



# **MIM – Message Implementation Manual**

*An implementation perspective.*

*Richard Kavanagh*

*CfH Data Standards and Products*

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# Overview

- **MIM Introduction.**
- **Publications to date ... and the future.**
- **Implementation Focus.**
- **Future Releases.**
- **Questions.**



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# MIM Introduction

“ provides information to implementers regarding the use of HL7 v3 messages within the National Programme for Information Technology (NPfIT). “

- **The MIM describes the HL7 messages used for communications across the NPfIT programme.**
- **Not all messages are HL7v3**
- **Not all messages are in the MIM.**



# MIM Introduction

- Originally derived from the HL7 ballot document around about 2003.
- Content and format has diverged significantly.
- Content and format will continue to diverge to meet both CfH and supplier requirements.



## Contents

- NPfIT MiM
  - Introduction
  - Domains - Common
  - Domains - Administra
  - Domains - Health and
  - Domains - PSIS CDA
  - Discharge**
  - Emergency Departm
  - HealthSpace
  - Nullification
  - Outpatients
  - Sealed Envelopes
  - Generic CDA Docum
  - DataTypes

### Legend

	Informative		Draft
	Reference		Normative
	Doc Group		

## Discharge Implementation Manual - Version 3.2 [Issued]

### Contents

- 1 Overview
  - 1.1 Domain Compliancy Statement
  - 1.2 Error Correction using CDA replacement
- 2 Storyboards
  - 2.1 Scenario Mavis (Adult with Subarachnoid Haemorrhage) Part II
  - 2.2 Scenario Colonel Mustard (Adult with Myocardial Infarction)
  - 2.3 Scenario Harriet (Child with Cerebral Palsy admitted as a day care patient for examination)
  - 2.4 Scenario Mary - Maternity Discharge
  - 2.5 Scenario John (Paediatric Intensive Care – Long Discharge Report)
- 3 Application Roles
  - 3.1 Discharge Report Originating System - POCD\_AR150001UK02
  - 3.2 Discharge Report Primary Receiving System - POCD\_AR150002UK02
  - 3.3 Discharge Report Receiving System (PSIS) - POCD\_AR150003UK02
  - 3.4 Discharge Report Copy Recipient - POCD\_AR150004UK02
- 4 Trigger Events
  - 4.1 Discharge Report - POCD\_TE150001UK01
  - 4.2 Discharge Report Nullify By Replacement - POCD\_TE150002UK01
- 5 Interaction Diagrams
  - 5.1 Discharge interactions



# MIM Introduction

- **Standard contents per domain**
  - **Domain Overview**
  - **Storyboards**
  - **Application Roles**
  - **Trigger Events**
  - **Interaction Diagrams**
  - **Interactions**
  - **Message Definitions + Examples**
  - **Change Control**



# MIM Introduction

- **Domains covered to date**

Alerts

Choose and Book

GP2GP

LRs

PDS

GP Summary

Medication Management

PSIS Query

Discharge

Emergency Department

HealthSpace

Outpatients

Sealed Envelopes



# MIM Introduction

- **MIM Publication Channels.**
  - CfH Supplier LSP/ESP Communications.
  - CfH Extranet.
  - HL7 UK.
- **MIM Growth.**
  - Increasing number of domains.
  - 70Mb Zipped file.



# Overview

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- **Publications to date ... and the future.**
- Implementation Focus.
- Future Releases.
- Questions.



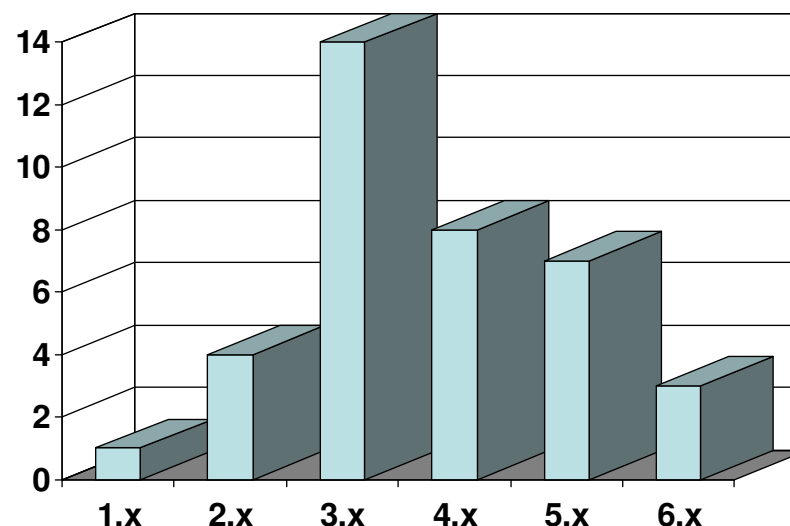
## **Publications to date ... and the future.**

- **Recent MIMs aligned to CfH spine releases.**
  - **MIM 4.x – 2006B2**
  - **MIM 5.x – 2007A**
  - **MIM 6.x – 2008A**
  - **MIM 7.x – 2008B**
- **Contractual end dates for MIM publications**



## Publications to date ... and the future.

- **MIM Stability**
  - **MIM 1.x – 1 version**
  - **MIM 2.x – 4 versions**
  - **MIM 3.x – 13 versions**
  - **MIM 4.x – 8 versions**
  - **MIM 5.x – 7 versions**
  - **MIM 6.x – 3 versions**





## **Publications to date ... and the future.**

- **MIM Development problems**
  - **Changing domain/project/programme requirements**
  - **Disconnected MIM review cycles.**
  - **MIM fatigue.**
  - **Late defect identification.**



## **Publications to date ... and the future.**

- **Known Supplier problems**
  - Identifying changes between MIMs is complex.
  - Identifying changes between Spine releases ( i.e. several MIMs is very complicated).
- **The MIM development team are working to assist suppliers in this area.**



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# Implementation Focus

- **A number of changes have already been implemented to assist suppliers.**
  - **Identification of reuse potential.**
  - **Improved vocabulary maintenance.**
  - **Improved change history.**
  - **Improved tooling for MIM users.**



# Implementation Focus

- **Identification of reuse potential.**
- **Generated cross references for :**
  - **CMETs**
  - **Templates**
  - **Vocabularies**
- **Shows potential areas of reuse within and across domains.**



# Implementation Focus

## CMET Implementation Manual - Cross Reference

### 9 CMET : UKCT\_MT120301UK02 [R\_AgentNPFITPersonSDS]

Domain	Model	Description	Class
Choose and Book	<a href="#">PRPA_RM010000UK06</a>	Request Service	<a href="#">Author</a>
Choose and Book	<a href="#">PRPA_RM030000UK06</a>	Referral	<a href="#">Author2</a>
Choose and Book	<a href="#">PRPA_RM030000UK06</a>	Referral	<a href="#">Performer</a>
Choose and Book	<a href="#">PRSC_RM090000UK08</a>	Respond Available Slots	<a href="#">Performer</a>
CMETs	<a href="#">UKCT_RM170001UK02</a>	A_CABReferral	<a href="#">Author2</a>
CMETs	<a href="#">UKCT_RM170001UK02</a>	A_CABReferral	<a href="#">Performer</a>
Infrastructure	<a href="#">MCCI_RM010000UK12</a>	Send Message Payload	<a href="#">Organization</a>
Infrastructure	<a href="#">MCCI_RM020000UK12</a>	ApplicationAcknowledgement	<a href="#">Organization</a>
Infrastructure	<a href="#">UKCI_RM000001UK02</a>	Withdrawal	<a href="#">Author</a>
Legitimate Relationships	<a href="#">REPC_RM010000UK15</a>	CreateRequest	<a href="#">LRInvolved</a>
Legitimate Relationships	<a href="#">REPC_RM040000UK14</a>	LRStatusChange	<a href="#">AuthorDetails</a>



# Implementation Focus

## 184 Vocabulary : *SealingStatus*

Domain	Model	Description	Class	Attribute
Discharge	<a href="#">POCD_RM150001UK03</a>	DischargeReport	<a href="#">ClinicalDocument</a>	confidentialityCode
Emergency Department	<a href="#">POCD_RM160001UK03</a>	EmergencyDepartmentReport	<a href="#">ClinicalDocument</a>	confidentialityCode
HealthSpace	<a href="#">POCD_RM140001UK02</a>	HealthSpaceSummary	<a href="#">ClinicalDocument</a>	confidentialityCode
Nullification	<a href="#">POCD_RM130001UK02</a>	NullifyDocument	<a href="#">ClinicalDocument</a>	confidentialityCode
Outpatients	<a href="#">POCD_RM170001UK03</a>	OutpatientReport	<a href="#">ClinicalDocument</a>	confidentialityCode
PSIS Query	<a href="#">QUPC_RM160002UK02</a>	PSISDocumentListQueryResponse	<a href="#">DocumentMetaData</a>	confidentialityCode
PSIS Query	<a href="#">QUPC_RM160004UK02</a>	PSISDocumentQueryResponse	<a href="#">DocumentMetaData</a>	confidentialityCode
PSIS Query	<a href="#">QUPC_RM160008UK02</a>	PSISCREListQueryResponse	<a href="#">DocumentMetaData</a>	confidentialityCode
PSIS Query	<a href="#">QUPC_RM160008UK02</a>	PSISCREListQueryResponse	<a href="#">DocumentSectionMetaData</a>	confidentialityCode
PSIS Query	<a href="#">QUPC_RM160010UK02</a>	PSISSynchronisationListQueryResponse	<a href="#">DocumentMetaData</a>	confidentialityCode
Sealed Envelopes	<a href="#">POCD_RM180001UK02</a>	RefusalToSealReport	<a href="#">ClinicalDocument</a>	confidentialityCode
Templates	<a href="#">COCD_TP146042UK02</a>	DischargeTextSection	<a href="#">DischargeTextSection</a>	confidentialityCode
Templates	<a href="#">COCD_TP146044UK02</a>	RefusalToSeal	<a href="#">TextSection</a>	confidentialityCode



# Implementation Focus

- **Schema Tightening**
  - Value sets are carried through to schemas.
  - Fixed values are fixed in schemas.
- **XML Examples are easier to create.**
- **More value in schema valid messages.**



# Implementation Focus

- **Commitment to machine process able interchange of message models.**
  - **HL7 MIF ( Message Interchange Format ).**
  - **Supplied with many of the domain message models from MIM 5.x onwards.**
  - **Will be supplied with all future message models.**
  - **Key for all future tooling developments.**



# Implementation Focus

- **ECLIPSE – Message Instance Editor**

Name	Instance Name	Type	Conformance	Cardinality	Fixed Value	Vocabulary Domain	Source
<Choice>		Choice of					UKCT_MTI144043UK02
<Finding>		Observation					UKCT_MTI144043UK02
classCode	CS	R	1	OBS			UKCT_MTI144043UK02
moodCode	CS	R	1	EVN		EVN	UKCT_MTI144043UK02
code	CD	R	1			FindingTypeSvCT	UKCT_MTI144043UK02
effectiveTime	IVL<TS>	R	1				UKCT_MTI144043UK02
id	II	R	1				UKCT_MTI144043UK02
statusCode	CS	R	1	completed		ActStatus	UKCT_MTI144043UK02
value	ANY	NP	[0..1]				UKCT_MTI144043UK02
author	ContextControlCode	Participation	NP	1	OP	ContextControl	UKCT_MTI144043UK02
contextControlCode	ContextControlCode	CS	R	1	AUT	AUT	UKCT_MTI144043UK02
time	TS	R	1				UKCT_MTI144043UK02
participant	Role	NP	1				UKCT_MTI144043UK02
informant	informant	Participation	NP	[0..1]			UKCT_MTI144043UK02
performer	performer	Participation	NP	[0..*]			UKCT_MTI144043UK02
performedInformation	performedInformation	ActRelationship	NP	[0..1]			UKCT_MTI144043UK02
referenceRange	referenceRange	ActRelationship	NP	[0..1]			UKCT_MTI144043UK02



# Implementation Focus

- **ECLIPSE – Message Instance Editor (Release 1)**
  - CfH Sponsored tool to allow easier creation of message instances from MIF.
  - Allows creations of payloads, control act wrappers and interaction wrappers.
  - CfH vocabulary aware.
  - Available to download today from Eclipse OHF site.



# Implementation Focus

- **ECLIPSE – Message Instance Editor (Release 2)**
  - CDA rendering capability.
  - CfH CDA Templating aware.
  - Creates SVG model images directly from MIF files.
  - Available to download by end of June from Eclipse OHF site.



# Implementation Focus

- **Vocabulary Management**
  - Purpose built vocabulary management system now in place.
  - Allows for controlled creation, modification and deprecation of vocabulary value sets,
  - All “vocabulary” pages within the MIM are now generated from the tool.



# Implementation Focus

- **Conformance Checking**
  - XML Schematron supplied for CDA clinical domains.
  - Allows for machine process able conformance checking.



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# Future Releases

- **Reduce MIM review cycle time.**
  - Increase QA checks performed by MIM production team.
  - Assist suppliers in identifying changes between current and previous MIM.
  - Recognise that the suppliers “previous” MIM may be several releases in the past.



# Future Releases

- **New ECLIPSE based Model Differencing Tool.**
  - Contract awarded at end of May for new tooling development.
  - 6 month development timeline, with phased releases.
  - Will identify and report of model differences for
    - Graphical RMIM models.
    - Tabular Views.
    - Individual messages or whole domains.



# Future Releases

- **Vocabulary Management**
  - Data Dictionary integration.
  - Identification of vocabularies related to NHS Data Dictionary definitions.
  - Alignment of MIM vocabulary change cycle and Data Dictionary change cycle.



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# Future Releases

- **Conformance Enhancements**
  - Adoption of OMVT conformance framework.
  - OMVT in addition to, not instead of NIC conformance checking.
  - HL7 conformance statement for each domain.



# Future Releases

- **Commitment to assist suppliers.**
  - **MIM feedback is appreciated.**
  - **The MIM can evolve to suit suppliers needs.**
  - **Tell us where the pinch points are.**



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# Questions

**Richard Kavanagh**  
**RICHARD.KAVANAGH@NHS.NET**