



InDex® Archive  
Version 5.1.3

HL7 Conformance Statement

This conformance statement applies to version 5.1.3 of the InDex® Archive product. Future versions of the product should maintain compatibility with this conformance statement, but will include added features and enhancements.

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July 10, 2009

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## 1.0 Introduction

InDex® Archive and the HL7 Standard

The InDex® Archive product utilizes the medical industry standard HL7 2.3 messaging protocol to exchange information with other HL7 compliant applications such as Hospital Information Systems (HIS) and Radiology Information Systems (RIS) on the network. The primary use of the HL7 protocol in the InDex® Archive is to support the IHE Scheduled Workflow profile (SWF), support the IHE Patient Information Reconciliation profile (PIR) and the ability to prefetch prior studies from all Inbound Message supported.

All messages are based on the IHE Technical Framework for Radiology.

### 1.1 Acronyms and Abbreviations

Definitions, terms and abbreviations used in this document are defined within the HL7 standard. Abbreviations and terms are as follows:

ADT	Admission, Discharge, and Transfer message
AL1	Patient Allergy Information segment
CHCS	Composite Health Care System, the RIS used by the US Military
EVN	Event Type segment
HL7	Health Level 7
IHE	Integrating the Healthcare Enterprise
MFN	Master Files Change Notification
MRG	Merge Patient Information segment
MSH	Message Header segment
NTE	Notes and comments segment
OBR	Observation Request segment
OBX	Observation/Result segment
ORC	Common Order segment
ORM	Order Request message
ORU	Observation Results - Unsolicited message
PID	Patient ID segment
PV1	Patient Visit segment
QRD	Query Definition segment
RIS	Radiology Information System
SIU	Schedule Information Unsolicited

### 1.2 Related Documents

- HL7 Standard version 2.3.1
- IHE Radiology Technical Framework Revision 8.0, August 30, 2007

## 2.0 Inbound Messages Supported

Message Type_Trigger	Definition	Comments
ADT_A01	Patient Admission	For Prefetch
ADT_A04	Patient Registration	For Prefetch
ADT_A05	Patient Pre-Admission	For Prefetch
ADT_A08	Update patient information	For PIR & Prefetch
ADT_A40	Merge patient – Patient identifier list	For PIR & Prefetch
ORM_001	Order message	For SWF & Prefetch

## 2.1 Inbound Message Framing

Message Framing	Description	Characters
Header	Before each message	0x0B
End of Segment	After each message segment	0x0D
Footer	After each message	0x1C, 0x0D

## 2.2 Segments Supported

Segment	Required	Comments
MSH	R	Message Header Segment
MSA	O	Returned by InDex® in all Acknowledge messages
EVN	O	Event Type Segment
PID	R	Patient Identification Segment
PV1	O	Patient Visit Segment
PV2	O	Additional Patient Visit Segment
ORC	C	Common Order Segment
OBR	C	Observation Request Segment
MGR	C	Merge Patient Information Segment
ZDS	O	IHE Additional Information Segment

**Note:** The Required field is as follows:

- R** (Required) – Required for all InDex® supported messages
- C** (Conditional) – Required for some InDex® supported messages
- O** (Optional) – Not required for InDex® supported messages

## 2.3 Supported Segment Matrix

Message	MSH	MSA	EVN	PID	PV1	PV2	ORC	OBR	MGR	ZDS
ADT_A01	R	O	O	R	O	O	O	O	O	O
ADT_A04	R	O	O	R	O	O	O	O	O	O
ADT_A05	R	O	O	R	O	O	O	O	O	O
ADT_A08	R	O	O	R	O	O	O	O	O	O
ADT_A40	R	O	O	R	O	O	O	O	R	O
ORM_001	R	O	O	R	O	O	R	R	O	O

## 2.4 Message Header Segment (MSH)

Sequence	Length	Required	Repeating	Element Name	Comments
1	1	Y	N	Field Separator	Usually “ ”
2	4	Y	N	Encoding Characters	Usually “^~\&”
3	180	N	N	Sending Application	Required for ORM_001 Is used as the Source AE Title for Prefetching.
4	180	N	N	Sending Facility	
5	180	N	N	Receiving Application	
6	180	N	N	Receiving Facility	
7	26	N	N	Date/Time of Message	
8	40	N	N	Security	
9	7	Y	N	Message Type	
10	20	Y	N	Message Control ID	
11	3	Y	N	Processing ID	
12	60	Y	N	Version ID	
13	15	N	N	Sequence Number	
14	180	N	N	Continuation Pointer	
15	2	N	N	Accept Acknowledgement Type	
16	2	N	N	Application Acknowledgement Type	
17	2	N	N	Country Code	
18	16	N	Y	Character Set	
19	60	N	N	Principal Language of Message	
20	20	N	N	Alternate Character Set Handling	

## 2.5 Message Acknowledgement Segment (MSA)

Sequence	Length	Required	Repeating	Element Name	Comments
1	1	Y	N	Acknowledgement Code	
2	20	Y	N	Message Control ID	
3	80	N	N	Text Message	

## 2.5 Message Acknowledgement Segment (Continued)

Sequence	Length	Required	Repeating	Element Name	Comments
4	15	N	N	Expected Sequence Number	
5	1	N	N	Delayed Acknowledgement Type	
6	100	N	N	Error Condition	

## 2.6 Patient Identification Segment (PID)

Sequence	Length	Required	Repeating	Element Name	Comments
1	4	N	N	Set ID – PID	
2	20	N	N	Patient ID	
3	20	Y	Y	Patient Identifier List	Required for all Inbound Messages supported.
4	20	N	Y	Alternate Patient ID	Required for all Inbound Messages supported (if configured).
5	48	Y	Y	Patient Name	Required for all Inbound Messages supported.
6	48	N	Y	Mother's Maiden Name	
7	26	N	N	Date/Time of Birth	
8	1	N	N	Sex	
9	48	N	Y	Patient Alias	
10	80	N	Y	Race	
11	106	N	Y	Patient Address	
12	4	N	N	Country Code	
13	40	N	Y	Phone Number - Home	
14	40	N	Y	Phone Number - Business	
15	60	N	N	Primary Language	
16	80	N	N	Marital Status	
17	80	N	N	Religion	
18	20	N	N	Patient Account Number	
19	16	N	N	Social Security Number - Patient	
20	25	N	N	Driver's License Number - Patient	
21	20	N	Y	Mother's Identifier	
22	80	N	Y	Ethnic Group	
23	60	N	N	Birth Place	
24	1	N	N	Multiple Birth Indicator	
25	2	N	N	Birth Order	
26	80	N	Y	Citizenship	
27	60	N	N	Veterans Military Status	
28	80	N	N	Nationality	
29	26	N	N	Patient Death Date and Time	
30	1	N	N	Patient Death Indicator	

## 2.7 Patient Visit Segment (PV1)

Sequence	Length	Required	Repeating	Element Name	Comments
1	4	N	N	Set ID – PV1	
2	1	Y	N	Patient Class	
3	80	N	N	Assigned Patient Location	
4	2	N	N	Admission Type	
5	20	N	N	Pre-admit Number	
6	80	N	N	Prior Patient Location	
7	60	N	Y	Attending Doctor	
8	60	N	Y	Referring Doctor	
9	60	N	Y	Consulting Doctor	
10	3	N	N	Hospital Service	
11	80	N	N	Temporary Location	
12	2	N	N	Pre-admit Test Indicator	
13	2	N	N	Re-admission Indicator	
14	3	N	N	Admit Source	
15	2	N	Y	Ambulatory Status	
16	2	N	N	VIP Indicator	
17	60	N	Y	Admitting Doctor	
18	2	N	N	Patient Type	
19	20	N	N	Visit Number	
20	50	N	Y	Financial Class	
21	2	N	N	Charge Price Indicator	
22	2	N	N	Courtesy Code	
23	2	N	N	Credit Rating	
24	2	N	Y	Contract Code	
25	8	N	Y	Contract Effective Date	
26	12	N	Y	Contract Amount	
27	3	N	Y	Contract Period	
28	2	N	N	Interest Code	
29	1	N	N	Transfer to Bad Debt Code	
30	8	N	N	Transfer to Bad Debt Date	
31	10	N	N	Bad Debt Agency Code	
32	12	N	N	Bad Debt Transfer Amount	
33	12	N	N	Bad Debt Recovery Amount	
34	1	N	N	Delete Account Indicator	
35	8	N	N	Delete Account Date	
36	3	N	N	Discharge Disposition	
37	25	N	N	Discharged to Location	
38	80	N	N	Diet Type	
39	2	N	N	Servicing Facility	
40	1	N	N	Bed Status	
41	2	N	N	Account Status	

## 2.7 Patient Visit Segment (Continued)

Sequence	Length	Required	Repeating	Element Name	Comments
42	80	N	N	Pending Location	
43	80	N	N	Prior Temporary Location	
44	26	N	N	Admit Date/Time	
45	26	N	N	Discharge Date/Time	
46	12	N	N	Current Patient Balance	
47	12	N	N	Total Charges	
48	12	N	N	Total Adjustments	
49	12	N	N	Total Payments	
50	20	N	N	Alternate Visit ID	
51	1	N	N	Visit Indicator	
52	60	N	Y	Other Healthcare Provider	

## 2.8 Common Order Segment (ORC)

Sequence	Length	Required	Repeating	Element Name	Comments
1	2	N	N	Order Control	
2	22	N	N	Placer Order Number	
3	22	N	N	Filler Order Number	
4	22	N	N	Placer Group Number	
5	2	N	N	Order Status	
6	1	N	N	Response Flag	
7	200	N	N	Quantity/Timing	Required for ORM_O01 Is used as the Scheduled Study Date.
8	200	N	N	Parent Order	
9	26	N	N	Date/Time of Transaction	
10	120	N	Y	Entered By	
11	120	N	Y	Verified By	
12	120	N	Y	Ordering Provider	
13	80	N	N	Enterer's Location	
14	40	N	Y	Call Back Phone Number	
15	26	N	N	Order Effective Date/Time	
16	200	N	N	Order Control Code Reason	
17	60	N	N	Entering Organization	
18	60	N	N	Entering Device	
19	120	N	Y	Action By	
20	40	N	N	Advanced Beneficiary Notice Code	
21	60	N	Y	Ordering Facility Name	
22	106	N	Y	Ordering Facility Address	
23	48	N	Y	Ordering Facility Phone Number	
24	106	N	Y	Ordering Provider Address	

## 2.8.1 Order Control Codes Supported (ORC - Sequence 1)

Control Code	Description
NW	New Order
CA	Cancel Order Request
DC	Discontinue Order Request
OC	Order Cancelled
OD	Order Discontinued
SC	Order Scheduled
XO	Change Order Request

## 2.8.2 Order Status Codes Supported (ORC - Sequence 5)

Status Code	Description
CA	Order was Cancelled
CM	Order is Completed
DC	Order was Discontinued
IP	Order in Progress

## 2.9 Observation Request Segment (OBR)

Sequence	Length	Required	Repeating	Element Name	Comments
1	4	N	N	Set ID – OBR	
2	22	N	N	Placer Order Number	
3	22	N	N	Filler Order Number	
4	200	Y	N	Universal Service ID	Required for ORM_O01 Is used as the Source Body Part for Prefetching.
5	2	N	N	Priority-OBR	
6	26	N	N	Requested Date/Time	
7	26	N	N	Observation Date/Time	
8	26	N	N	Observation End Date/Time	
9	20	N	N	Collection Volume	
10	60	N	Y	Collector Identifier	
11	1	N	N	Specimen Action Code	
12	60	N	N	Danger Code	
13	300	N	N	Relevant Clinical Information	
14	26	N	N	Specimen Received Date/Time	
15	300	N	N	Specimen Source	
16	120	N	Y	Ordering Provider	

## 2.9 Observation Request Segment (Continued)

Sequence	Length	Required	Repeating	Element Name	Comments
17	40	N	Y	Order Callback Phone Number	
18	60	N	N	Placer Field 1	
19	60	N	N	Placer Field 2	
20	60	N	N	Filler Field 1	
21	60	N	N	Filler Field 2	
22	26	N	N	Result Rpt/Status Change - Date/Time	
23	40	N	N	Charge To Practice	
24	10	N	N	Diagnostic Serv Sect Id	Required for ORM_001 Is used as the Scheduled Modality Type/Source Modality for Prefetching.
25	1	N	N	Result Status	
26	200	N	N	Parent Result	
27	200	N	Y	Quantity/Timing	
28	150	N	Y	Result Copies To	
29	200	N	N	Parent Number	
30	20	N	N	Transportation Mode	
31	300	N	Y	Reason For Study	
32	200	N	N	Principal Result Interpreter	
33	200	N	Y	Assistant Result Interpreter	
34	200	N	Y	Technician	
35	200	N	Y	Transcriptionist	
36	26	N	N	Scheduled Date/Time	
37	4	N	N	Number of Sample Containers	
38	60	N	Y	Transport Logistics of Collected Sample	
39	200	N	Y	Collector's Comment	
40	60	N	N	Transport Arrangement Responsibility	
41	30	N	N	Transport Arranged	
42	1	N	N	Escort Required	
43	200	N	Y	Planned Patient Transport Comment	
44	80	N	N	Procedure Code	
45	80	N	Y	Procedure Code Modifier	

## 2.10 Merge Patient Information Segment (MRG)

Sequence	Length	Required	Repeating	Element Name	Comments
1	20	Y	Y	Prior Patient Identifier List	Required for ADT_A40
2	20	N	Y	Prior Alternate Patient ID	
3	20	N	N	Prior Patient Account Number	
4	20	N	N	Prior Patient ID	
5	20	N	N	Prior Visit Number	
6	20	N	N	Prior Alternate Visit ID	
7	48	N	Y	Prior Patient Name	

## 2.11 IHE Additional Information Segment (ZDS)

Sequence	Element Name	Shall Contain
1	Reference Pointer	DICOM Study Instance Value
2	Application ID	Implementation Specific
3	Type of Data	“Application”
4	Subtype	“DICOM”