

# HL7 Conformance Profile

# **ADT Inbound A12**

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## About this Conformance Profile

HL7Server5 - Release 2005.1.4 - Conformance profile ADT Inbound

History:

2005-11-05 - Creation - Nico Vannieuwenhuyze

Remarks:

When messages are received via HL7 MLLP (socket) HL7Server5 processes the message before sending an acknowledgement message. For certain events (eg A40) this can take a few seconds, so please configure the sending application to wait eg 180 seconds for an acknowledgment.

For more information on HL7 conformance profiles please consult HL7 ANSI standard chapter 2 and HL7 Implementation/Conformance Technical Committee documents at <http://www.hl7.org/special/committees/ictc/docs.cfm>

## Conformance parameters

### Message Profile

- HL7 Version: 2.4
- Profile Type: Constrainable
- Topics: confsig-AGFA/QUADRAT-2.4-profile-accNE\_accNE-Immediate

### Encoding Method

ER7

## Interaction 1

### Dynamic Definition

- Accept Acknowledgement: NE
- Application Acknowledgement: NE
- Acknowledgement Mode: Immediate

### Static Definition

- Message Type: ADT
- Trigger Event: A12
- Message Structure: ADT\_A09
- Topics: confsig-AGFA/QUADRAT-2.4-static-ADT-A12-null-ADT\_A09-2005.1.4--Receiver

### Message structure

MSH EVN PID [PD1] PV1 [PV2] {[DB1]} {[OBX]} [DG1]

### MSH - Message Header

- Usage: Required
- Cardinality:1..1

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Field Separator	ST		1	R	1..1	e.g.
2	Encoding Characters	ST		4	R	1..1	e.g. ^~\&
3	Sending Application	HD		227	R	1..1	
3.1	namespace ID	IS		50	R	..	e.g. HIS
4	Sending Facility	HD		227	O	0..1	
4.1	namespace ID	IS		50	O	..	e.g. FACILITY1
7	Date/Time Of Message	TS		26	R	1..1	
7.1	Date/Time	NM		24	R	..	e.g. 200511070945
9	Message Type	CM_MSG	HL70076	15	R	1..1	
9.1	message type	ID	HL70076	3	R	..	e.g. ADT
9.2	trigger event	ID	HL70003	3	R	..	e.g. A12
9.3	message structure	ID	HL70354	7	O	..	e.g. ADT_A09
10	Message Control ID	ST		20	R	1..1	e.g. 0000001
11	Processing ID	PT		3	R	1..1	
11.1	processing ID	ID	HL70103	3	R	..	e.g. P
12	Version ID	VID	HL70104	973	R	1..1	
12.1	version ID	ID	HL70104	60	R	..	e.g. 2.4
18	Character Set	ID	HL70211	16	O	0..*	e.g. 8859/1
21	Conformance Statement ID	ID		10	O	0..*	

#### 1. Field Separator

This field contains the separator between the segment ID and the first real field, MSH-2- encoding characters. As such it serves as the separator and defines the character to be used as a separator for the rest of the message. Recommended value and used by Agfa is |, (ASCII 124).

#### 2. Encoding Characters

This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator. Recommended values and used by Agfa Healthcare are ^~\&, (ASCII 94, 126, 92, and 38).

### 3. Sending Application

This field uniquely identifies the sending application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise. Entirely site-defined and a parameter for Agfa.

### 7. Date/Time Of Message

This field contains the date/time that the sending system created the message. If the time zone is specified, it is expected to be the local time zone !

### 9. Message Type

Should be ADT^A01^ADT\_A01 for an admission notification

#### 9.3. message structure

Only used when input is hl7 v2.xml

### 10. Message Control ID

This field contains a number or other identifier that uniquely identifies the message. The receiving system echoes this ID back to the sending system in the Message acknowledgment segment (MSA).

#### 11.1. processing ID

No difference in processing by HL7SERVER5 if Production or Test

#### 12.1. version ID

Versions supported by HL7SERVER5 are 2.2, 2.3, 2.3.1, 2.4

### 18. Character Set

Character set has to be a subset of the Windows ANSI codepage of the pc where HL7SERVER5 is running ! e.g. ISO 8859/1 on a windows 1252 code page UTF-8 is not supported !

## **EVN - Event Type**

- Usage: Required

- Cardinality:1..1

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Event Type Code	ID		3	O	0..1	e.g. A12
2	Recorded Date/Time	TS		26	R	1..1	
2.1	Date/Time	NM		24	R	..	e.g. 200511070945
4	Event Reason Code	IS	HL70062	3	O	0..1	e.g. 2
6	Event Occurred	TS		26	O	0..1	
6.1	Date/Time	NM		24	R	..	e.g. 200511070945

#### 1. Event Type Code

If empty the value is taken from MSH-9-1

#### 2. Recorded Date/Time

Only used when EVN-6 Event Occurred is empty

#### 6. Event Occurred

This field contains the date/time that the event actually occurred. For example, on a transfer (A02 (transfer a patient)), this field would contain the date/time the patient was actually transferred. On a cancellation event, this field should contain the date/time that the event being canceled occurred.

## **PID - Patient identification**

- Usage: Required

- Cardinality:1..1

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
2	Patient ID	CX		1913	O	0..1	
2.1	ID	ST		20	O	..	e.g. 1234567
3	Patient Identifier List	CX		1913	R	1..*	
3.1	ID	ST		20	R	..	e.g. 1234567
3.2	Check digit	ST		200	O	..	e.g. 4
3.3	code identifying the check digit scheme employed	ID	HL70061	200	O	..	e.g. M11
3.4	assigning authority	HD		603	O	..	
3.4.1	namespace ID	IS		200	O	..	e.g. HIS1
3.4.2	universal ID	ST		200	O	..	
3.4.3	universal ID type	ID		200	O	..	
3.5	identifier type code (ID)	ID	HL70203	200	O	..	e.g. MR
3.6	assigning facility	HD		603	O	..	
3.6.1	namespace ID	IS		200	O	..	e.g. FACILITY1
3.6.2	universal ID	ST		200	O	..	
3.6.3	universal ID type	ID		200	O	..	
3.7	effective date (DT)	DT		24	O	..	e.g. 20051107
3.8	expiration date	DT		24	O	..	
4	Alternate Patient ID - PID	CX		1913	O	0..1	
4.1	ID	ST		20	O	..	e.g. 1234567
5	Patient Name	XPN		1103	R	1..1	
5.1	family name	FN		174	O	..	
5.1.1	surname	ST		30	R	..	e.g. Yarmey
5.2	given name	ST		30	O	..	e.g. Jane
5.3	second and further given names or initials thereof	ST		30	O	..	e.g. C
5.4	suffix (e.g., JR or III)	ST		15	O	..	
5.5	prefix (e.g., DR)	ST		100	O	..	e.g. DR.
6	Mother's Maiden Name	XPN		1103	O	0..1	
6.1	family name	FN		174	O	..	
6.1.1	surname	ST		30	O	..	
7	Date/Time Of Birth	TS		26	O	0..1	
7.1	Date/Time	NM		24	R	..	e.g. 19931022
8	Administrative Sex	IS	HL70001	1	O	0..1	e.g. F
9	Patient Alias	XPN		1103	O	0..1	
9.1	family name	FN		174	O	..	
9.1.1	surname	ST		30	O	..	e.g. Simmons
9.2	given name	ST		15	O	..	e.g. Neil
9.3	second and further given names or initials thereof	ST		3	O	..	
9.4	suffix (e.g., JR or III)	ST		3	O	..	
9.5	prefix (e.g., DR)	ST		30	O	..	
9.6	degree (e.g., MD)	IS	HL70360	3	O	..	
9.7	name type code	ID	HL70200	3	O	..	e.g. P

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
9.8	Name Representation code	ID	HL70465	3	O	..	
9.9	name context	CE	HL70448	20	O	..	
9.9.1	identifier	ST			O	..	
9.9.2	text	ST		3	O	..	
9.9.3	name of coding system	IS	HL70396	3	O	..	
9.9.4	alternate identifier	ST		3	O	..	
9.9.5	alternate text	ST		3	O	..	
9.9.6	name of alternate coding system	IS	HL70396	3	O	..	
9.11	name assembly order	ID	HL70444	3	O	..	
10	Race	CE	HL70005	483	O	0..1	
10.1	identifier	ST		40	O	..	e.g. 2106-3
11	Patient Address	XAD		631	O	0..*	
11.1	street address (SAD)	SAD		318	O	..	
11.1.1	street or mailing address	ST		254	O	..	e.g. Kortrijksesteenweg
11.2	other designation	ST		254	O	..	e.g. 254
11.3	city	ST		30	O	..	e.g. Sint Martens Latem
11.4	state or province	ST		20	O	..	e.g. OVL
11.5	zip or postal code	ST		20	O	..	e.g. 9831
11.6	country	ID		20	O	..	e.g. BE
11.7	address type	ID	HL70190	10	O	..	e.g. P
13	Phone Number - Home	XTN		850	O	0..1	
13.1	[(999)] 999-9999 [X99999][C any text]	TN		30	O	..	
13.5	Country Code	NM		15	O	..	e.g. 32
13.6	Area/city code	NM		15	O	..	e.g. 3
13.7	Phone number	NM		15	O	..	e.g. 4448150
13.8	Extension	NM		15	O	..	e.g. 500
14	Phone Number - Business	XTN		850	O	0..1	
14.1	[(999)] 999-9999 [X99999][C any text]	TN		30	O	..	e.g. 024448150
15	Primary Language	CE		483	O	0..1	
15.1	identifier	ST		20	O	..	e.g. EN
16	Marital Status	CE	HL70002	483	O	0..1	
16.1	identifier	ST		10	O	..	e.g. M
17	Religion	CE	HL70006	483	O	0..1	
17.1	identifier	ST		40	O	..	
17.2	text	ST		40	O	..	
18	Patient Account Number	CX		1913	O	0..1	
18.1	ID	ST		30	O	..	e.g. 2590852
18.4	assigning authority	HD		257	O	..	
18.4.1	namespace ID	IS		50	O	..	e.g. HIS1
18.7	effective date (DT)	DT		24	O	..	e.g. 20051107
18.8	expiration date	DT		24	O	..	
19	SSN Number - Patient	ST		50	O	0..1	e.g. 19931022175

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
21	Mother's Identifier	CX		1913	O	0..1	
21.1	ID	ST		40	O	..	e.g. 1234560
22	Ethnic Group	CE	HL70189	483	O	0..1	
22.1	identifier	ST		40	O	..	
23	Birth Place	ST		30	O	0..1	e.g. Deinze
24	Multiple Birth Indicator	ID	HL70136	1	O	0..1	e.g. Y
25	Birth Order	NM		2	O	0..1	e.g. 2
26	Citizenship	CE	HL70171	483	O	0..1	
26.1	identifier	ST		20	O	..	e.g. BE
28	Nationality	CE	HL70212	483	O	0..1	
28.1	identifier	ST		20	O	..	e.g. BE
29	Patient Death Date and Time	TS		26	O	0..1	
29.1	Date/Time	NM		24	O	..	
30	Patient Death Indicator	ID	HL70136	1	O	0..1	e.g. N

## 2. Patient ID

Please use PID-3 and map them using the parameters PIDDomainForCode, PIDDomainForHISCode ... to the PATIENTS.xxx columns

## 3. Patient Identifier List

Patient Identifier (list) which UNIQUELY identifies a single patient. Combination of components ID and Assigning Authority should be sufficient to UNIQUELY identify a patient.

### 3.4. assigning authority

Authority/System that generated the patient identifier

### 3.6. assigning facility

Facility in which the patient identifier was generated

## 4. Alternate Patient ID - PID

Please use PID-3 and map them using the parameters PIDDomainForCode, PIDDomainForHISCode ... to the PATIENTS.xxx columns

## 5. Patient Name

Patient name - no repetitions allowed!

## 6. Mother's Maiden Name

Sometimes used in France to exchange the patients maiden name

## 7. Date/Time Of Birth

Patient birth date - is a required field in the RIS database

## 9. Patient Alias

ONLY TYPE P is supported and only when COUNTRY - COUNTRY parameter is N and ApplyCountrySpecificNameRules is true

## 11. Patient Address

The occurrence that has an address type (PID-11-7) of P or M or blank is considered the main address and is stored in the PATIENTS table. ALL occurrences are stored in PAT\_ADDRESSES.

### 11.6. country

In a multi-site environment with multiple HIS systems, make sure that each HIS is using the same code-set.

### 11.7. address type

In a multi-site environment with multiple HIS systems, make sure that each HIS is using the same code-set.

### 13. Phone Number - Home

Patients primary phone number - only the first occurrence is used !

#### 13.1. [(999)] 999-9999 [X99999][C any text]

RIS version < 560: max length = 15

### 14. Phone Number - Business

Additional (second) phone number

#### 14.1. [(999)] 999-9999 [X99999][C any text]

RIS version < 560: max length = 15

### 16.1. identifier

In a multi-site environment with multiple HIS systems, make sure that each HIS is using the same code-set.

### 18. Patient Account Number

Account number (billing) will be linked to the visit number (PV1-19). In a multi-site environment with multiple HIS systems, make sure that the component Assigning Authority is provided !

### 19. SSN Number - Patient

Social security number

### 21. Mother's Identifier

ID of the mother in case of a newborn

### 28. Nationality

In a multi-site environment with multiple HIS systems, make sure that each HIS is using the same code-set.

## **PD1 - patient additional demographic**

- Usage: Optional

- Cardinality: 0..1

- Implementation note: Additional patient information like primary care physician

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
4	Patient Primary Care Provider Name & ID No.	XCN		3002	O	0..1	
4.1	ID number (ST)	ST		20	O	..	e.g. 1282
4.2	family name	FN		184	O	..	
4.2.1	surname	ST		40	O	..	e.g. Pew
4.3	given name	ST		30	O	..	e.g. John
11	Publicity Code	CE	HL70215	483	O	0..1	
11.1	identifier	ST		40	O	..	e.g. EMP

#### 4.1. ID number (ST)

In a multi-site environment with multiple HIS systems, make sure that each HIS is using the same code-set.

### 11. Publicity Code

Used to indicate that a patient is a member of the facility personnel

## 11.1. identifier

Only EMP supported

### **PV1 - Patient visit**

- Usage: Required

- Cardinality:1..1

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Set ID - PV1	SI		4	O	0..1	e.g. 1
2	Patient Class	IS	HL70004	1	R	1..1	e.g. I
3	Assigned Patient Location	PL		1230	O	0..1	
3.1	point of care	IS		25	O	..	e.g. U31
3.2	room	IS		8	O	..	e.g. 310
3.3	bed	IS		25	O	..	e.g. A
3.4	facility (HD)	HD		223	O	..	
3.4.1	namespace ID	IS		15	O	..	e.g. FACILITY1
4	Admission Type	IS		2	O	0..1	e.g. R
6	Prior Patient Location	PL		1230	O	0..1	
6.1	point of care	IS	HL70302	3	O	..	
7	Attending Doctor	XCN	HL70010	3002	O	0..1	
7.1	ID number (ST)	ST		15	O	..	e.g. 759
7.2	family name	FN		184	O	..	
7.2.1	surname	ST		40	O	..	e.g. Rudjord
7.3	given name	ST		30	O	..	e.g. Anders
8	Referring Doctor	XCN	HL70010	3002	O	0..1	
8.1	ID number (ST)	ST		15	O	..	e.g. 1282
8.2	family name	FN		184	O	..	
8.2.1	surname	ST		40	O	..	e.g. Blichfeldt
8.3	given name	ST		30	O	..	e.g. Erik
9	Consulting Doctor	XCN	HL70010	3002	O	0..1	
9.1	ID number (ST)	ST		15	O	..	
9.2	family name	FN		184	O	..	
9.2.1	surname	ST		40	O	..	
9.3	given name	ST		30	O	..	
10	Hospital Service	IS		10	O	0..1	e.g. MED
16	VIP Indicator	IS	HL70099	2	O	0..1	e.g. N
18	Patient Type	IS		10	O	0..1	e.g. H1
19	Visit Number	CX		1913	R	1..1	
19.1	ID	ST		20	R	..	e.g. 200411143
19.4	assigning authority	HD		258	O	..	
19.4.1	namespace ID	IS		50	O	..	e.g. HIS1
20	Financial Class	FC		47	O	0..1	
20.1	Financial Class	IS		10	O	..	e.g. 4
21	Charge Price Indicator	IS	HL70032	10	O	0..1	e.g. 1
44	Admit Date/Time	TS		26	O	0..1	

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
44.1	Date/Time	NM		24	R	..	e.g. 200511070945
45	Discharge Date/Time	TS		26	O	0..1	
45.1	Date/Time	NM		24	O	..	
47	Total Charges	NM		10	O	0..1	e.g. 1000
50	Alternate Visit ID	CX	HL70203	1913	O	0..1	
50.1	ID	ST		50	O	..	e.g. 200411143_01

## 2. Patient Class

Important field ! Can be mapped to specific patient class in RIS. In a multi-site environment with multiple HIS systems, make sure that each HIS is using the same code-set.

### 3.1. point of care

Care unit where the patient resides. In a multi-site environment with multiple HIS systems, make sure that each HIS is using the same code-set.

### 3.4. facility (HD)

Facility where the patient resides - encouraged to use this field - certainly in a multi-site implementation. In a multi-site environment with multiple HIS systems, make sure that each HIS is using the same code-set.

## 6. Prior Patient Location

Only used for lookup of prior transfer - not stored in the database

### 6.1. point of care

only used for lookup of prior transfer - not stored in the database

### 7.1. ID number (ST)

In a multi-site environment with multiple HIS systems, make sure that each HIS is using the same code-set.

### 8.1. ID number (ST)

In a multi-site environment with multiple HIS systems, make sure that each HIS is using the same code-set.

## 9. Consulting Doctor

Stored as patient related physician - NOT linked to the visit

### 9.1. ID number (ST)

In a multi-site environment with multiple HIS systems, make sure that each HIS is using the same code-set.

## 18. Patient Type

In a multi-site environment with multiple HIS systems, make sure that each HIS is using the same code-set.

## 19. Visit Number

Required field for Agfa RIS when exchanging visit information Identifier generated per patient stay in a facility. In a multi-site environment with multiple HIS systems make sure the component Assigning Authority is provided

### 19.4. assigning authority

Encouraged to use this component in a multi-site environment

## 20. Financial Class

Paymode linked to the visit - can be mapped to a QDoc paymode. In a multi-site environment with multiple HIS systems, make sure that each HIS is using the same code-set.

#### 44. Admit Date/Time

Admission date/time

#### 47. Total Charges

Stored as patient extra info

#### 50. Alternate Visit ID

Can be used to uniquely identify a TRANSFERS record - requires specific parameter settings

### **PV2 - Patient visit - additional information**

- Usage: Optional

- Cardinality: 0..1

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
22	Visit Protection Indicator	ID	HL70136	1	O	0..1	e.g. N

### **DB1 - Disability**

- Usage: Not supported

### **OBX - Observation/Result**

- Usage: Optional

- Cardinality: 0..\*

- Implementation note: Used to convey additional patient information, like weighth, height ...

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Set ID - OBX	SI		4	O	0..1	e.g. 1
2	Value Type	ID	HL70125	2	R	1..1	e.g. NM
3	Observation Identifier	CE		483	R	1..1	
3.1	identifier	ST		30	O	..	e.g. WEIGHT
3.2	text	ST		200	O	..	e.g. Weight
5	Observation Value	ST		40	R	1..1	e.g. 76
6	Units	CE		483	O	0..1	
6.1	identifier	ST		40	O	..	e.g. kg

#### 2. Value Type

Not stored in db, but used to transform OBX-5

### **DG1 - Diagnosis**

- Usage: Optional

- Cardinality: 0..1

- Implementation note: Diagnosis information - stored as a visit remark (for usage in QDoc) and also stored in a specific table for use in Medar

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Set ID - DG1	SI		4	O	0..1	e.g. 1
3	Diagnosis Code - DG1	CE	HL70051	483	O	0..1	
3.1	identifier	ST		100	O	..	e.g. V76.1
3.2	text	ST		100	O	..	e.g. OTH SCREEN MAMMO-MALIGN NEOPLASM OF BREAST
3.3	name of coding system	IS	HL70396	3	O	..	e.g. I9
3.4	alternate identifier	ST		3	O	..	

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
3.5	alternate text	ST		3	O	..	
3.6	name of alternate coding system	IS	HL70396	3	O	..	
4	Diagnosis Description	ST		100	O	0..1	e.g. OTH SCREEN MAMMO-MALIGN NEOPLASM OF BREAST
5	Diagnosis Date/Time	TS		26	O	0..1	
5.1	Date/Time	NM		24	R	..	e.g. 20051107
6	Diagnosis Type	IS	HL70052	2	R	1..1	e.g. A

## 6. Diagnosis Type

HL7 required field