – thus preserving the ability to use that allergy information as a warning during future prescribing events.

This has effects on good practice which are discussed below.

A2.3.3 Business specific information

There are and will be from time to time, aspects of G.P. electronic record keeping that are designed to support specific business processes relating to terms and conditions of service and/or remuneration such as, currently, IoS payments and cervical cytology call/recall/targets. For most of such processes, either different systems have different conventions for their representation or users create idiosyncratic methods for handling them or both. This has two broad consequences at the point of transfer of the information.

Firstly, while it is always possible to transfer the raw data that supports, for instance, cervical cytology call and recall between systems, it may not be the case that that information can be recreated on a receiving system so that it supports that system's own call and recall functions. During the course of the GP-GP record transfer project, a general template for handling cervical cytology information was proposed but this has not yet been implemented and, until such a common view is held, practices will continue to have to do additional work to make such information completely useful when received from a different system.

Secondly, individual practices may create internal reports to support things like target payments based upon an internal practice agreement as to what codes will be used. These code-lists will not necessarily be the same as those used by a receiving practice following transfer.

The good practice effects of this are discussed below.

A2.3.4 General record view

As discussed in the Data Transfer chapter, transfer of information between different systems will result in an alteration in the way that information is viewed and navigated by the receiving system. This does not necessarily have any adverse effect upon the process of patient care, provided that clinical users of the systems understand that this is the case and interpret the record accordingly. Once again, this is discussed below.

A2.4 General clinical safety

Systems engaging in GP-GP record transfer will be required to adhere to some processing rules on receipt to reduce the potentially adverse effects of the above limitations.

A2.5 Electronic and paper GP-GP record transfer

The transfer of paper G.P. records alongside electronic ones will continue for the foreseeable future for a variety of reasons which include;

- The variable penetration of use in general practice of electronic records for direct patient care
- The majority of patient information from outside practices remains paper-based
- The variable degree to which such external information is incorporated into the electronic record
- The variable degree to which historical patient information native to practices has been incorporated into electronic records

The net effect of this is that, while electronic record transfer will reduce the need to re-key information, it will not remove the onus on practices to enter historical information present in old paper records.

A2.6 GP electronic record quality

However assiduously electronic records are kept, errors in their content will sometimes be present. The following examples are already known to have occurred;

- Erroneous codes added by a secretary from an inbound letter
- Erroneous diagnostic code added by a doctor on “hearsay” from a third party
- Erroneous codes added as a result of a flawed data transfer mapping exercise
- Automatic code entry as a result of software misinterpretation of inbound electronic messages
- Missing or incomplete significant data
- Data summarised from Lloyd George notes that relates to a different patient's clinical information

The general issue of good record keeping is detailed elsewhere in these guidelines. Some particular matters relating to transferred electronic records are discussed below.

A2.7 GP-GP record transfer good practice guidelines

A2.7.1 Workflow

Links with registration business process

The GP2GP record transfer process, although triggered by the patient registering at a new practice, is quite separate from the registration process. The message transfer process employs the Personal Demographic Service (PDS) <http://www.connectingforhealth.nhs.uk/demographics> and the Spine Directory Service (SDS). A number of checks are carried out to ensure that the correct record will be requested for the correct patient from the correct previous practice and that the patient has registered at a genuine practice. The electronic message carrying the patient's record is conveyed securely across the N3 network into the Transaction and Messaging Spine (TMS) and then out again across the N3 network to the new practice. Only users with the appropriate role / access level will be able to trigger the GP2GP process and even then, only if they have logged on to the system using their smart card.

A chain of events is triggered when the patient registers. Firstly the Personal Demographic Service (PDS) is used to run a patient trace. By using key information such as surname, forename, date of birth (and NHS number if available) the correct patient is identified on the PDS. Following this the patient's previous practice is automatically identified. An automatic check is performed using the Spine Directory Service (SDS), which holds essential information about NHS organisations, to find out the exact electronic location of the previous practice and to check whether or not it is GP2GP enabled. If the previous practice is not GP2GP enabled then the GP2GP process stops and the registration process simply reverts to a paper based record transfer. If the previous practice is GP2GP enabled then an electronic request is sent to the previous practice using the EHR_request message.

At the previous practice a series of events takes place automatically.

- A check is performed to confirm that the patient's record can be found
- If the record is found then a check is run against the SDS to obtain the routing details of the patient's new practice
- An electronic acknowledgement is sent to the new practice

- A check is run against the PDS to check that the patient has in fact registered at this new practice
- Finally, assuming that the previous checks have returned satisfactory responses, the patient's electronic record is automatically extracted and conveyed by the EHR_extract message across the N3 network and the TMS to the new practice

The GP2GP record transfer process is designed automatically to fetch the patient's record safely, securely and quickly from the previous practice. Typically the record will arrive within minutes of the patient completing registration.

Automatic sending of the record by the previous practice

At registration when patients sign the GMS1 form they are effectively instructing the new GP to retrieve their records. It can be argued that neither the previous nor the new GP have any 'say' in the process: the new GP is in effect being instructed to get the patient's records. This explicit statement gives the new GP the right to extract the newly-registered patient's records whether the records be paper, electronic or otherwise. For these reasons the strict legal and regulatory arrangement is that as soon as the patient is accepted by the requesting practice, they have assumed responsibility for the patient. From that point onwards the patient is no longer a patient of the sending practice and that practice has no right to deny the registered GP access to what is now his patient's record.

During the development of the GP2GP record transfer process two issues were considered:

- Whether to have an automatic process that extracted the record from the sending practice without intervention from the sending practice, or whether to have the sending practice 'allow' the request and determine whether the record would be extracted, i.e. in some way be able to stop or deny the request
- Whether the extraction should occur immediately or at some other (delayed) time, e.g. 24 or 72 hours later.

These issues were considered and debated by the full committee of the General Practitioner Committee, the Royal College of GPs, the GP2GP Project Board and the GP2GP Clinical Safety Team.

The unanimous view of all of these bodies is that the electronic record should be extracted and sent, automatically and immediately, in response to the EHR_request message.

Handling of electronic patients received in error

Despite the checks built into the process it is inevitable that from time to time, typically as the result of human error, practices will find that the electronic patient record received via the GP2GP process does not belong to the new patient. The most likely cause for this is the acceptance of a PDS match that is in fact a mismatch when identifying a patient. Two possible scenarios should be considered:

- Wrong patient registered (e.g. through acceptance of erroneous PDS match) with correct record for that patient.
- Correct patient registered but incorrect record received for that patient. This may be either due to errors during PDS trace at receiving practice or due to problems at the sending practice.

See following interim guidance

GP2GP – erroneous record transfers (interim guidance)

Introduction

This guidance has been developed by the GP2GP project and the Joint GP IT Committee to advise practices how to reduce the risk of making an erroneous record transfer request and advising practices and PCTs how to manage such erroneous requests when they do occur. Erroneous record transfers usually occur when patients are incorrectly identified when registering with a new GP practice. This may result in a request being made for the wrong record via a GP2GP transfer and a patient being inappropriately deducted from their true registered general practice.

Registering new patients

Correctly identifying and registering new patients on the demographics database (PDS) is the absolutely key step in reducing the risk of erroneous GP2GP record requests being made. When completing the GMS1 registration form, practices should carefully check the accuracy of patient data and try to provide as much information as possible, preferably including the NHS number when it is available. The GMS1 should be checked in the presence of the patient to check its legibility, completeness and accuracy. If a patient cannot be positively identified, practices might consider asking registering patients to provide formal identification and proof of recent address to ensure that correct GP2GP record transfer occurs. If in doubt, registration should be deferred and advice sought from the PCT/Patient Services Agency.

Erroneous transfers & the sending practice

Most erroneous transfers come to light when the patient contacts their practice (the sending practice) for an appointment or prescription, to be told they are no longer registered. Sending practices should contact their system supplier helpdesk to report the erroneous transfer. The practice should also contact their PCT (Patient Services Agency) to request that the patient's registration be reinstated and consider informing the patient what has happened.

Erroneous transfers & the receiving practice

The practice requesting the record (the receiving practice) may also identify that they have the wrong record, or are informed by their supplier helpdesk that they have registered the wrong patient. Practices should contact their PCT (PSA) to advise them of the erroneous transfer and with the support of the PSA and supplier helpdesk, arrange to delete the erroneous NHS number and "roll back" the clinical system so that the erroneous incoming GP2GP record is deleted and no patient details remain in the receiving practice. The receiving practice should consider whether an erroneous transfer should be considered as a practice critical incident, to reduce the risk of further such errors.

Arrangements for returning patients – the 'A – B – A' scenario

Where a patient returns to re-register at Practice 'A' the previous electronic record including demographic entries should still exist. This forms a special case known as the 'A – B – A' scenario and leads to the following challenges:

- Practice 'A' must not end up with duplicate records for the patient (i.e. both the original and the newly received records).
- The need to keep duplication, disorganisation and degradation of the content of the original existing record at Practice 'A' to a minimum when attempts are made to merge this with the incoming record from 'B'
- The need to apply all changes to the record deliberately made by any user since the patient left Practice 'A'
- The need for any merging process to have an automatic default that is deemed to be clinically safe

At the present time these challenges cannot be satisfactorily met. Therefore a constraint is applied. Until further notice users should expect that GP2GP record transfers will not take place for returning patients. Instead, the original record at 'A' should be reactivated. Work is currently in progress to develop an intelligent, safe 'merge' of records for returning patients. The prime aim will be to preserve all of the changes that have resulted from deliberate human actions since the patient left Practice 'A' but to minimise the duplications, degrades and disorganisation to the pre-existing record (at Practice 'A') that result from the automatic processes of heterogeneous GP2GP record transfer. A secondary but important aim will be to maximise the chances of achieving long, unbroken chains of electronic record transfers and generally to improve the quality of these transfers.

Parallel running with paper records

At this point in time although the number of uncomputerised practices is very small a significant part of the GP estate in England is not GP2GP enabled. Nor are there arrangements in place for cross border electronic record transfers. For this reason paper records will continue to follow the patient. GP2GP enabled practices remain contractually bound to follow standard practice for the handling of paper records.

A2.7.2 General Organisation

The GP2GP record transfer process can be considered in a series of stages each of which needs to be supported organisationally by the practice. The precise details as to how these stages should be managed and by whom will depend on the practice. However, particular attention should be paid to the checks outlined in section A2.7.5 and the general principles enumerated in section A2.7.6 should be followed. The stages should typically follow in this sequence:

1. Registration process / PDS trace and triggering of the automatic EHR_request process:

It is vital that staff involved with the registration of patients should understand the process, and the need to be logged on with Smart card. To minimise the risk of mismatching patients they should be thoroughly trained in the use of the PDS trace. (See section A2.7.1). In this context, they should be aware of the importance of using the patient's NHS number wherever possible

2. Initial check of incoming records leading to filing in a timely fashion:

All systems provide a facility to preview the incoming record before it is filed into the database. Some systems provide facilities to filter this preview in various ways (e.g. to identify drug allergy / medication degrades) and to give an impression of the overall quality of the record. The record should be checked to ensure that it is not obviously the wrong record for a patient of the stated age and gender. It is not possible in any way to alter the incoming record at this stage. However, in exceptional circumstances (e.g. if this turns out to be the wrong record or if the record is deemed to be of such poor quality as to be useless), the user has the option to reject the record and to opt for the Practice to start building a new record from scratch. In the majority of cases the aim should be to file the record without delay so that the patient and attending clinicians can benefit from having access to the record as early as possible (e.g. have access to information about current medications and drug allergies). Any entries that have been made to the patient's record prior to filing should be checked against the previous record after filing and any inaccuracies or duplications should be appropriately handled. It follows that the earlier the record is filed the less the amount of checking that will need to be done

3. Fixing of any degraded drug allergies in the incoming record so that prescribing is unlocked:

The GP2GP record transfer process has been designed to minimise the risk of drug allergy information being lost or over-looked leading to inappropriate prescribing. Because drug allergies are represented in different ways in different systems it is inevitable that degraded drug allergies will occur. These will not interact with prescribing decision support. After filing the presence of even a single drug allergy degrade will therefore lock down prescribing so that it will not be possible for any medication to be authorised and then prescribed until the degrades have been appropriately processed. Different systems provide users with different tools to identify these degrades, to enter the allergy in the appropriate way, and then to delete the degrade. These actions are recorded in the system audit trail. It is vital that everyone who has access to the record before these degrades have been processed fully understands the importance of handling them in the proper way. Following preview and filing some practices may choose to give the processing of these degrades a high priority so that time can be saved in the first consultation

4. Reviewing and reauthorising medication (typically with the patient):

At the first consultation immediately after registration time is likely to be at a premium. As a minimum:

- a. A conscious check should be made to ensure that the demographic details belong to the consulting patient and that the correct electronic record has been filed into the practice system for this patient
- b. The accuracy and appropriateness of current medications and allergies should be checked with the patient. N.B. Medications may not be prescribed from an incoming record until
 - i. All drug allergy degrades have been processed (see above)
 - ii. Medications have been reviewed and (re) authorised by a prescriber in the new practice

5. General review of the record with the patient to check and correct any missing information or inaccuracies:

The prime objective here is to ensure that from the patient's point of view the record is complete and accurate (See under general principles for guidance about making alterations). In particular, if not already done:

- a. A conscious check should be made to ensure that the demographic details belong to the consulting patient and that the correct electronic record has been filed into the practice system for this patient
- b. Any interim record information on the receiving system should be checked against the incoming record
- c. Any current medication or allergy information should be checked for accuracy

6. Review of paper record to look for and back load missing information:

Typically this will be a 'back office' activity similar to the 'summarising' activity performed for paper based transfers. The main objective should be to find important information in the paper record that was not entered into the electronic record at the previous practice. It follows that there should be no need to check the computerised printout from the previous practice as all of this information will have been transferred by the GP2GP process. It is likely to be more rewarding to check for any summary card and to check hospital letters. Practice staff should resist the temptation to make cosmetic changes to the incoming record (See under general principles for guidance about making alterations)

7. Business specific information review:

The aim of this 'back office' activity is to review the record to ensure that it contains necessary entries to support practice business processes (e.g. cervical cytology call / recall). In this case, because individual practices have different ways of managing their various business processes it is very likely that changes will need to be made to the record. However, these should be kept to a minimum (See under general principles for guidance about making alterations to incoming records). This activity can be carried out in parallel with the other activities outlined above.

8. Keeping filing of incoming results / correspondence up to date:

In contrast to all of the above points which relate to the receiving of records this relates to the Practice's role as a sender of records. Practices often have no advance warning that a patient has moved and registered elsewhere. Because GP2GP record transfer is an automatic process notification that the record has already have been transferred to the next practice may be the first indication that the patient has moved (See A2.7.1 for discussion of automatic sending of records). It is therefore good practice to keep filing of all incoming results and correspondence up to date. In the event that pathology results have been received into the practice and matched but not yet actioned, the GP2GP transfer process will forward all such results to the next practice. However, the requesting clinician remains responsible for ensuring that any action appropriate to a result is taken even though the patient has moved on to the next practice. To the receiving practice the results will appear to have been actioned. To the sending practice the results will still be displayed as awaiting action. If urgent action is needed it may be necessary to contact the new practice. PCTs or PCAs should be able to assist. Practices should be clear about the procedure to be followed in such cases.

A2.7.3 Training

Practices should ensure that all of these processes outlined in section A2.7.2 are integrated into their general operations and managed effectively. There should be clear policy about what each of these functions should entail and who will perform each of them. Roles should be clearly defined and appropriate system access levels set up, commensurate with experience, training and responsibility, to enable users to carry out these roles. The team members concerned should have undergone appropriate training. In particular:

- A responsible member of staff and a deputy should be identified to take the lead within the practice and be trained in the processes involved in GP to GP record transfer

- The Practice lead should identify how the processes outlined in A2.7.2 will be integrated into general practice operations and carry out a training needs assessment of the people involved. In particular this should address:
 - Registration process and PDS trace
 - Initial check of records on receipt and filing
 - Handling of drug allergy degrades
 - Reauthorisation of medications / identification of what was current medication in previous practice
 - Review of paper records, what to backload, how to achieve this keeping changes to incoming record to a minimum
 - Dealing with business specific information
- All users of the practice system should be trained in what to expect from electronic record transfer and, in particular, from the limitations outlined in section 2.8 of this Appendix.
- More generally, all members of the clinical team and relevant members of the administrative team should be familiar with these good practice guidelines prior to commencement of GP to GP record transfer
- Practices should identify a date from which they will implement GP to GP record transfer and all members of the practice should be informed of the date of commencement of GP to GP record transfer

A2.7.4 Non-computerised practices

Although the number of non computerised practices has become very small not all record transfers between practices are capable of being covered by GP2GP. Therefore it will be necessary to continue to exchange paper records for the foreseeable future. (See A2.7.1 – Parallel running with paper records)

A2.7.5 Validation

This is about 'fitness for purpose' of the incoming record and relates to things that should be done as soon as possible after the incoming record is received.

- Check that both demographic information and associated electronic record relate to the patient
- On preview confirm that the record is of adequate quality to file
- Check compatibility and consistency between any interim record already made and the filed incoming record
- Deal with any drug allergy degrades
- Reauthorise medications and deal with any medication degrades
- Check business specific information and amend entries to align with practice processes but resisting the temptation to make any changes unless they are absolutely necessary from a safety / usability / business process point of view

A2.7.6 General principles

The quality issues identified in section A2.6 above require practices to have in place mechanisms aimed at reducing or eliminating the impact of externally received erroneous data.

- The practice's native record should be maintained in line with these "Good Practice Guidelines for General Practice Electronic Patient Records"
- Practices should follow the guidelines identified in section A2.7.2 of this appendix on receipt of an external record
- In particular, the incoming record should be subject to validation checks as identified in section A2.7.5
- Practices should recognise that patients themselves are generally the most competent to judge the accuracy of their own historical information, and should consider making a printed version of the record available to their patients for comment at specific points in

their experience such as their first visit after registering, on the point of referral to hospital etc.

- Practices are provided with functionality on their systems that will allow them to review but currently not to alter incoming records before they are filed. They are currently presented with a choice of either filing the record into the Practice database or rejecting it in which case it will persist as an attachment to the patient's new record. The choice to reject should only be exercised rarely
- Practices are provided with further functionality to assist them in making some essential changes to the record after filing (e.g. degraded drug allergies – see below)
- There is a need to review and, in some cases to make further alterations to the information in those records after filing (See section A2.7.5 – Validation). When doing this the responsible user should ensure that
 - Incoming record information is not modified beyond what is necessary to make it safe and usable on the receiving system
 - Incoming record information is never deleted unless deemed to be unsafe in terms of its accuracy or comprehensibility

When paper records are subsequently received they should be reviewed by a GP or other appropriately trained member of staff and amendments made to the electronic record where appropriate

A2.8 The limits of electronic GP-GP record transfer - updated

This section updates the original section A2.3

A2.8.1 Medication information

GP 2 GP applies the following rules

- Repeat medications which were 'current' at the time when the patient left the 'old' practice will be de-activated on import
- Review dates will not be transferred from 'old' to 'new' practice
- Suppliers will offer the means to users with appropriate prescribing rights easily to identify and re-activate / authorise 'current' medications selectively
- Any 'current' medication that has been degraded to text will be brought to the user's attention

Past issues of medication are normally grouped in EMIS systems but this grouping is lost when the data is imported back into EMIS system

DM + D is now the preferred standard for handling medicines and devices and all current GP systems are capable of mapping such information to and from DM + D. The trend towards DM + D becoming increasingly integrated into GP systems has been accelerated by projects such as Electronic Prescribing Service (EPS). However 100% interoperability remains elusive. See section A2.3.1

A2.8.2 Allergy information

Any drug allergy information which has been degraded to text or which cannot be properly represented on the receive system as an allergy will be brought to the users attention. For reasons of clinical safety it will not be possible to issue any medication until appropriate action has been taken for every drug allergy degrade and the degrade has then been deleted
See section A2.3.2

A2.8.3 Business specific information

See section A2.3.3.

A2.8.4 General record view

Users should be aware that information imported via GP 2 GP from a previous practice may not obey rules on the receiver system, in terms of appearance, layout or ordering, to which users are accustomed. This will necessitate some changes in the way that records are viewed so that important information is not missed.

As discussed in the Data Transfer chapter, transfer of information between different systems will result in an alteration in the way that information is viewed and navigated by the receiving system. This does not necessarily have any adverse effect upon the process of patient care, provided that clinical users of the systems understand that this is the case and interpret the record accordingly.

- **Duplication, transfer degrades and order changes**

One of the inevitable consequences of heterogeneous record transfer is that the incoming record may have a very different appearance on the receiving system from that on the sending system. This is because the receiving system will not always be able to replicate structures native to the sending system. Where structures (e.g. Vision forms) cannot be faithfully represented on the receiving system their content will be imported and displayed as text. This text will typically be a concatenation of the field descriptions and entries from the original form. Sometimes the same (or similar) information may be displayed twice. Where information is coded in the incoming record using a coding system that is not recognised by the receiving system (e.g. Egton code or Emis drug code) the information will be converted into a transfer degrade. In the receiving system the original text will be displayed but the original code will be replaced with the most appropriate transfer degrade code. The sending system may be able to support consultation entries that string together sequences that consist of text followed by code followed by text etc. A receiving system that can only display one code at a time followed by one piece of text will typically re-order the information displaying each code on a new line followed by its original text followed by a label 'prefix text' followed by the prefixed text. Despite these duplications, degrades and order changes the original meaning is usually clear. There is no need to edit out these irregularities

- **Local codes and transfer degrades**

There are broadly two kinds of local codes. Those that are system wide and managed by the Supplier. Those that are Practice generated. The former can be transferred without degrade where sending and receiving practices use the same system. However, they lead to transfer degrades in any heterogeneous transfer. In the interests of improving the quality of record transfers suppliers are being asked to reduce the use of these codes. Practice generated codes will always lead to transfer degrades so that their use should be strongly discouraged. Where they have to be used the associated text should always have a clear, unambiguous meaning that will be understandable to any future practice.

- **Consultation structures**

No two types of GP computer system support the same consultation categories and at least one system offers no categories at all. Because these cannot be rendered completely interoperable this results in items being displayed under unusual categories and also to changes in ordering when compared with the sending system. However, typically the original meaning is preserved

- **Values, units, ranges, and abnormality indicators changed to text**

Units are not fully interoperable between different systems. Where a receiving system cannot 'understand' units, the value, units, range and abnormality indicators may become converted to text. While such strings may be perfectly understandable to humans the machine will not be able to handle values converted to text (e.g. when running searches or showing a sequence of results graphically)

- **Cross mapping limitations**

At present not all systems involved in GP2GP record transfers use the same coding system for representing medications. However, all systems are capable of translating medication information between their native medication coding scheme and DM + D. However, even the best quality cross map breaks down where a medication cannot be represented either in DM + D or in a native coding scheme resulting in medication transfer degrades. However, the receiving system should be able to recognise medication transfer degrades and to display these in the appropriate part of the record. The original term text should be preserved so that the original medication entry will at least be human readable. Thus when medications are initially reviewed appropriate action may be taken.

In future it is possible that clinical information will be transferred between systems using different coding schemes (e.g. Read v2, CTV3, or SNOMED). This will inevitably be a further source of transfer degrades

- **Linkages between different elements of the EPR**

While best attempts have been made to extract information about linkages between different elements of the record it has proved difficult to reconstitute these reliably. Some elements that

the user might normally expect to find linked may not be so. As an example, linkages to referral documents will not be fully reconstituted on the receiving system. This may necessitate searching the record more thoroughly (e.g. for relevant documents) than might be necessary for a 'native' record

- **Degrades to text**

These will occur where an importing system cannot effectively emulate structured information and this is mainly a problem where sender and receiver systems are different. The rule is that such information will be degraded to human readable text which will preserve the meaning. While human readable meaning may be preserved any automatic function dependent on structured as opposed to textual entries will be lost. There are various situations where this may occur and the following are examples:

- Term Codes: Some term codes exported from EMIS systems cannot be recognised on import to InPS Vision and so are degraded to text. This may occur where term codes have been used in the process of migrating EMIS practices from 4 byte Read to Version 2 Read
- Qualifiers: Some InPS Vision forms carry qualifiers which are extracted as text. On import to an EMIS system the forms cannot be reproduced so that the qualifier information appears as text
- Dates: Some InPS Vision forms carry contextualised dates (e.g. disease register forms) which will be degraded to text on import to an EMIS system Medications: Some medications (e.g. mixtures) cannot be represented in the NHS standard Drugs, Medications and Devices dictionary (DM + D). Where sender and receiver systems are different the details will be degraded to text
- Allergies: Where drug details cannot be represented in DM + D and the sender and receiver systems are different, the details will be degraded to text

- **Dates**

Typically, observations in GP records are displayed with a single uncontextualised date usually on the left hand side of the screen. This date may have been changed by the user at the time of data entry for a variety of different reasons (e.g. the observation was made on a date that differs from the system date). In most cases this will not have important clinical consequences. However, it should not be assumed that other practices will change these dates according to any particular set of rules. Therefore dates that are not associated with an explicit context should be interpreted with care. Some dates do have a clear context (e.g. plans, recalls) both in sender and receiver systems.

InPS Vision holds contextualised dates in a small subset of its forms (e.g. 'data of last fit'). Where the record is transferred between InPS Vision systems the display of these dates will be preserved in context. Where the record is transferred to any system that can only handle one date (e.g. EMIS LV system) such dates will be degraded to text which will be displayed with the rubric and any other text. Thus in text the context of the date will be preserved. The left hand date may be changed to this same "effective date".

It is hoped that in future GP systems will be better able to contextualise dates and that future versions of the message will be better able to handle that context

- **EMIS system – complex consultation text**

EMIS users in Consultation view can construct complex strings of text and coded information. This construct can be passably recreated on re-import to an EMIS system but users may see line returns in unusual places.

It has proved very difficult to represent this construct meaningfully when the information is imported to an InPS Vision system. Currently InPS Vision users will see a series of coded entries interspersed with text. Code and text may not appear in the same order as in the originating EMIS system which can sometimes make such entries difficult to interpret.

Selection of a different record view may help. Further work is in progress to ameliorate this.

A2.8.5 Attachments including Documents

In the GP2GP context an attachment may be defined as any file that is separate from the main body of the electronic record but with an explicit link embedded in the record. This link must enable the file to be opened from within the record. All such attachments should be extracted along with the record and transferred by the GP2GP transfer process to the next practice. At the receiving practice, once the record has been filed, all such attachments should be accessible from within the record. However, there are currently limitations:

- The TMS currently has a restricted list of file types that may be sent. Where a file is of an 'illegal' type only a placeholder will be sent on to the next practice¹
- The TMS currently has a message size limit of 5 Mb. If the total size of the record plus all attachments exceeds this limit then the GP2GP record transfer will fail totally¹
- The TMS currently limits attachments to a maximum of 99. If this limit is exceeded then the GP2GP record transfer will fail totally¹
- Some Third Party document management systems employ their own application programming interface (API) to enable the address in the embedded link to be interpreted to find the true location of the file. Unless the GP system supplier can access this API at the time of extraction the file will not be found. In this case only a placeholder will be sent on to the next practice²
- Contextual information (e.g. meaningful name or descriptive notation) is not currently interoperable between different GP systems so that at the receiving system it may be impossible to tell the content of any document without first opening it. At present this is inevitable because no standard for naming and categorising documents operates in the GP domain

A2.8.6 System audit trails

The system audit trail is **not** transferred by the GP 2 GP message and there are strict rules originally outlined in RFA for its preservation on the originating system

A2.8.7 Handling of pathology (PMIP) results

A2.8.7.1 Dates

PMIP results may have as many as four associated dates. Because the present GP 2 GP HL7 message cannot contextualise dates only one of these dates (date specimen received by the laboratory) is forwarded to the next practice

A2.8.7.2 Ranges and abnormality indicators

PMIP results when transmitted from the pathology lab will typically be accompanied by their own normal ranges and where appropriate, abnormality indicators. The rules adopted for GP 2 GP transfers of PMIP data are as follows:

- PMIP ranges (plus abnormality indicator if present) will be extracted and sent along with the value of the result
- On import, systems will preserve PMIP ranges (plus abnormality indicator if present). They will not substitute 'native' ranges nor change the abnormality indicator; they will not insert an abnormality indicator where it was originally absent from the PMIP result

On import EMIS obeys these rules for "Results" screen but on the "Values" screen, where there is no abnormality indicator carried in the message, it may be set according to the imported range and value. Users may therefore find the same result displayed differently on the two screens

¹ In all of these cases a 'Large Message Solution' is expected to overcome these limitations but even so it may still be impossible to open some file types in the receiving system if the necessary application is not installed

² In at least one case this problem can be solved if the sending practice upgrades its document management system to the appropriate version. In other cases there may still be work to be done between individual document management system suppliers and GP system suppliers