



Data Integration

Outbound DFT Implementation Guide

HL7 v2.5.1

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Revision History

Date	Version	Description	Author
6/28/2022	1.0	Initial Document	David Botero

1. Introduction

This document pertains to all *Kipu* adhering to HL7 messaging, version 2.5.1. The purpose of this document is to provide EMR system vendors an interface implementation guide for retrieving HL7 messages via Excelleris' electronic results distribution process.

1.1. Message Transmission Methods

The following methods of connectivity are supported for outbound messaging, *available* only and only if the communication is established *directly* between KIPU Health and the Vendor.

- File Transfer
- Secure-FTP (SFTP)
- VPN
- TCP/IP
- REST API
- SOAP

1.2. Messages Supported & Types

The implementation guide addresses electronic submission of patient accounting transactions, set to provides for the entry and manipulation of information on billing accounts, charges, payments, adjustments, insurance, and other related patient billing and accounts receivable information:

- HL7 DFT P03 –Process detail financial transaction

2. Segment Attributes and Definitions

2.1. Basic HL7 Terms

A **Message** is the atomic unit of data transferred between systems. It is comprised of a group of segments in a defined sequence, with a message type and a trigger event.

A **Segment** is a logical grouping of data fields. Segments of a message may be required or optional. They may occur only once in a message, or they may be allowed to repeat.

A **Field** is a string of characters. Each field has an element name and is identified by the segment it is in and its sequence within the segment.

A **Component** is one of a logical grouping of items that comprise the contents of a coded or composite field.

Data Type is the basic building block used to construct or restrict the contents of a data field.

2.2. Message Delimiters

Delimiter	Value	Position	Description
Field Separator		-	Separates two adjacent data fields within a segment
Component Separator	^	1	Separates adjacent components of data fields when allowed
Subcomponent Separator	&	4	Separates adjacent subcomponents of data fields

Repetition Separator	~	2	Separates multiple occurrences of a field
Escape Character	\	3	Escape character

2.3. Implementation Guide for Data Types

The following data types have been used in the implementation Guide. For further definition of these Data Types, please refer to the HL7 Standard Version 2.5.1 located at <http://www.hl7.org/>.

Value	Description	Comment
AD	Address	
CE	Coded Entry	
CF	Coded Element with Formatted Values	
CK	Composite ID With Check Digit	
CN	Composite ID And Name	
CP	Composite Price	
CWE	Coded with Exceptions	
CX	Extended Composite ID With Check Digit	
DT	Date	
ED	Encapsulated Data	
EI	Entity Identifier	
FN	Family Name	
FT	Formatted Text (Display)	
HD	Hierarchic Designator	
ID	Coded Value for HI7-defined Tables	
IS	Coded Value for User-defined Tables	
MO	Money	
MSG	Message Type	
NM	Numeric	
PN	Person Name	
PT	Processing Type	
RP	Reference Pointer	
SI	Sequence Identifier	
SN	Structured Numeric	
ST	String Data	
TM	Time	
TN	Telephone Number	
TS	Time Stamp (Date & Time)	
TX	Text Data (Display)	
VID	Version Identifier	
XAD	Extended Address	
XCN	Extended Composite Name and Number for Persons	

XPN	Extended Person Name	
XTN	Extended Telecommunications Number	

2.4. Table Definitions and Usage

The following table defines the various columns headers in the message segment tables, a set of codes for Usage that identify the governing rules for HL7 elements. These codes (set values) will be present in the R/O column in each segment table.

Attribute	Definition	
Segment	<p>A three-character code for the segment plus the square and curly braces structure syntax. If a segment is not documented in this guide, it should not be sent.</p> <p>Segments without brackets – will be always sent, instance R: may repeat, [] – Optional, {} - May repeat, [{}] - Optional and May repeat.</p>	
Name	A short, descriptive name of the segment	
Description	Explanation of the use of the segment	
	The designations for optionality are:	
Usage	R	<p>Required. All “R” elements shall be populated with a non-empty value.</p>
	RE	<p>Required, but can be empty. The element may be missing from the message but must be sent by the sending application if there is relevant data.</p>
	O	<p>Optional. This code indicates that the Usage for this element has not yet been defined. A usage of “Optional” may not be used in the message profiles.</p>
	C(a/b)	<p>Conditional. The usage code has an associated condition predicate true.</p> <ul style="list-style-type: none"> • If the condition predicate associated with the element is true, follow the rules for a which shall be one of “R”, “RE”, “O” or “X” • If the condition predicate associate with the element is false, follow the rules for b which shall be one of “R”, “RE”, “O” or “X” • a and b can be the same
	X	<p>Not used for this profile. For conformant sending applications, the element will not be sent. Conformant receiving applications may ignore the element if it is sent or may raise an application error.</p>
	Defines the minimum and maximum number of times (repetitions) the segment may appear in this message:	
Cardinality	[0...1]	Element may be omitted, and it can have at most one occurrence
	[1...1]	Element must have exactly one occurrence
	[0...*]	Element may be omitted or repeat for an unlimited number of times

	[1...*]	Element must appear at least once, and may repeat unlimited number of times
	[0...0]	Element is never present

3. DFT Message Structure

This section discusses the structure of each Detail Financial Transaction message sent, including segment name, description, usage, and cardinality, as well as the definition of each segment used in the message structure.

3.1. Post Detail Financial Transactions (Event P03)

An P03 event describes a financial transaction transmitted between systems, that is, to the billing system for ancillary charges, ADT to billing system for patient deposits, etc. If a message contains multiple transactions for disparate orders for the same account each FT1 segment construct may contain the order related information specific to that transaction within the message.

Segment Identifier	Segment Description	R/O	Cardinality
MSH	Message Header	R	[1...1]
[[SFT]]	Software Segment	X	[0...0]
EVN	Even Type	R	[1...1]
PID	Patient Identification	R	[1...1]
[PD1]	Additional Demographics	O	[0...1]
[[ROL]]	Role	O	[0...*]
[PV1]	Patient Visit	O	[0...1]
[PV2]	Patient Visit – Additional Info.	O	[0...1]
[[ROL]]	Role	O	[0...*]
[[DB1]]	Disability Information	O	[0...*]
{	--- COMMON ORDER begin	O	[0...*]
[ORC]	Common Order (across all FT1s)	O	[0...1]
{	--- TIMING QUANTITY begin	O	[0...*]
TQ1	Timing/Quantity	R	[1...1]
[[TQ2]]	Timing/Quantity Order Sequence	O	[0...*]
}}	--- TIMING_QUANTITY end		
[--- ORDER begin	O	[0...1]
OBR	Order Detail Segment	R	[1...1]
[[NTE]]	Notes and Comments (on Order Detail)	O	[0...*]
]	--- ORDER end		
{	--- OBSERVATION begin	O	[0...*]
OBX	Observation/Result	R	[1...1]
[[NTE]]	Notes and Comments (on Result)	O	[0...*]
}}	--- OBSERVATION end		
}}	--- COMMON_ORDER end		
{	--- FINANCIAL begin	O	[1...*]
FT1	Financial Transaction	R	[1...1]

[{ NTE }]	Notes and Comments (on FT1 - above)	O	[0...*]
-------------	-------------------------------------	---	---------

[{	--- FINANCIAL_PROCEDURE begin	O	[0...*]
PR1	Procedures	R	[1...1]
[{ ROL }]	Role	O	[0...*]
}	--- FINANCIAL_PROCEDURE end		
[{	--- FINANCIAL_COMMON ORDER begin	O	[0...*]
[ORC]	Common Order (specific to above FT1)	O	[0...1]
[{	--- FINANCIAL_TIMING QUANTITY begin	O	[0...*]
TQ1	Timing/Quantity	R	[1...1]
[{ TQ2 }]	Timing/Quantity Order Sequence	O	[0...*]
}	--- FINANCIAL_TIMING_QUANTITY end		
[--- FINANCIAL_ORDER begin	O	[0...1]
OBR	Order Detail Segment	R	[1...1]
[{ NTE }]	Notes and Comments (on Order Detail)	O	[0...*]
]	--- FINANCIAL_ORDER end		
[{	--- FINANCIAL_OBSERVATION begin	O	[0...*]
OBX	Observation/Result	R	[1...1]
[{ NTE }]	Notes and Comments (on Result)	O	[0...*]
}	--- FINANCIAL_OBSERVATION end		
}	--- FINANCIAL_COMMON ORDER end		
}	--- FINANCIAL end		
[{ DG1 }]	Diagnosis Information (global across all FT1s)	O	[0...*]
[DRG]	Diagnosis Related Group	O	[0...1]
[{ GT1 }]	Guarantor (global across all FT1s)	O	[0...*]
[{	----- INSURANCE begin	O	[0...*]
IN1	Insurance (global across all FT1s)	R	[1...1]
[IN2]	Insurance Additional Info.	O	[0...1]
[{ IN3 }]	Insurance Additional Info. - Certification	O	[0...*]
[{ ROL }]	Role	O	[0...*]
}	--- INSURANCE end		
[ACC]	Accident Information	O	[0...1]

4. Segment Definitions

This section identifies the specific formats for the segments.

4.1. MSH - Message Header

The MSH segment defines the intent, source, destination, and some specifics of the syntax of a message and is the first segment for all DFT messages. It is required to be present, and Kipu Health expects it to be sent or received by a partner facility.

Sequence	Segment Name	R/O	Data Type	Field #	Value	Sample
MSH.1	Field Separator	R	ST	MSH.1.1		
MSH.2	Encoding Characters	R	ST	MSH.2.1		^~\&
MSH.3	Sending Application	O	HD	MSH.3.1	Namespace ID	Kipu Systems
MSH.4	Sending Facility	O	HD	MSH.4.1	Namespace ID	Palm Hospital
				MSH.4.2	Universal ID	9856
MSH.5	Receiving Application	O	HD	MSH.5.1	Namespace ID	avea
MSH.6	Receiving Facility	O	HD	MSH.6.1	Namespace ID	Mushroom Kingdom...
				MSH.6.2	Universal ID	Kipu-12345
MSH.7	Date/Time of Message	R	TS	MSH.7.1	Time	20220628104546
MSH.9	Message Type	R	MSG	MSH.9.1	Message Code	DFT
				MSH.9.2	Trigger Event	P03
MSH.10	Message Control ID	R	ST	MSH.10.1	Message Identifier	20220408154132383
MSH.11	Processing ID	R	PT	MSH.11.1		T - Training
MSH.12	Version ID	R	VID	MSH.12.1		2.5.1

MSH|^~\&|Kipu Systems|Palm Hospital^9856|avea|Mushroom Kingdom Medical Center^kipu-12345|20220628104546||DFT^P03|20220408154132383|T^|2.5.1

4.2. EVN - Event Type

The EVN segment is used to communicate necessary trigger event information to receiving applications. This segment is always required for DFT messages.

Sequence	Segment Name	R/O	Data Type	Field #	Value	Sample
EVN.1	Event Type Code	O	ID	EVN.1.1		P03
EVN.2	Recorded Date/Time	R	TS	EVN.2.1	Time	20220628104546
EVN.3	Date/Time Planned Event	O	TS	EVN.3.1	Time	
EVN.4	Event Reason Code	O	IS	EVN.4.1		

EVN|P03|20220628104546||

4.3. PID - Patient Identification

The PID segment is used by all applications as the primary means of patient identification information. This segment contains permanent patient identifying and demographic information, for the most part, are not likely to change frequently and this segment is required for all DFT messages.

Sequence	Segment Name	R/O	Data Type	Field #	Value	Sample
PID.1	Set ID - PID	O	SI	PID.1.1	Sequence ID	1
PID.2	Patient ID	O	CX	PID.2.1	ID Number	
PID.3	Patient Identifier List ¹	R	CX	PID.3.1	Kipu Account Number	3f939ea7-
				PID.3.5	Identifier Type Code	AN
PID.4	Alternate Patient ID – PID	O	CX	PID.4.1	Assigning Authority	2022-5
				PID.4.5	Identifier Type Code	MR
PID.5	Patient Name	R	XPN	PID.5.1	Family Name	Grape
				PID.5.2	Given Name	Geraldine
				PID.5.3	Middle Name	
PID.7	Date/Time of Birth	R	TS	PID.7.1	Time	19901211
PID.8	Administrative Sex	O	IS	PID.8.1		F
PID.10	Race	O	CWE	PID.10.1	Identifier	
PID.11	Patient Address	O	XAD	PID.11.1	Street Address	234 SE Grape St
				PID.11.2	Other Designation	
				PID.11.3	City	Grape City
				PID.11.4	State or Province	OR
				PID.11.5	Zip or Postal Code	97211
				PID.11.6	Country	
PID.13	Phone Number - Home	O	XTN	PID.13.1	Telephone Number	
				PID.13.4	Email Address	
PID.14	Phone Number - Business	O	XTN	PID.14.1	Telephone Number	
PID.16	Marital Status	O	CWE	PID.16.1	Identifier	
PID.18	Alternate Patient ID	O	CX	PID.18.1	Patient External ID	
PID.19	SSN Number - Patient	O	ST	PID.19.1		111-22-3333
PID.22	Ethnic Group	O	CE	PID.22.1	Identifier	
PID.29	Death Date and Time	O	TS	PID.29.1	Time	
PID.30	Patient Death Indicator	O	ID	PID.30.1		N

PID|1||3f939ea7-70df-4f36-9622-16a8635c6963^^^^AN|2022-5^^^^MR|Grape^Geraldine||19901211|F||234 SE Grape St^^Grape City^OR^97211||||||111-22-3333|||||||N

¹ The Kipu Account Number is unique within the *Kipu* system.

4.4. PD1 - Patient Additional Demographic

The patient additional demographics segment contains demographic information that is likely to change about the patient.

Field #	Segment Name	R/O	Data Type	Field #	Value	Sample
PD1.4	Patient Primary Care Provider Name & ID No. ²	O	XCN	PD1.4.1	Id Number	123456789
				PD1.4.2	Family Name	Doe
				PD1.4.3	Given Name	John

PD1||||123456789^Doe^John

4.5. PV1 - Patient Visit

The required PV1 segment is used by Registration/Patient Administration applications to transfer data on visit-specific basis.

Sequence	Segment Name	R/O	Data Type	Field #	Value	Sample
PV1.1	Set ID - PV1	O	SI	PV1.1.1	Sequence Id	1
PV1.2	Patient Class ³	R	IS	PV1.2.1		U
PV1.3	Assigned Patient Location	O	PL	PV1.3.1	Point Of Care	4395
				PV1.4.4	Facility	Acme Behavioral
PV1.7	Attending Doctor	O	XCN	PV1.7.1	Id Number	123456789
				PV1.7.2	Family Name	Doe
				PV1.7.3	Given Name	John
				PV1.7.4	Middle Name	
PV1.20	Financial Class ⁴	O	FC	PV1.20.1	Financial Class Code	Insurance
PV1.44	Admit Date/Time	O	TS	PV1.44.1	Time	20220314090000
PV1.45	Discharge Date/Time	O	TS	PV1.45.1	Time	20220414090000
PV1.51	Visit Indicator	O	IS	PV1.51.1		

PV1|1|U|4395^^^Acme Behavioral||||123456789^Doe^John||||||||Insurance||||||||
 |||||||20220314090000|20220414090000

² This field is retained for backward compatibility only.

³ Patient Class is used by systems to categorize patients by site.

(E)mergency, (I)npatient, (O)utpatient, (P)readmit, (R)ecurring patient, O(b)stetrics, (C)ommercial Account (N)ot Applicable, (U)known.

⁴ *Financial Class(es)* assigned to patient for the purpose of identifying sources of reimbursement: Insurance, Medicare, Facility, Patient/Self Pay.

4.6. FT1 - Financial Transaction

The FT1 segment contains the detail data necessary to post charges, payments, adjustments, etc. to patient accounting records.

Sequence	Segment Name	R/O	Data Type	Field #	Fields	Sample
FT1.1	Set ID – FT1	R	SI	FT1.1.1	Sequence Id	1
FT1.4	Transaction Date	R	DR	FT1.4.1		20220328
FT1.5	Transaction Posting Date	O	TS	FT1.5.1		20220328
FT1.6	Transaction Type	R	IS	FT1.6.1		CG
FT1.9	Transaction Description - Alt	R	IS	FT1.6.1		36
FT1.10	Transaction Quantity	O	NM	FT1.10.1		1
FT1.16	Assigned Patient Location	O	PL	FT1.16.1		
FT1.19	Diagnosis Code – FT1	O	CE	FT1.20.1		F10.20
FT1.25	Procedure Code	O	CE	FT1.25.1		S0201
FT1.27	Advanced Beneficiary Notice Code	O	CE	FT1.27.1		0913

FT1|1|||20220328|20220328|CG|||36|1|||||||F10.20|||||S0201||0913

4.7. DG1 - Diagnosis

The DG1 segment contains patient diagnosis information of various types, for example, admitting, primary, etc., and is used to send multiple diagnoses.

Sequence	Segment Name	R/O	Data Type	Field #	Fields	Sample
DG1.1	Set ID – DG1	R	SI	DG1.1.1	Sequence Id	1
DG1.2	Diagnosis Coding Method	O	ID	DG1.2.1		ICD10
DG1.3	Diagnosis Code - DG1	O	CE	DG1.3.1	Identifier	F10.20
DG1.4	Diagnosis Description	O	ST	DG1.4.1		F10.20 Alcohol use disorder Moderate
DG1.6	Diagnosis Type	R	IS	DG1.6.1		W

DG1|1|ICD10|F10.20|F10.20 Alcohol use disorder Moderate||W

4.8. IN1 - Insurance

The IN1 segment contains insurance policy coverage information necessary to produce properly prorated patient and insurance bills. This segment is designated as optional in DFT messages, but it is highly recommended that it be included when information is available in the patient's record.

Sequence	Segment Name	R/O	Data Type	Field #	Fields	Sample
IN1.1	Set ID - IN1	R	SI	IN1.1.1	Sequence Identifier	1
IN1.2	Health Plan ID	O	CE	IN1.2.1	Insurance Plan ID	W234324234
IN1.3	Insurance Company ID	R	CX	IN1.3.1	Id Number	60054
IN1.4	Insurance Company Name	O	XON	IN1.4.1	Organization Name	Aetna
IN1.7	Insurance Co. Phone Number	O	XTN	IN1.7.1	Telephone Number	
IN1.8	Group Number	O	ST	IN1.8.1		23424
IN1.12	Plan Effective Date	O	DT	IN1.12.1	Date	20220301
IN1.13	Plan Expiration Date	O	DT	IN1.13.1	Date	
IN1.16	Name of Insured	O	XPN	IN1.16.1	Family Name	Grape
				IN1.16.2	Given Name	Geraldine
				IN1.16.3	Given Names or Initials Thereof	
IN1.17	Insured's Relationship to Patient	O	CWE	IN1.17.1	Identifier	SEL
IN1.18	Insured's Date of Birth	O	TS	IN1.18.1	Time	19830207
IN1.19	Insured's Address	O	XAD	IN1.19.1	Street Address	234 SE Grape St
				IN1.19.2	Other Designation	
				IN1.19.3	City	Grape City
				IN1.19.4	State or Province	OR
				IN1.19.5	Zip or Postal Code	97211
IN1.23	Notice Of Admission Flag	O	ID	IN1.23.1		
IN1.36	Policy Number	O	ST	IN1.36.1		W234324234
IN1.43	Insured Administrative Sex	O	IS	IN1.43.1		F

```
IN1|1|W234324234|60054|Aetna|||23424|||20220301|||Grape^Geraldine|SEL|19830207|234 SE Grape
St^^Grape City^OR^97211|||Y|20220314|||W234324234|||F
```

4.9. IN2 - Insurance Additional Information

The IN2 segment contains additional insurance policy coverage and benefits necessary for proper billing and reimbursement and is a continuation of the information present in the IN1 segment.

Sequence	Segment Name	R/O	Data Type	Field #	Fields	Sample
IN2.2	Set ID	O	SI	IN2.2.1	Insured's Social Security Number	111-22-3333

```
IN2||111-22-3333
```

4.10. IN3 - Insurance Additional Information, Certification

The IN3 segment contains additional insurance information for certifying the need for patient care. Fields used by this segment are defined by CMS, or other regulatory agencies.

Sequence	Segment Name	R/O	Data Type	Field #	Fields	Sample
IN3.1	Set ID - IN3	R	SI	IN3.1.1		1
IN3.4	Certification Required	O	ID	IN3.4.1		Y
IN3.9	Certification Begin Date	O	DT	IN3.9.1		20220326
IN3.10	Certification End Date	O	DT	IN3.10.1		20220331

IN3|1|||Y|||||20220326|20220331

4.11. UB2 - UB92 Data

The UB2 segment contains data necessary to complete UB92 bills specific to the United States; other realms may choose to implement using regional code sets.

Sequence	Segment Name	R/O	Data Type	Field #	Fields	Sample
UB2.1	Set ID - UB2	O	SI	UB2.1.1		1

UB2|1

4.12. GP1 – Grouping/Reimbursement – Visit

These fields are used in grouping and reimbursement for CMS APCs.

Sequence	Segment Name	R/O	Data Type	Field #	Fields	Sample
GP1.1	Type of Bill Code	R	IS	GP1.1.1		13
GP1.2	Revenue Code	O	IS	GP1.2.1		0913

GP1|13|0913

5. Sample DFT Messages

The sample DFT message below was triggered by a PO3 event, post detail financial transaction. This message provides information on the patient and the corresponding transactions on that patient for a service encounter.

DFT (Process Detail Financial Transaction - Event PO3)

```
MSH|^~\&|Kipu Systems|Palm Hospital^9856|avea|Mushroom Kingdom Medical Center^kipu-
12345|20220628104546||DFT^P03|20220408154132383|T^|2.5.1
EVN|P03|20220628104546||
PID|1||3f939ea7-70df-4f36-9622-16a8635c6963^^^^AN|2022-5^^^^MR|Grape^Geraldine||19901211|F|||234 SE Grape St^^Grape
City^OR^97211|||||111-22-3333|||||N
PD1|||123456789^Doe^John
PV1|1|U|4395^^^Acme Behavioral|||123456789^Doe^John|||||Insurance|||||20220314090000|20220414090000
FT1|1|||20220328|20220328|CG|||36|1|||||F10.20||||S0201||0913
DG1|1|ICD10|F10.20|F10.20 Alcohol use disorder Moderate||W
IN1|1|W234324234|60054|Aetna|||23424|||20220301|^20220326^undefined||Grape^Geraldine|SEL|19830207|234 SE Grape St^^Grape
City^OR^97211|||Y|20220314|||||W234324234|||||F
IN2||111-22-3333
IN3|1||Y|||20220326|20220331
UB2|1
GP1|13|0913
```


6. Appendix

6.1. Administrative Sex Code Value Set

The User-defined Table #0001 below provides the value code set and its corresponding text description that shall be used to indicate a patient's Administrative Sex.

Value	Description	Comment
A	Ambiguous	
F	Female	
M	Male	
N	Not applicable	
O	Other	
U	Unknown	

6.2. Patient Class Code Value Set

The User-defined Table #0004 below provides the value code set and corresponding text description that shall be used to indicate a Patient Class.

Value	Description	Comment
B	Obstetrics	
C	Commercial Account	Usage allowed for HL7 v2.4+
E	Emergency	
I	Inpatient	
N	Not Applicable	
O	Outpatient	
P	Preadmit	
R	Recurring patient	
U	Unknown	

6.3. Ethnic Group Code Value Set

The User-defined Table #0189 below defines the patient's ancestry.

Value	Description	Comment
H	Hispanic or Latino	
N	Not Hispanic or Latino	
U	Unknown	

6.4. Yes/No Indicator

The Standard Table #0136 for a Boolean indication

Value	Description	Comment
N	No	

Y	Yes	
---	-----	--

6.5. Race Code Value Set

The User-defined Table #0005 provides code set value and corresponding text description to indicate the patient's Race.

Value	Description	Comment
1002-5	American Indian or Alaska Native	
2028-9	Asian	
2054-5	Black or African American	
2076-8	Native Hawaiian or Other Pacific Islander	
2106-3	White	
2131-1	Other Race	

6.6. Telecommunication Use Code Value Set

The HL7 Standard Table #0201 below provides codes that represent a specific use of a telecommunication number.

Value	Description	Comment
ASN	Answering Service Number	
BPN	Beeper Number	
EMR	Emergency Number	
NET	Network (email) Address	
ORN	Other Residence Number	
PRN	Primary Residence Number	
VHN	Vacation Home Number	
WPN	Work Number	

6.7. Telecommunication Equipment Type Code Value Set

The HL7 Standard Table #0202 below provides codes that represent the types of telecommunication equipment.

Value	Description	Comment
BP	Beeper	
CP	Cellular Phone	
FX	Fax	
Internet	Internet Address	
MD	Modem	Use Only If Telecom. Use Code Is NET
PH	Telephone	
TDD	Telecommunications Device for the Deaf	
TTY	Teletypewriter	

X.400	X.400 email address	Use Only If Telecom. Use Code Is NET
-------	---------------------	---

6.8. Relationship

The User-defined Table #0063 below defines the Relationship to a patient.

Value	Description	Comment
ASC	Associate	
BRO	Brother	
CGV	Care giver	
CHD	Child	
DEP	Handicapped dependent	
DOM	Life partner	
EMC	Emergency contact	
EME	Employee	
EMR	Employer	
EXF	Extended family	
FCH	Foster child	
FND	Friend	
FTH	Father	
GCH	Grandchild	
GRD	Guardian	
GRP	Grandparent	
MGR	Manager	
MTH	Mother	
NCH	Natural child	
NON	None	
OAD	Other adult	
OTH	Other	
OWN	Owner	
PAR	Parent	
SCH	Stepchild	
SEL	Self	
SIB	Sibling	
SIS	Sister	
SPO	Spouse	
TRA	Trainer	
UNK	Unknown	
WRD	Ward of court	

6.9. Marital Status Code Value Set

The user-defined Table #0002 below provides the value code set and its corresponding text description to indicate the patient's Marital Status

Value	Description	Comment
A	Separated	
B	Unmarried	
C	Common law	
D	Divorced	
E	Legally Separated	
G	Living together	
I	Interlocutory	
M	Married	
N	Annulled	
O	Other	
P	Domestic partner	
R	Registered domestic partner	
S	Single	
T	Unreported	
U	Unknown	
W	Widowed	

6.10. Transaction Type Code Value Set

The user-defined Table #0017 below proves the value code set and its corresponding text description that shall be used to indicate transaction type in an FT1 segment.

Value	Description	Comment
CG	Charge	
CD	Credit	
PY	Payment	
AJ	Adjustment	
CO	Co-Payment	



Data Integration

Outbound ADT Implementation Guide

HL7 v2.5.1

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Revision History

Date	Version	Description	Author
6/14/2022	1.0	Initial Document	David Botero

1. Introduction

This document pertains to all *Kipu* adhering to HL7 messaging, version 2.5.1. The purpose of this document is to provide EMR system vendors an interface implementation guide for retrieving HL7 messages via Excelleris' electronic results distribution process.

1.1. Message Transmission Methods

The following methods of connectivity are supported for outbound messaging, *available* only and only if the communication is established *directly* between KIPU Health and the Vendor.

- **File Transfer**
- **Secure-FTP (SFTP)**
- **VPN**
- **TCP/IP**
- **REST API**
- **SOAP**

1.2. Messages Supported & Types

The interface engines are designed to handle the following for Outbound traffic:

- HL7 ADT A03 – Discharge/End Visit
- HL7 ADT A04 – Register a patient including insurance details
- HL7 ADT A08 – Update patient information

2. Segment Attributes and Definitions

2.1. Basic HL7 Terms

A **Message** is the atomic unit of data transferred between systems. It is comprised of a group of segments in a defined sequence, with a message type and a trigger event.

A **Segment** is a logical grouping of data fields. Segments of a message may be required or optional. They may occur only once in a message, or they may be allowed to repeat.

A **Field** is a string of characters. Each field has an element name and is identified by the segment it is in and its sequence within the segment.

A **Component** is one of a logical grouping of items that comprise the contents of a coded or composite field.

Data Type is the basic building block used to construct or restrict the contents of a data field.

2.2. Message Delimiters

Delimiter	Value	Position	Description
Field Separator		-	Separates two adjacent data fields within a segment
Component Separator	^	1	Separates adjacent components of data fields when allowed
Subcomponent Separator	&	4	Separates adjacent subcomponents of data fields

Repetition Separator	~	2	Separates multiple occurrences of a field
Escape Character	\	3	Escape character

2.3. Implementation Guide for Data Types

The following data types have been used in the implementation Guide. For further definition of these Data Types, please refer to the HL7 Standard Version 2.5.1 located at <http://www.hl7.org/>.

Value	Description	Comment
AD	Address	
CE	Coded Entry	
CF	Coded Element with Formatted Values	
CK	Composite ID With Check Digit	
CN	Composite ID And Name	
CP	Composite Price	
CWE	Coded with Exceptions	
CX	Extended Composite ID With Check Digit	
DT	Date	
ED	Encapsulated Data	
EI	Entity Identifier	
FN	Family Name	
FT	Formatted Text (Display)	
HD	Hierarchic Designator	
ID	Coded Value for HL7-defined Tables	
IS	Coded Value for User-defined Tables	
MO	Money	
MSG	Message Type	
NM	Numeric	
PN	Person Name	
PT	Processing Type	
RP	Reference Pointer	
SI	Sequence Identifier	
SN	Structured Numeric	
ST	String Data	
TM	Time	
TN	Telephone Number	
TS	Time Stamp (Date & Time)	
TX	Text Data (Display)	
VID	Version Identifier	
XAD	Extended Address	
XCN	Extended Composite Name and Number for Persons	

XPN	Extended Person Name	
XTN	Extended Telecommunications Number	

2.4. Table Definitions and Usage

The following table defines the various columns headers in the message segment tables, a set of codes for Usage that identify the governing rules for HL7 elements. These codes (set values) will be present in the R/O column in each segment table.

Attribute	Definition	
Segment	<p>A three-character code for the segment plus the square and curly braces structure syntax. If a segment is not documented in this guide, it should not be sent.</p> <p>Segments without brackets – will be always sent, instance R: may repeat, [] – Optional, {} - May repeat, [{}] - Optional and May repeat.</p>	
Name	A short, descriptive name of the segment	
Description	Explanation of the use of the segment	
	The designations for optionality are:	
Usage	R	<p>Required.</p> <p>All “R” elements shall be populated with a non-empty value.</p>
	RE	<p>Required, but can be empty.</p> <p>The element may be missing from the message but must be sent by the sending application if there is relevant data.</p>
	O	<p>Optional.</p> <p>This code indicates that the Usage for this element has not yet been defined. A usage of “Optional” may not be used in the message profiles.</p>
	C(a/b)	<p>Conditional.</p> <p>The usage code has an associated condition predicate true.</p> <ul style="list-style-type: none"> • If the condition predicate associated with the element is true, follow the rules for a which shall be one of “R”, “RE”, “O” or “X” • If the condition predicate associate with the element is false, follow the rules for b which shall be one of “R”, “RE”, “O” or “X” • a and b can be the same
	X	<p>Not used for this profile. For conformant sending applications, the element will not be sent. Conformant receiving applications may ignore the element if it is sent or may raise an application error.</p>
	Defines the minimum and maximum number of times (repetitions) the segment may appear in this message:	
Cardinality	[0...1]	Element may be omitted, and it can have at most one occurrence

	[1...1]	Element must have exactly one occurrence
	[0...*]	Element may be omitted or repeat for an unlimited number of times
	[1...*]	Element must appear at least once, and may repeat unlimited number of times
	[0...0]	Element is never present

3. ADT Message Structure

This section discusses the structure of each demographic message sent, including segment name, description, usage, and cardinality, as well as the definition of each segment used in the message structure. Each available trigger event is listed below, along with the applicable form of the message exchange.

3.1. Discharge/End Visit (Event A03)

An A03 event signals the end of a patient's stay in a healthcare facility. It signals that the patient's status has changed to "discharged" and that a discharge date has been recorded.

Segment Identifier	Segment Description	Usage	Cardinality
MSH	Message Header	R	[1...1]
[{ SFT }]	Software Segment	X	[0...0]
EVN	Even Type	R	[1...1]
PID	Patient Identification	R	[1...1]
[PD1]	Additional Demographics	O	[0...1]
[{ ROL }]	Role	O	[0...*]
[{ NK1 }]	Next of Kin / Associated Parties	O	[0...*]
PV1	Patient Visit	R	[1...1]
[PV2]	Patient Visit – Additional Info.	O	[0...1]
[{ ROL }]	Role	O	[0...*]
[{ DB1 }]	Disability Information	O	[0...*]
[{ AL1 }]	Allergy Information	O	[0...*]
[{ DG1 }]	Diagnosis Information	O	[0...*]
[DRG]	Diagnosis Related Group	O	[0...1]
{	----- PROCEDURE begin		
PR1	Procedures	R	[1...1]
[{ ROL }]	Role	O	[0...*]
}	----- PROCEDURE end		
[{ OBX }]	Observation/Result	O	[0...*]
[{ GT1 }]	Guarantor	O	[0...*]
{	----- INSURANCE begin		
IN1	Insurance	R	[1...1]
[IN2]	Insurance Additional Info.	O	[0...1]

[{ IN3 }]	Insurance Additional Info. - Certification	O	[0...*]
[{ ROL }]	Role	O	[0...*]
}}	----- INSURANCE end		
[ACC]	Accident Information	O	[0...1]
[PDA]	Patient Death and Autopsy	O	[0...1]

3.2. Register a Patient (Event A04)

An A04 event signals that the patient has arrived or checked in as a one-time, or recurring outpatient, and is not assigned to a bed. The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. When triggered, the HL7 message shall follow the message schema outlined below:

Segment Identifier	Segment Description	R/O	Cardinality
MSH	Message Header	R	[1...1]
[{ SFT }]	Software Segment	X	[0...0]
EVN	Event Type	R	[1...1]
PID	Patient Identification	R	[1...1]
[PD1]	Additional Demographics	O	[0...1]
[{ ROL }]	Role	O	[0...*]
[{ NK1 }]	Next of Kin / Associated Parties	O	[0...*]
PV1	Patient Visit	R	[1...1]
[PV2]	Patient Visit – Additional Info.	O	[0...1]
[{ ROL }]	Role	O	[0...*]
[{ DB1 }]	Disability Information	O	[0...*]
[{ OBX }]	Observation/Result		
[{ AL1 }]	Allergy Information	O	[0...*]
[{ DG1 }]	Diagnosis Information	O	[0...*]
[DRG]	Diagnosis Related Group	O	[0...1]
{{	----- PROCEDURE begin		
PR1	Procedures	R	[1...1]
[{ ROL }]	Role	O	[0...*]
}}	----- PROCEDURE end		
[{ GT1 }]	Guarantor	O	[0...*]
{{	----- INSURANCE begin		
IN1	Insurance	R	[1...1]
[IN2]	Insurance Additional Info.	O	[0...1]
[{ IN3 }]	Insurance Additional Info. - Certification	O	[0...*]
[{ ROL }]	Role	O	[0...*]
}}	----- INSURANCE end		
[ACC]	Accident Information	O	[0...1]
[UB1]	Universal Bill Information	O	[0...1]

[UB2]	Universal Bill 92 Information	O	[0...1]
[PDA]	Patient Death and Autopsy	O	[0...1]

3.3. Update Patient Information (Event A08)

This trigger event is used when any patient information has changed but when no other trigger event has occurred. For example, an A08 event can be used to notify the receiving systems of a change of address or a name change.

Segment Identifier	Segment Description	R/O	Cardinality
MSH	Message Header	R	[1...1]
[{ SFT }]	Software Segment	X	[0...0]
EVN	Even Type	R	[1...1]
PID	Patient Identification	R	[1...1]
[PD1]	Additional Demographics	O	[0...1]
[{ ROL }]	Role	O	[0...*]
[{ NK1 }]	Next of Kin / Associated Parties	O	[0...*]
PV1	Patient Visit	R	[1...1]
[PV2]	Patient Visit – Additional Info.	O	[0...1]
[{ ROL }]	Role	O	[0...*]
[{ DB1 }]	Disability Information	O	[0...*]
[{ OBX }]	Observation/Result		
[{ AL1 }]	Allergy Information	O	[0...*]
[{ DG1 }]	Diagnosis Information	O	[0...*]
[DRG]	Diagnosis Related Group	O	[0...1]
{	----- PROCEDURE begin		
PR1	Procedures	R	[1...1]
[{ ROL }]	Role	O	[0...*]
}	----- PROCEDURE end		
[{ GT1 }]	Guarantor	O	[0...*]
{	----- INSURANCE begin		
IN1	Insurance	R	[1...1]
[IN2]	Insurance Additional Info.	O	[0...1]
[{ IN3 }]	Insurance Additional Info. - Certification	O	[0...*]
[{ ROL }]	Role	O	[0...*]
}	----- INSURANCE end		
[ACC]	Accident Information	O	[0...1]
[UB1]	Universal Bill Information	O	[0...1]
[UB2]	Universal Bill 92 Information	O	[0...1]

[PDA]	Patient Death and Autopsy	O	[0...1]
---------	---------------------------	---	---------

4. Segment Definitions

This section identifies the specific formats for the segments.

4.1. MSH - Message Header

The MSH segment defines the intent, source, destination, and some specifics of the syntax of a message and is the first segment for an ADT message. It is required to be present for all ADT messages and Kipu Health expects it to be present in all ADT messages sent or received by a partner facility.

Sequence	Segment Name	R/O	Data Type	Field #	Value	Sample
MSH.1	Field Separator	R	ST	MSH.1.1		
MSH.2	Encoding Characters	R	ST	MSH.2.1		^~\&
MSH.3	Sending Application	O	HD	MSH.3.1	Namespace ID	Kipu Systems
MSH.4	Sending Facility	O	HD	MSH.4.1	Namespace ID	Demo Adolescent
				MSH.4.2	Universal ID	d921b24f-
MSH.5	Receiving Application	O	HD	MSH.5.1	Namespace ID	avena
MSH.6	Receiving Facility	O	HD	MSH.6.1	Namespace ID	Integration Testing
				MSH.6.2	Universal ID	f6918730-
MSH.7	Date/Time of Message	R	TS	MSH.7.1	Time	202205271358
MSH.9	Message Type	R	MSG	MSH.9.1	Message Code	ADT
				MSH.9.2	Trigger Event	A08
MSH.10	Message Control ID	R	ST	MSH.10.1	Message Identifier	20220527135813556
MSH.11	Processing ID	R	PT	MSH.11.1		T - Training
MSH.12	Version ID	R	VID	MSH.12.1		2.5.1

MSH|^~\&|Kipu Systems|Demo Adolescent Treatment^d921b24f-1ca6-ec11-a81b-000d3a5c6921|avea|Integration Testing^f6918730-1ca6-ec11-a81b-000d3a5c6921|202205271358||ADT^A08|20220527135813556|P|2.5.1

4.2. EVN - Event Type

The EVN segment is used to communicate necessary trigger event information to receiving applications. This segment is always required for ADT messages.

Sequence	Segment Name	R/O	Data Type	Field #	Value	Sample
EVN.1	Event Type Code	O	ID	EVN.1.1		A08
EVN.2	Recorded Date/Time	R	TS	EVN.2.1	Time	20220527135813
EVN.3	Date/Time Planned Event	O	TS	EVN.3.1	Time	20220609124459
EVN.4	Event Reason Code	O	IS	EVN.4.1		

EVN|A08|20220527135813|20220609124459||

4.3. PID - Patient Identification

The PID segment is used by all applications as the primary means of patient identification information. This segment contains permanent patient identifying and demographic information, for the most part, are not likely to change frequently and this segment is required for all ADT messages.

Sequence	Segment Name	R/O	Data Type	Field #	Value	Sample
PID.1	Set ID - PID	O	SI	PID.1.1	Sequence ID	1
PID.2	Patient ID	O	CX	PID.2.1	ID Number	
PID.3	Patient Identifier List ¹	R	CX	PID.3.1	Kipu Account Number	3f939ea7-
PID.4	Alternate Patient ID – PID	O	CX	PID.4.1	Assigning Authority	2022-5
PID.5	Patient Name	R	XPN	PID.5.1	Family Name	Grape
				PID.5.2	Given Name	Geraldine
				PID.5.3	Middle Name	
PID.7	Date/Time of Birth	R	TS	PID.7.1	Time	19901211
PID.8	Administrative Sex	O	IS	PID.8.1		F
PID.10	Race	O	CWE	PID.10.1	Identifier	
PID.11	Patient Address	O	XAD	PID.11.1	Street Address	234 SE Grape St
				PID.11.2	Other Designation	
				PID.11.3	City	Grape City
				PID.11.4	State or Province	OR
				PID.11.5	Zip or Postal Code	97211
				PID.11.6	Country	
PID.13	Phone Number - Home	O	XTN	PID.13.1	Telephone Number	
				PID.13.4	Email Address	
PID.14	Phone Number - Business	O	XTN	PID.14.1	Telephone Number	
PID.16	Marital Status	O	CWE	PID.16.1	Identifier	
PID.18	Alternate Patient ID	O	CX	PID.18.1	Patient External ID	
PID.19	SSN Number - Patient	O	ST	PID.19.1		111-22-3333
PID.22	Ethnic Group	O	CE	PID.22.1	Identifier	
PID.29	Death Date and Time	O	TS	PID.29.1	Time	

PID|1||3f939ea7-70df-4f36-9622-16a8635c6963|2022-5|Grape^Geraldine||19901211|F|||234 SE Grape St^^Grape City^OR^97211|||||||111-22-3333|||

¹ The Kipu Account Number is unique within the *Kipu* system.

4.4. PD1 - Patient Additional Demographic

The patient additional demographics segment contains demographic information that is likely to change about the patient.

Field #	Segment Name	R/O	Data Type	Field #	Value	Sample
PD1.4	Patient Primary Care Provider Name & ID No. ²	O	XCN	PD1.4.1	Id Number	1234567
				PD1.4.2	Family Name	Bashir
				PD1.4.3	Given Name	Julian

PD1| |||1111234567^Bashir^Julian

4.5. NK1 - Next of Kin / associated Parties

The NK1 segment contains information about the patient's other related parties.

Sequence	Segment Name	R/O	Data Type	Field #	Value	Sample
NK1.1	Set ID – NK1	R	SI	NK1.1.1	Sequence ID	1
NK1.2	Name	O	XPN	NK1.2.1	Family Name	Funk
				NK1.2.2	Given Name	Justin
				NK1.2.3	Middle Name	
NK1.3	Relationship	O	CE	NK1.3.1	Identifier	FND
NK1.4	Address	O	XAD	NK1.4.1	Street Address	84627 Meghann Club
				NK1.4.2	Other Designation	Apt. 256
				NK1.4.3	City	Lake Thereseestad
				NK1.4.4	State or Province	ME
				NK1.4.5	Zip or Postal Code	79448
				NK1.4.6	Country	
NK1.5	Phone Number	O	XTN	NK1.5.1	Phone Number	5660736108
				NK1.5.2	Use Code	PRN
				NK1.5.3	Equipment Type	PH
				NK1.5.4	Email Address	fritz_rice@example.com
NK1.6	Business Phone Number	O	XTN	NK1.6.1	Phone Number	678161416
				NK1.6.2	Use Code	WPN
				NK1.6.3	Equipment Type	PH

NK1|1|Funk^Justin|FND|84627 Meghann Club^Apt. 256^Lake Thereseestad^ME^79448|5660736108^PRN^PH^fritz_rice@example.com|6781614160^WPN^PH

² This field is retained for backward compatibility only.

4.6. PV1 - Patient Visit

The PV1 segment is used by Registration/Patient Administration applications to transfer data on visit-specific basis. This segment is required for all ADT messages.

Sequence	Segment Name	R/O	Data Type	Field #	Value	Sample
PV1.1	Set ID - PV1	O	SI	PV1.1.1	Sequence Id	1
PV1.2	Patient Class ³	R	IS	PV1.2.1		U
PV1.7	Attending Doctor	O	XCN	PV1.7.1	Id Number	1234567
				PV1.7.2	Family Name	Bashir
				PV1.7.3	Given Name	Julian
				PV1.7.4	Middle Name	
PV1.20	Financial Class ⁴	O	FC	PV1.20.1	Financial Class Code	Insurance
PV1.44	Admit Date/Time	O	TS	PV1.44.1	Time	20220314090000
PV1.45	Discharge Date/Time	O	TS	PV1.45.1	Time	
PV1.51	Visit Indicator	O	IS	PV1.51.1		

PV1|1|U|||||1111234567^Bashir^Julian|||||||Insurance|||||||20220314090000|

4.7. DG1 - Diagnosis

The DG1 segment contains patient diagnosis information of various types, for example, admitting, primary, etc., and is used to send multiple diagnoses.

Sequence	Segment Name	R/O	Data Type	Field #	Fields	Sample
DG1.1	Set ID – DG1	R	SI	DG1.1.1	Sequence Id	1
DG1.2	Diagnosis Coding Method	O	ID	DG1.2.1		ICD10
DG1.3	Diagnosis Code - DG1	O	CE	DG1.3.1	Identifier	F10.20
DG1.4	Diagnosis Description	O	ST	DG1.4.1		F10.20 Alcohol use disorder Moderate
DG1.6	Diagnosis Type	R	IS	DG1.6.1		W

DG1|1|ICD10|F10.20|F10.20 Alcohol use disorder Moderate||W

³ Patient Class is used by systems to categorize patients by site.

(E)mergency, (I)npatient, (O)utpatient, (P)readmit, (R)ecurring patient, O(b)stetrics, (C)ommercial Account (N)ot Applicable, (U)known.

⁴ *Financial Class(es)* assigned to patient for the purpose of identifying sources of reimbursement: Insurance, Medicare, Facility, Patient/Self Pay.

4.8. IN1 - Insurance

The IN1 segment contains insurance policy coverage information necessary to produce properly prorated patient and insurance bills. This segment is designated as optional in ADT messages, but it is highly recommended that it be included when information is available.

Sequence	Segment Name	R/O	Data Type	Field #	Fields	Sample
IN1.1	Set ID - IN1	R	SI	IN1.1.1	Sequence Identifier	1
IN1.2	Health Plan ID	O	CE	IN1.2.1	Insurance Plan ID	W234324234
IN1.3	Insurance Company ID	R	CX	IN1.3.1	Id Number	60054
IN1.4	Insurance Company Name	O	XON	IN1.4.1	Organization Name	Aetna
IN1.7	Insurance Co. Phone Number	O	XTN	IN1.7.1	Telephone Number	
IN1.8	Group Number	O	ST	IN1.8.1		23424
IN1.12	Plan Effective Date	O	DT	IN1.12.1	Date	20220301
IN1.13	Plan Expiration Date	O	DT	IN1.13.1	Date	
IN1.16	Name of Insured	O	XPN	IN1.16.1	Family Name	Grape
				IN1.16.2	Given Name	Geraldine
				IN1.16.3	Given Names or Initials Thereof	
IN1.17	Insured's Relationship to Patient	O	CWE	IN1.17.1	Identifier	SEL
IN1.18	Insured's Date of Birth	O	TS	IN1.18.1	Time	19830207
IN1.19	Insured's Address	O	XAD	IN1.19.1	Street Address	234 SE Grape St
				IN1.19.2	Other Designation	
				IN1.19.3	City	Grape City
				IN1.19.4	State or Province	OR
				IN1.19.5	Zip or Postal Code	97211
IN1.23	Notice Of Admission Flag	O	ID	IN1.23.1		
IN1.36	Policy Number	O	ST	IN1.36.1		W234324234
IN1.43	Insured Administrative Sex	O	IS	IN1.43.1		F

```
IN1|1|W234324234|60054|Aetna|||23424|||20220301|||Grape^Geraldine|SEL|19830207|234 SE Grape St^^Grape
City^OR^97211|||Y|20220314|||W234324234|||F
```

4.9. IN2 - Insurance Additional Information

The IN2 segment contains additional insurance policy coverage and benefits necessary for proper billing and reimbursement and is a continuation of the information present in the IN1 segment.

Sequence	Segment Name	R/O	Data Type	Field #	Fields	Sample
IN2.2	Set ID	O	SI	IN2.2.1	Insured's Social Security Number	111-22-3333

```
IN2||111-22-3333
```

5. Sample ADT Messages

ADT (Update Patient Information - Event A08)

```
MSH|^~\&|Kipu Systems|Demo Adolescent Treatment^d921b24f-1ca6-ec11-a81b-000d3a5c6921|avea|Integration Testing^f6918730-1ca6-ec11-a81b-000d3a5c6921|20220609124459||ADT^A08|undefined|T|2.5.1
EVN|A08|20220527135813|20220609124459|
PID|1||3f939ea7-70df-4f36-9622-16a8635c6963|2022-5^^^MR|Grape^Geraldine||19901211|F||234 SE Grape St^^Grape City^OR^97211|||||111-22-3333||
PD1||||1111234567^Bashir^Julian
PV1|1|U|||||1111234567^Bashir^Julian|||||Insurance|||||20220314090000|
DG1|1|ICD10|F10.20|F10.20 Alcohol use disorder Moderate||W
IN1|1|W234324234|60054|Aetna|||||23424||20220301|||Grape^Geraldine|SEL|19830207|234 SE Grape St^^Grape City^OR^97211||||Y|20220314|||||W234324234||||F
IN2||111-22-3333
```

ADT (Register a Patient - Event A04)

```
MSH|^~\&|Kipu Systems|Demo Adolescent Treatment^d921b24f-1ca6-ec11-a81b-000d3a5c6921|Avea|Integration Testing^f6918730-1ca6-ec11-a81b-000d3a5c6921|20220307134653||ADT^A04|20220307134653|P|2.3.1
EVN|A04|20220307134653||Hardcoded Reason Code
PID|1||c55d84d4-b2ef-4e33-9609-be7ddc13f7b8||Test^Max||20041102|M||B|4972 McLaughlin Mount^Suite 790^Gwynethbury^SC^69813||3058889999||M||789-23-4567||M
PD1||||1111234567^Bashir^Julian
NK1|1|Funk^Justin|FND|84627 Meghann Club^Apt. 256^Lake Therese^ME^79448|5660736108^^fritz_rice@example.com|6781614160
PV1|1|U|||||1111234567^Bashir^Julian|||||20211014151700
DG1|1|ICD10|F10.10|F10.10 Alcohol abuse uncomplicated||W
DG1|2|ICD10|F20.0|F20.0 Paranoid schizophrenia||W
IN1|1|AH-317504685641|CMD1234|Carecentrix - Aetna||498-046-1318||33469215||||Test^Minnie|P|20041102|4972 McLaughlin Mount^^Gwynethbury^SC^69813||||Y|20211014|||||AH-317504685641||||F
```

6. Appendix

6.1. Administrative Sex Code Value Set

The User-defined Table #0001 below provides the value code set and its corresponding text description that shall be used to indicate a patient's Administrative Sex.

Value	Description	Comment
A	Ambiguous	
F	Female	
M	Male	
N	Not applicable	
O	Other	
U	Unknown	

6.2. Patient Class Code Value Set

The User-defined Table #0004 below provides the value code set and corresponding text description that shall be used to indicate a Patient Class.

Value	Description	Comment
B	Obstetrics	
C	Commercial Account	Usage allowed for HL7 v2.4+
E	Emergency	
I	Inpatient	
N	Not Applicable	
O	Outpatient	
P	Preadmit	
R	Recurring patient	
U	Unknown	

6.3. Ethnic Group Code Value Set

The User-defined Table #0189 below defines the patient's ancestry.

Value	Description	Comment
H	Hispanic or Latino	
N	Not Hispanic or Latino	
U	Unknown	

6.4. Yes/No Indicator

The Standard Table #0136 for a Boolean indication

Value	Description	Comment
N	No	

Y	Yes	
---	-----	--

6.5. Race Code Value Set

The User-defined Table #0005 provides code set value and corresponding text description to indicate the patient's Race.

Value	Description	Comment
1002-5	American Indian or Alaska Native	
2028-9	Asian	
2054-5	Black or African American	
2076-8	Native Hawaiian or Other Pacific Islander	
2106-3	White	
2131-1	Other Race	

6.6. Telecommunication Use Code Value Set

The HL7 Standard Table #0201 below provides codes that represent a specific use of a telecommunication number.

Value	Description	Comment
ASN	Answering Service Number	
BPN	Beeper Number	
EMR	Emergency Number	
NET	Network (email) Address	
ORN	Other Residence Number	
PRN	Primary Residence Number	
VHN	Vacation Home Number	
WPN	Work Number	

6.7. Telecommunication Equipment Type Code Value Set

The HL7 Standard Table #0202 below provides codes that represent the types of telecommunication equipment.

Value	Description	Comment
BP	Beeper	
CP	Cellular Phone	
FX	Fax	
Internet	Internet Address	
MD	Modem	Use Only If Telecom. Use Code Is NET
PH	Telephone	
TDD	Telecommunications Device for the Deaf	
TTY	Teletypewriter	

X.400	X.400 email address	Use Only If Telecom. Use Code Is NET
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6.8. Relationship

The User-defined Table #0063 below defines the Relationship to a patient.

Value	Description	Comment
ASC	Associate	
BRO	Brother	
CGV	Care giver	
CHD	Child	
DEP	Handicapped dependent	
DOM	Life partner	
EMC	Emergency contact	
EME	Employee	
EMR	Employer	
EXF	Extended family	
FCH	Foster child	
FND	Friend	
FTH	Father	
GCH	Grandchild	
GRD	Guardian	
GRP	Grandparent	
MGR	Manager	
MTH	Mother	
NCH	Natural child	
NON	None	
OAD	Other adult	
OTH	Other	
OWN	Owner	
PAR	Parent	
SCH	Stepchild	
SEL	Self	
SIB	Sibling	
SIS	Sister	
SPO	Spouse	
TRA	Trainer	
UNK	Unknown	
WRD	Ward of court	

6.9. Marital Status Code Value Set

The user-defined Table #0002 below provides the value code set and its corresponding text description to indicate the patient's Marital Status

Value	Description	Comment
A	Separated	
B	Unmarried	
C	Common law	
D	Divorced	
E	Legally Separated	
G	Living together	
I	Interlocutory	
M	Married	
N	Annulled	
O	Other	
P	Domestic partner	
R	Registered domestic partner	
S	Single	
T	Unreported	
U	Unknown	
W	Widowed	