	Commercial in Confidence	
	GP2GP Supplementary Specification	
	Structured Degrade Handling	
Programme	*NPFIT*	**DOCUMENT RECORD ID KEY**
Sub-Prog / Project	*GP2GP*	*NPFIT-PC-BLD-0132.03*
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Owner	*David McAvenue*	Version	*V1.0*
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Version Date	*18/01/06*	Status	*Approved*

Subject	**Structured Degrade Handling**
Reference	Test Director incidents (1947, 1981)
Supplier	General
Summary	Degradation of record data in GP2GP transfer is the process by which coded record entries from one system become un-coded or less specifically coded in another system following record import[1]. These degrades are due to the use of codes and coding systems that are not interoperable between systems. This occurs for a number of reasons including the prevalence of historical or legacy data in participating systems. However in the absence of specific common requirements for degrade handling it is possible for systems to handle degrades in different ways. While divergent mechanisms for handling degrade appear to produce generally satisfactory results in simple heterogeneous A to B record transfer significant issues are found in onward propagation. The key underlying theme is that degrade of records into a different form leads to handling issues within systems and in onward transfer, for example systems have well developed mechanisms for handling the hundreds of medication issues that are present in real patient records as part of the medication management functionality of applications but if large numbers of these records are degraded for example to text rather than handled as medications then these records become difficult to manage on receiving systems and cause complications in onward propagation to other systems.

For example:

1. System A utilises a web application to extend the existing application to manage the handling of degrades which are maintained within a document attachment to the patient record. This produces good results in simple A->B transfer but in onward propagation to an instance of system B at practice C the attachment which stores degrades in a proprietary format is not readable leading to the loss of all degraded information. This information loss is undesirable because it puts additional and probably unworkable requirements on practice B to fully process all degrades into an interoperable form prior to transfer (1947).

2. System B handles all degrades by transforming them into simple text entries in the patient record. This works adequately

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[1] There are other forms of record degradation in GP2GP transfer due to structural differences between applications but this is the specific type that occurs due to non interoperable codes.

for small records but in real records with hundreds of medication issues for example it leads to large and unusual volumes of notepad entries in the record which has a swamping effect. Moreover when these records propagate to a system A at practice C that system may deal with otherwise un-typed text entries in specific ways such as only displaying them in specific views which may lead to additional loss of information.

Addressing these issues requires a consistent and structured approach to the handling of degraded record entries.

1. Systems shall maintain the original statement types, structures and detail of degraded records (with the exception of original codes) in onward propagation i.e. a degraded medication record should appear as a MedicationStatement in onward transfer.

2. Systems should in general handle degraded record instances in a similar manner to non degraded records i.e. medication degrades are presented via the application's medication management module.

3. Degraded records shall be clearly identifiable as such however all of the detail of the original record entry shall also be visible (with the exception of original codes). This may be achieved by display of the appropriate degrade display term.

4. The identification of degraded records within an application shall not lead to pollution of the record content in onward transfer e.g. DEGRADE text added to a notes field.

5. Systems shall avoid degrade handling behaviour which is inappropriate or compromises application integrity for example while it is desirable that degraded medications identified as such should be presented within the medication management module of an application this behaviour shall not extend to the issuing or printing of degraded medications.

6. There is no requirement to preserve the original code within the degrade statement any such requirement may be met at a future date by inter-statement references to a previous folder for example.

7. If there are sound and agreed reasons why requirement 2 cannot be met then requirement 1 shall still apply e.g. an application which cannot support degraded medication statements appearing within the 'medications' screen of the application without extensive re-development and therefore treats these as general record entries must recreate the original structure and content in a MedicationStatement when this record is re-exported.

8. Degraded allergies should also propagate as allergies i.e. within the allergy identifying compound structure. The implication of this is that if the allergy processing performed by a practice leaves the degrades on the record then the next practice may have to deal with both the allergy degrade and it's handled and re-entered counterpart. The solution to this is that the best

practice handling of allergy degrades at receiving practices is to remove the degrade record when the allergy it relates to has been processed and re-entered on the system.

Detail	A number of additional codes (SNOMED CT and Read V2) have been allocated to explicitly identify degraded instances of each type of record. These codes coupled with the use of originalText and other translations allow both the original record content to be preserved and the explicit identification of records as degrades. The examples below demonstrate the required structures.

It is expected that both the Read V2 and SNOMED CT degrade codes will be present in the Statement/code element either as the main code or in translation.

Term	SNOMED CT	Read V2	Description
Transfer-degraded record Entry	196411000000103	9bJ..	Identifies degraded instances of ObservationStatement
Transfer-degraded plan	196451000000104	9bJ3.	Identifies degraded instances of PlanStatement
Transfer-degraded referral	196431000000106	9bJ1.	Identifies degraded instances of referral RequestStatements
Transfer-degraded request	196441000000102	9bJ2.	Identifies degraded instances of request RequestStatements
Transfer-degraded drug allergy	196461000000101	9bJ4.	Identifies degraded instances of Allergies[2]
Transfer-degraded non-drug Allergy	196471000000108	9bJ5.	Identifies degraded instances on non-drug allergies
Transfer-degraded medication entry	196421000000109	9bJ0.	Identifies degraded instances of medications

Examples	

1.1.   General Record Entries

```
<ObservationStatement xmlns="urn:hl7-org:v3">
<id root="D4F4BD7A-ECB1-4CA9-ABEE-9676785396A8" />
<code code="9bJ.." codeSystem="2.16.840.113883.2.1.6.2"
displayName="Transfer-degraded record entry">
<originalText>Deteriorated Mental State</originalText>
<translation codeSystem="2.16.840.1.113883.2.1.3.2.4.15" code="196411000000103
" displayName="Transfer-degraded record entry" />
</code>
<statusCode code="COMPLETE" />
<effectiveTime nullFlavor="NI" />
<availabilityTime value="19900512" />
</ObservationStatement>
```

1.2.   Medication

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[2] Note that there are additional requirements around Allergy and Adverse Reaction handling to be met which are the subject of a separate specification. The scope of this document simply refers to their handling and representation in degrade.

The following example shows an acute medication issue in degrade form.

```xml
<MedicationStatement xmlns="urn:hl7-org:v3" classCode="SBADM"
      moodCode="ORD">
<id root="950F1B37-3A35-485A-8E2A-08E7714623B1" />
<statusCode code="COMPLETE" />
<effectiveTime>
<low value="20051118" />
</effectiveTime>
<availabilityTime value="20051118" />
<consumable typeCode="CSM">
<manufacturedProduct classCode="MANU">
<manufacturedMaterial classCode="MMAT" determinerCode="KIND">
<code codeSystem="2.16.840.1.113883.2.1.3.2.4.15" code="
196421000000109" displayName="Transfer-degraded medication entry">
<originalText>CO-AMOXICLAV tabs 250mg+125mg</originalText>
<translation codeSystem="2.16.840.2.1.6.2" code="9bJ0."
      displayName="Transfer-degraded medication entry" />
</code>
</manufacturedMaterial>
</manufacturedProduct>
</consumable>
<component typeCode="COMP">
<ehrSupplyAuthorise classCode="SPLY" moodCode="INT">
<id root="C292A583-14E1-4E2A-8F0A-D758895B3547" />
<code code="394823007" displayName="NHS Prescription"
      codeSystem="2.16.840.1.113883.2.1.3.2.4.15" />
<statusCode code="COMPLETE" />
<availabilityTime value="20051118" />
<repeatNumber value="0" />
<quantity value="21" unit="1">
<translation value="21">
<originalText>tablet(s)</originalText>
</translation>
</quantity>
</ehrSupplyAuthorise>
</component>
<component typeCode="COMP">
<ehrSupplyPrescribe classCode="SPLY" moodCode="RQO">
<id root="5C0DF0CE-E9C8-4619-ABEF-A5AEB47DD5A0" />
<code code="394823007" displayName="NHS Prescription"
      codeSystem="2.16.840.1.113883.2.1.3.2.4.15" />
<statusCode code="COMPLETE" />
<availabilityTime value="20051118" />
<quantity value="21" unit="1">
<translation value="21">
<originalText>tablet(s)</originalText>
</translation>
</quantity>
<inFulfillmentOf typeCode="FLFS">
<priorMedicationRef moodCode="INT">
<id root="C292A583-14E1-4E2A-8F0A-D758895B3547" />
</priorMedicationRef>
</inFulfillmentOf>
</ehrSupplyPrescribe>
</component>
<pertinentInformation typeCode="PERT">
<pertinentMedicationDosage classCode="SBADM" moodCode="RMD">
<text>TAKE ONE 3 TIMES/DAY</text>
</pertinentMedicationDosage>
</pertinentInformation>
</MedicationStatement>
```

1.3. Plans

```xml
<PlanStatement xmlns="urn:hl7-org:v3">
<id root="0334AAC3-E017-4814-A389-5D26771F1474" />
<code code="9bJ3." codeSystem="2.16.840.113883.2.1.6.2"
      displayName="Transfer-degraded plan">
<originalText>Elderly Health Assessment</originalText>
<translation codeSystem="2.16.840.1.113883.2.1.3.2.4.15" code="196451000000104"
```

```
        displayName="Transfer-degraded plan" />
    </code>
    <statusCode code="COMPLETE" />
    <effectiveTime>
        <center value="20380415" />
    </effectiveTime>
    <availabilityTime value="20051115" />
    </PlanStatement>
```

1.4.   Referral

```
<RequestStatement xmlns="urn:hl7-org:v3" classCode="OBS" moodCode="RQO">
<id root="A6646B1A-8D56-410A-91F4-D22B0BDB314B" />
<code code="9bJ1." displayName="Transfer-degraded referral"
        codeSystem="2.16.840.1.113883.2.1.6.2">
    <originalText>Cervicalgia – pain in neck</originalText>
    <translation code="196431000000106" displayName="Transfer-degraded referral"
        codeSystem="2.16.840.1.113883.2.1.3.2.4.15" />
    </code>
<text>Source: GP Referral, Referral Type: Out Patient, Referral Status:
    Referred, NHS Speciality: Trauma and Orthopaedics. NOTES: This is some
    additional referral notes by Dave.</text>
<statusCode code="COMPLETE" />
<effectiveTime>
<center value="20051208" />
    </effectiveTime>
<availabilityTime value="20051117" />
    <priorityCode code="394848005" displayName="Normal"
        codeSystem="2.16.840.1.113883.2.1.3.2.4.15">
<originalText>Routine</originalText>
    </priorityCode>
<responsibleParty typeCode="RESP">
<agentRef classCode="AGNT">
<id root="D3E47AF0-8DDE-4DC2-9150-F78F8619A95E" />
    </agentRef>
    </responsibleParty>
<Participant typeCode="AUT">
<time value="20051117" />
<agentRef classCode="AGNT">
<id root="E9B27FDF-EB6A-409E-AB10-0226DA3FA445" />
    </agentRef>
    </Participant>
    </RequestStatement>
```

1.5.   Non Drug Allergy

```
<ObservationStatement classCode="OBS" moodCode="EVN">
<id root="46C83861-29C9-4979-BE5D-890B445EB1ED" />
<code code="9bJ5." displayName="Transfer-degraded non-drug allergy"
        codeSystem="2.16.840.1.113883.2.1.6.2">"
    <originalText>Latex allergy</originalText>
    <translation code="196471000000108" displayName="Transfer-degraded non-drug
        allergy" codeSystem="2.16.840.1.113883.2.1.3.2.4.15" />
    </code>
<statusCode code="COMPLETE" />
<effectiveTime>
<center nullFlavor="NI" />
    </effectiveTime>
<availabilityTime value="20050725" />
<pertinentInformation typeCode="PERT">
<sequenceNumber value="+1" />
<pertinentAnnotation classCode="OBS" moodCode="EVN">
<text>Reaction type: Allergy, Severity of allergy: Moderate, Certainty of
    allergy: Likely. NOTES: Suspect latex allergy.</text>
    </pertinentAnnotation>
    </pertinentInformation>
    </ObservationStatement>
```

Terminology Status	Codes provide in this document are provisional and will be incorporated in official terminology distributions at a future date.

Amendment History:

Issue	Version	Date	Amendment History
01	0.1	01/12/2005	First draft for comment
02	0.2	05/01/2006	Amendments following review. Key change was to mandate the propagation of degraded allergies as allergies i.e. within the allergy identifying compound. Agreed in PMIP teleconference 16/12/05. To be sent for Approval.
03	1.0	18/01/2006	Approved.

Forecast Changes:

Anticipated Change	When

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This document must be reviewed by the following. Indicate any delegation for sign off.

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Distribution:

Per reviewers and approvers.

Document Status:

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Related Documents:

These documents will provide additional information.

Ref no	Doc Reference Number	Title	Version
1	NPFIT-SHR-QMS-PRP-0015	Glossary of Terms Consolidated.doc	<enter latest>
2	NPFIT-PC-BLD-0068	Compliance Requirements for GP2GP Record Transfer	Latest Version

Glossary of Terms:

List any new terms created in this document. Mail the NPO Quality Manager to have these included in the master glossary above [1].

Term	Acronym	Definition