

EMR Health Report Manager (HRM)

Requirements

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1. INTRODUCTION

1.1 Purpose

This document provides the guidance and information for an EMR Offering to meet the requirements necessary to integrate the Health Report Manager (HRM).

1.2 Version History

VERSION	DATE	DESCRIPTION OF CHANGE
1.0	2017-08-04	Initial version
1.1	2021-06-15	<ul style="list-style-type: none"> a) Separated the business context and requirements into separate documents b) Updated format for consistency with current specifications c) Corrected various errata and formatting issues

2. EMR REQUIREMENTS

This section consists of the EMR Offering requirements for the EMR Health Report Manager (HRM) Specification.

Support:

M = Mandatory; EMR Offerings certified for this specification **MUST** support this requirement

O = Optional; EMR vendors **MAY** choose to support this requirement in their certified EMR Offering

Status:

N = New requirement for this EMR Specification version

P = Previous requirement

U = Updated requirement from the previous EMR Specification version

R = Retired requirement from the previous EMR Specification version

OMD #:

A unique identifier that identifies each requirement within OntarioMD's EMR Requirements Repository

CONFORMANCE LANGUAGE

The following definitions of the conformance verbs are used in this document:

- **SHALL/MUST** – Required/Mandatory
- **SHOULD** – Best Practice/Recommendation
- **MAY** – Acceptable/Permitted

The tables that follow contain column headings named: 1) "Requirement," which generally contains a high-level requirement statement; and 2) "Guidelines," which contains additional instructions or detail about the high-level requirement. The text in both columns is considered requirement statements.

2.1 HRM Report Retrieval

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
HRM01.01	The EMR Offering MUST automatically pull HRM reports periodically from HRM.	<p>The EMR Offering MUST have a default polling interval. The suggested default polling interval is 30 minutes.</p> <p>The default polling interval MUST be applied equally to all provider recipients at the practice level.</p> <p>The EMR authorized user (at the practice level) MUST be able to set up and modify the default polling interval.</p> <p>Contacting the EMR vendor's service desk to set up and modify the default polling interval will not satisfy this requirement.</p> <p>Refer to the Connectivity Requirements document for additional details.</p>	M	P
HRM01.02	The EMR Offering MUST allow the EMR authorized user to manually pull HRM reports on an ad hoc basis (outside of the regular polling interval).	<p>Requiring the EMR authorized user to have administrative rights in order to run the ad-hoc request will not satisfy this requirement.</p> <p>Manually pulling reports MUST not affect the default polling interval set up at the practice level for HRM.</p> <p>Contacting the EMR vendor's service desk in order to facilitate the ad-hoc request to HRM will not satisfy this requirement.</p>	M	P

2.2 HRM Report Management

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
HRM02.01	The EMR Offering MUST match the retrieved HRM report to the provider recipient within the EMR.	<p>The HRM report MUST be matched to the provider recipient using one of the following identifiers:</p> <p>CPSO unique identifier including a prefix of 'D' (e.g., D#####) D for Doctor ##### - 5 or 6 digit CPSO number CNO unique identifier including a prefix of 'N' (i.e., N#####) N for Nurse Practitioner ##### - 7 or 8 alphanumeric CNO number</p> <p>Note: The actual identifier value and its maximum length are determined by the respective organization (i.e, CPSO, CNO) and may change.</p>	M	P
HRM02.02	HRM Reports that have been automatically matched to a physician recipient MUST be accessible from that "provider recipient's inbox" / work queue.	Access to HRM reports is limited to the provider recipient unless providers are sharing the patients or are covering for each other.	M	P
HRM02.03	The EMR Offering MUST allow multiple providers to sign off the same HRM report.	<p>Sign-off MUST be an attribute of an HRM report version.</p> <p>The date and name of the EMR user who signed off an HRM report MUST be visually accessible. Requiring an EMR user to search through the audit log will not satisfy this requirement.</p> <p>Any associated comments and annotations are retained separately and visually accessible along with the corresponding report copy in the patient chart.</p>	M	P
HRM02.04	The EMR Offering MUST support a method to identify and resolve the HRM reports received without a provider match in the EMR.	<p>The HRM reports manually matched to a physician must be accessible within the "provider inbox" / work queue.</p> <p>Contacting the EMR vendor's service desk in order to facilitate manual matching will not satisfy this requirement.</p>	M	P

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
HRM02.05	The EMR Offering MUST match the retrieved HRM reports to the EMR patient.	<p>To automatically match an HRM report to the EMR patient all of the following patient demographic data elements MUST match:</p> <p>Health Card Number Gender Date of Birth Last Name</p> <p>Additional fields may be used to conduct patient matching provided the minimum patient demographic information described in the requirements is matched.</p>	M	P
HRM02.06	The EMR Offering files one copy of the HRM report in the patient's chart.		M	P
HRM02.07	The EMR Offering MUST support a method to identify and resolve the HRM reports received without a patient match in the EMR Offering.	<p>The HRM reports manually matched to a patient MUST be accessible within the patient's chart.</p> <p>Contacting the EMR vendor's service desk in order to facilitate manual matching will not satisfy this requirement.</p>	M	P
HRM02.08	The EMR Offering MUST automatically categorize reports by Report Class and Report Sub-Class for Medical Record report types and Report Class and Accompanying Sub-Class for Diagnostic Imaging report types according to the existing EMR categorization/report organization criteria.	<p>The Report Class and Report Sub-Class are used to organize Medical Records reports within a patient's chart, e.g., Medical Record Reports (denoted by a Class = MR and Sub-Class = Consult or Discharge Summary, etc.)</p> <p>The Report Class and Accompanying Sub-Class are used to organize Diagnostic Imaging reports and their respective modalities within the patient's chart, e.g., Diagnostic Imaging (denoted by a Class = DI) and Accompanying Sub-class = Mammogram radiology reports.</p> <p>The EMR Offering may receive reports with more than one Accompanying Sub-Class and will use its business rules for report organization accordingly, e.g., Diagnostic Imaging reports containing Nuclear Medicine & Radiology exams on the same report.</p>	M	P

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
		<p>Enabling the end-user to manually attend to the process of organizing/categorizing reports where different. Accompanying Sub-Class exists on the same report.</p> <p>Sending Facilities classify reports using Report Class, Sub-Class and Accompanying Sub-Class differently. The EMR needs to identify the Sending Facility ID in order to harmonize the organization of the reports using the naming convention defined within the EMR.</p>		
HRM02.09	The EMR Offering MUST support a method to identify and resolve the HRM reports received that are unmatched to an existing class, sub-class, accompanying sub-class within the EMR.	Contacting the EMR vendor's service desk in order to facilitate manual matching will not satisfy this requirement.	M	P
HRM02.10	The EMR Offering MUST allow EMR authorized users to associate categories identified in reports with categories used in the EMR Offering for automated processing.	<p>Report organization/categorization will be established and applied for all health reports received for all report recipients using the same EMR database. Subsequent reports received will match to existing categories within the EMR Offering.</p> <p>The minimum requirement to associate categories defined with the EMR Offering to categories from each sending facility is at the level of sending facility, class and sub-class for Medical Record (MR) reports and sending facility, class and accompanying sub-class for Diagnostic Imaging/Cardio-Respiratory (DI/CRT) reports.</p>	M	P
HRM02.11	The EMR Offering MUST allow an EMR authorized user and/or the physician recipient to manually correct report categorization after posting to the patient chart.		M	P
HRM02.12	The EMR Offering MUST detect and manage duplicate and changed HRM reports.	<p>The most current report version should be presented in the patient's chart with prior versions accessible when required.</p> <p>Users should be able to easily access all HRM report versions.</p>	M	P

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
		Refer to “Duplicate and Changed Reports” in the Report Identification Guidance section of this document for more information.		

2.3 Error Management

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
HRM03.01	The EMR Offering MUST alert or message the EMR administrator if automatic polling is down or unsuccessful.	<p>Supports notification to EMR administrator through an alert and console function if a console is a feature of the EMR Offering.</p> <p>At a minimum, the alert MUST contain:</p> <ul style="list-style-type: none"> The timestamp for the incident Description of the event (e.g., reports not received) Reason for failure (e.g., network down) <p>Once the initial message is received, the EMR administrator can choose to not receive further notifications for that outage.</p> <p>The functionality MUST be available to both “local” and “hosted” solutions.</p> <p>Supporting the functionality through the service desk will not meet the requirement.</p>	M	P
HRM03.02	Alert or message to the EMR user and the EMR administrator is provided if manual retrieval is unsuccessful.	<p>Supports notification to EMR administrator and the user through an alert.</p> <p>The functionality must be available to both “local” and “hosted” solutions.</p> <p>Supporting the functionality through the service desk will not meet the requirement.</p>	M	P
HRM03.03	The EMR Offering MUST be able to re-start the automatic polling mechanism if the mechanism fails.	At a minimum, the EMR Offering MUST attempt to re-connect at the pre-defined polling interval.	M	P

2.4 Audit / Certification / Other

OMD #	REQUIREMENT	GUIDELINES	M/O	STATUS
HRM04.01	EMR Offering must have successfully passed HRM Conformance Testing.	Refer to the Connectivity Requirements document.	M	P
HRM04.02	The EMR Offering must maintain a log of all reports retrieved from HRM.	<p>At a minimum, log entries must include the following discrete data elements:</p> <ul style="list-style-type: none"> a) Retrieval Timestamp b) Transaction Type: Identify whether the report was automatically retrieved or manually retrieved c) Initiating user: Identify the user that initiated the query (if manual) d) Physician recipient e) External System: Fixed value "HRM" <p>The log entries will be retained in accordance with regulations governed by the <i>Medicine Act</i>, 1991.</p>		
HRM04.03	Supports addition of Medical Practice confidentiality statement on printed text reports.	<p>The confidentiality statement must be configurable per practice.</p> <p>The confidentiality statement must appear on every page of the printed report.</p>	M	P
HRM04.04	Supports addition of Medical Practice confidentiality statement on printed binary reports.	<p>The confidentiality statement must be configurable per practice.</p> <p>The confidentiality statement must appear on every page of the printed report.</p>	O	P
HRM04.05	The EMR Offering will be required to extract base64 encoded text (i.e., binary report formats) before rendering the content to the user.	Refer to Section 4.2 Reports Received for additional information; specifically, Data Elements #59 through #61.	M	P
HRM04.06	The EMR Offering must be able to extract from base64 encoded text and render the following file formats: pdf, .tiff, .rtf, .jpeg, .gif, .png, .html.		M	P

1.

1. HRM XSD SCHEMA– STRUCTURE & BUSINESS RULES

This section identifies HRM Data Categories using the following headings:

1. Patient Demographic
2. Reports Received
3. Transaction Information

For this section, the following terms and abbreviations are defined and shall be applied to all tables in this section:

HRM XSD Schema:

- the data structure that is used to transport HRM reports from HRM to EMR Offerings
- comprised of HRM categories
- the HRM XSD Schema is a subset of the CDS XSD Schema that was originally published with Core EMR Specification: Section 2 – Data Portability v4.2 and the corresponding data types

HRM XSD Schema - Data Elements and Business Rules:

HRM # - represents a unique identifier by which any data element will be identified within the HRM XSD Schema. New data elements added to the HRM XSD Schema are identified by 'N'.

Data Element:

- a unit of data as set out in the HRM XSD Schema
- (*) - this symbol means that HRM Data Category, or subsection within an HRM Data Category or a “data element” may be repeated
 - Example of a category: Reports Received
 - Example of a subsection: (*) Accompanying Sub-Class / (*) Accompanying Mnemonic / (*) Accompanying Description / (*) Observation Date/Time.
 - Example of a data element: (*) Contact Purpose

Definition - the detailed description of the Data Element

Required Fields:

- Y - field/element guaranteed to be populated by HRM
- O - field/element to be populated by HRM when provided by HIS
- N - field/element not populated by HRM

Data Type - the characteristic of the data listed

- DATE: YYYY-MM-DD
- DATE/TIME: YYYY-MM-DDThh:mm:ss.sTZD
- YYYY = four-digit year
 - MM = two-digit month
 - DD = two-digit day of the month (01 through 31)
 - hh = two digits of the hour (00 through 23), mm = two digits of minute (00 through 59)
 - ss = two digits of the second (00 through 59), s = one or more digits representing a decimal fraction of a second
 - TZD = time zone designator (Z or +hh:mm or -hh:mm)
- NUM: numeric
- AN: alphanumeric
- AB: alphabetic

LEN – maximum number of characters represented in a particular Data Element

- NL – No Limit
- BOT – Based on Type
- TBP – To Be Provided

CODE SOURCE - the source of the coding system or specific codes that are valid for a given Data Element

BUSINESS RULES – the set of business rules and restrictions that applies to a given data element that supersedes and/or complement the HRM XSD Schema

2.5 Patient Demographics

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
1	Name Prefix	An honorific title used when addressing a person by name.	N	AN	6		
2	(*) Name Part	A part of a name. Typical name parts for person names are first/given names and last/family names.	Y	AN	50		Provided by HRM
3	(*) Name Part Type	Indicates whether the name part is a first/given name or last/family name.	Y	AN	4	See Table CT-002: Name Part Type	Provided by HRM: • “GIV” - for first name and middle name • FAMC – for family name
4	(*) Name Part Qualifier	Indicator to distinguish the person's name for any of the name parts.	Y	AN	2	See Table CT-003: Name Part Qualifier	Provided by HRM: • “CL” - for first name and middle name • “BR” - for last name
5	(*) Name Purpose	If more than one name is recorded, a Name may have a code advising a system or user which name in a set of names to select for a given purpose.	Y	AN	2	See Table CT-004: Name Purpose	Provided by HRM Value: L - legal
6	Name Suffix	An additional term placed after a person's name.	N	AN	3		
7	Date of Birth	The date on which the patient was born.	Y	DATE	10	W3C Date Standard	Provided by HRM

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
8	Health Card Number	The lifetime identification number assigned to all eligible residents within a jurisdiction to receive provincially funded insured health services.	O	AN	20		<p>Provided by HRM</p> <p>The health card number, as provided by the sending facility but not necessarily verified with OHIP.</p>
9	Health Card Version Code	The two-digit code associated with Ontario HCN that uniquely identifies the status of that health card.	O	AB	2		Provided by HRM
10	Health Card Expiry Date	The expiration date for the HCN.	N	DATE	10		
11	Health Card Province	The legal entity (province) responsible for assigning the HCN.	O	AB	5	See Table CT-013: Province/State/Territory	Provided by HRM
12	Chart Number	The number used by the medical practice to identify the associated hardcopy chart.	N	AN	15		
13	Gender	The reported sexual identity of a person for administrative purposes.	Y	AN	1	See Table CT-006: Gender	<p>Provided by HRM:</p> <ul style="list-style-type: none"> • M - Male • F - Female • U - Unknown
14	Unique Vendor ID Sequence	System-specific internal unique key (has no contextual meaning) to uniquely identify the patient within the exporting system.	Y	AN	20		<p>Provided by HRM</p> <p>EMR to ignore the value in this field.</p>
15	Address Type	At a minimum, the EMR Offering must support: - residence address - mailing address	N	AN	1	See Table CT-011: Address Type	

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
16	Mailing Street Address line 1	The unit and street address for postal delivery, as declared by the patient.	N	AN	50		
17	Mailing Street Address line 2	The unit and street address for postal delivery, as declared by the patient.	N	AN	50		
18	Mailing City	The city assigned for postal delivery purposes, as declared by the patient.	N	AN	80		
19	Mailing Country & Province/State	The country and province/state for postal delivery, as declared by the patient.	N	AN	7		
20	Mailing Postal/Zip Code	The postal/zip code for postal delivery, as declared by the patient.	N	AN	10		
21	Residence Street Address line 1	The street address where the patient lives.	O	AN	50		
22	Residence Street Address line 2	The street address where the patient lives.	O	AN	50		
23	Residence City	City where the patient lives.	O	AN	80		
24	Residence Country & Province/State	The country & province/state where the patient lives.	O	AB	7	ISO 3166-2	ISO 3166-2 - Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes
25	Residence Postal/Zip Code	The residence postal/zip code as declared by the patient.	O	AN	10		

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
26	Phone Number Type			AN	1	See Table CT-012: Phone Number Type	
27	Residence Phone	The phone number where the patient lives.	O	NUM	25		
28	Preferred Phone	Identify the preferred phone for person contact	N	AB	1		
29	Cell Phone	The cell phone number for contacting the patient.	N	NUM	25		
30	Work Phone	The organization's work phone number where the patient can be reached during working hours.	N	NUM	25		
31	Work Phone Extension		N	NUM	5		
32	Preferred Official Language	Official languages are English and French.	N	AN	3		
33	Preferred Spoken Language	Indicates in which language a person prefers to communicate.	N	AN	25		
34	(*) Contact Purpose	The type of contact person.	N	AN	2		
35	(*) Contact First Name		N	AN	50		
36	(*) Contact Middle Name		N	AN	50		
37	(*) Contact Last Name		N	AN	50		
38	Phone Number Type		N	AN			
39	(*) Contact Residence Phone	The phone number where the contact person lives.	N	AN	25		

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
40	(*) Contact Cell Phone	The cell phone number for the contact person.	N	AN	25		
41	(*) Contact Work Phone	The organization's work phone number where the contact person can be reached during working hours.	N	AN	25		
42	(*) Contact Work Phone Extension	The number used to access the contact's work phone number within an organization.	N	NUM	5		
43	(*) Contact E-Mail Address	The email address preferred by the contact person.	N	AN	50		
44	(*) Contact Note	Additional notes about the contact person.	N	AN	200		
45	Patient Note	Additional notes about the patient.	N	AN	64k		
46	Patient Warning Flag	If alerts on file about the person, this flag is set to 1 otherwise the default is 0.	N	NUM	1		
47	(*) Enrolment Status	Refers to whether the patient is enrolled, his enrolment was terminated or never has been enrolled with a particular physician at a given point in time.	Y	NUM	1		Provided by HRM Value: "1" EMR to ignore the value.
48	(*) Enrolment Date	The date the patient has been enrolled with a particular physician.	N	DATE	10		

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
49	(*) Enrolment Termination Date	The date the patient enrolment was terminated with a particular physician.	N	DATE	10		
50	(*) Enrolment Termination Reason	Reason for terminating patient enrolment with a particular physician as provided and defined by the MOHLTC.	N	NUM	2		
51	Primary Physician - First Name	The First Name of the most responsible physician to whom the patient record is assigned.	N	AN	50		
52	Primary Physician - Last Name	The Last Name of the most responsible physician to whom the patient record is assigned.	N	AN	50		
53	Primary Physician - OHIP Billing Number	The "OHIP Billing Number" of the most responsible physician to whom the patient record is assigned.	N	NUM	6		
54	Patient E-Mail Address	The email address preferred by the patient.	N	AN	50		
55	Family Member Link	System-specific internal unique key (has no contextual meaning) to uniquely identify the person; Link to one or more family members	N	AN	20		
56	Patient Status	Refers to whether the 'Primary Physician' considers the patient to be 'active', 'inactive', 'deceased' or other values as supported by the practice.	Y	AN	1		Provided by HRM Value: 'A' EMR to ignore the value

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
57	Patient Status Date	The date associated with 'Patient Status'; Refers to the date the patient becomes 'active' or the date the status has been changed.	N	DATE	10		
58	SIN	Social Insurance Number	N	NUM	9		

2.6 Reports Received

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
59	Report Media	The media used for the report.	Y	AN	20	Email Download Portable Media Hardcopy	Provided by HRM Value: 'Download'
60	Report Format	The format of the report.	Y	AN	50	Text Binary	Provided by HRM Value is 'Text' or 'Binary' If Report Format equals: <u>Text</u> : Report Content Data Element contains the embedded human-readable text of the report <u>Binary</u> : Report Content Data Element contains a base64 encoded binary file, defined by the Report Type File Extension
61	Report Type File Extension	The extension of the exported file and/or encounter plain text.	Y	AN	50		Provided by HRM If Report Format equals: <u>Text</u> : Value is "From OMD Report Manager" <u>Binary</u> : Value is the format and extension of the file. Supported file formats: .pdf, .tiff, .rtf, .jpeg, .gif, .png, .html

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
62	Report Content	The content of the HRM report, as downloaded from HRM.	Y	AN	NL		<p>Provided by HRM</p> <p>May be text or base64 encoded content</p> <p>If Report Format equals:</p> <p><u>Text</u>: Text content will appear in the <i>TextContent tag</i>, where the TextContent tag is a child of the ReportContent tag</p> <p>The length of a line is determined by the output from the sending facility which is variable in length and has no limit. All lines will be joined together in this field in the text sequence received from the sending facility.</p> <p><u>Binary</u>: The base64 encoded message will appear in the Media tag, where the <i>Media tag</i> is a child of the ReportContent tag.</p>
63	Report Class	Classification of the HRM reports as provided by the source.	Y	AN	60	A subset of Table CT-027: Report Class	<p>Provided by HRM</p> <p>Values:</p> <ul style="list-style-type: none"> ▪ Diagnostic Imaging Report (DI) ▪ Cardio-Respiratory Report (CRT) ▪ Medical Record Report (MR) <p>The sending facility will provide the codes to OntarioMD to configure and enable HRM to</p>

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
							translate and name the reports accordingly.
64	Report Sub-class	Sub-classification of the MR report as provided by the source.	Y	AN	50		Provided by HRM
65	Event Occurred Date/Time	Date and time the MR report has been created (authored).	Y	DATE/ TIME	30	W3C Date Standard	Provided by HRM
66	Report Received Date/Time	Date and time the HRM reports have been received by the medical practice; this is not the date the report was recorded in the EMR.	N	DATE/ TIME	30		
67	Report Date and Time Reviewed	Date and time the report has been signed-off (reviewed) by the authorized provider.	N	DATE/ TIME	30		
68	Source Author - First Name	First Name of the external provider who authored the report.	N	AN	60		
69	Source Author - Last Name	Last Name of the external provider who authored the report.	O	AN	60		Provided by HRM Format: MM^LN^FN^AMI^PD • MM - the provider mnemonic used by the sending facility • LN - provider last name • FN - provider first name • AMN - abbreviated middle initial and possible punctuation

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
							<ul style="list-style-type: none"> • PD - provider designation (e.g., "MD")
70	Report Reviewed By	OHIP Billing Number of the authorized who signed-off (reviewed) the report.	N	AN	6		
71	Source Facility ID	<p>Unique ID of the facility that sends HRM reports.</p> <p>This discrete data element is specific to reports downloaded from HRM.</p>	Y	AN	4		<p>Provided by HRM</p> <p>The Source Facility (hospitals or IHFs) is responsible for providing the Source Facility ID.</p> <p>For the values sent by hospitals, please refer to the MOHLTC Master Numbering System.</p>
72	Source Facility Report Number	<p>Unique ID for a report as provided by the sending facility.</p> <p>This discrete data element is specific to reports downloaded from HRM.</p>	Y	AN	75		<p>Provided by HRM</p> <p>The number might be reused by the sending facility over time.</p>
73	(*) Accompanying Sub-Class	<p>The sub-classification of the DI and CRT reports, as provided by the source.</p> <p>This discrete data element is specific to DI and CRT reports downloaded from HRM.</p>	Y	AN	60		<p>Provided by HRM.</p> <p>Accompanying Sub-Class, Accompanying Mnemonic, Accompanying Description and Observation Date Time form a group of fields that can be repeated for multiple "accompanying sub-classes"</p>

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
							and/or multiple procedures within the same report.
74	(*) Accompanying Mnemonic	<p>The abbreviated term used by the sending facility to describe procedures/studies as provided by the sending facility</p> <p>This discrete data element is specific to DI and CRT reports downloaded from HRM.</p>	Y	AN	200		Provided by HRM.
75	(*) Accompanying Description	<p>The description of a procedure/study corresponding to the Accompanying Mnemonic data element as provided by sending facility.</p> <p>This discrete data element is specific to DI and CRT reports downloaded from HRM.</p>	Y	AN	200		Provided by HRM
76	(*) Observation Date/Time	<p>Date and Time the observation/service have been performed for each DI and CRT report as provided by the sending facility (source facility).</p> <p>This discrete data element is specific to DI and CRT reports downloaded from HRM.</p>	Y	DATE/TIME	30	W3C Date Standard	Provided by HRM

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
77	Report Status	The Status of the HRM report as provided by the sending facility.	Y	AN	1		Provided by HRM Values: <ul style="list-style-type: none"> • S - Signed By • C - Cancelled (the report is null and void)

2.7 Transaction Information

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
78	Message Unique ID	Unique identifier for each HRM message received from HRM.	Y	AN	250		<p>Provided by HRM</p> <p>EMR to record and provide the Message Unique ID as is.</p> <p>MessageUniqueID Format:</p> <p><HRM Process Date>^<Accession Number>^<Sending Facility>^<Report Class>^<Report Number>^<Message Date>^<Environment Mode>^<Site Instance>^<Report Status>^<Visit Number><OBX Line Count></p> <p>MessageUniqueID components definition:</p> <ul style="list-style-type: none"> HRM Process Date <ul style="list-style-type: none"> a date provided by HRM specifying when the report was created format: YYYYMMDDHHMMSSsss (SS is seconds and sss is milliseconds) Accession Number <ul style="list-style-type: none"> unique value and is the key used to identify a specific message from the sending facility

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
							<ul style="list-style-type: none"> ▪ Sending Facility - consistent with field #71 above ▪ Report Class - consistent with field #63 above ▪ Report Number <ul style="list-style-type: none"> - the report number provided by the sending facility - may not be unique within a sending facility - consistent with field #72 above ▪ Message Date <ul style="list-style-type: none"> - date and time the message was created by the sending facility system - Format: YYYYMMDDHHMM ▪ Environment Mode – refers to whether the reports sent by the sending facility are actual, or test reports. <ul style="list-style-type: none"> - P: Production report with actual PHI and - T: Test report without PHI (not used in a production environment). ▪ Site Instance - the sFTP account name of where the XML file has been downloaded from. This field is present but is no longer populated.

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
							<ul style="list-style-type: none"> ▪ Report Status - specifies the status of the report provided by the sending facility. ▪ Visit Number <ul style="list-style-type: none"> - the unique identifier assigned to each patient visit - is an optional field, therefore, sending facilities may not provide a visit number within every message ▪ OBX Line Count <ul style="list-style-type: none"> - Count of the number of lines in the original report transmitted by the sending facility in the HL7 message <p>Example: <MessageUniqueId>20091007161111480^1830380^3987^MR^1036^200910071610^P^xyfht11^S^1498736585^43</MessageUniqueId></p> <p>IMPORTANT: Both HRM Process Date and Accession Number will be unique per unique report. Therefore, if using Message Unique ID to detect duplicate or changed reports both of these values should be temporarily replaced. Refer to section 2 – REPORT</p>

HRM #	DATA ELEMENT	DEFINITION	REQ FIELD	DATA TYPE	LEN	CODE SOURCE	BUSINESS RULES
							IDENTIFICATION GUIDANCE for additional information regarding Duplicate and Changed Reports.
79	Deliver To -Provider First Name	Report Recipient First Name is as entered in HRM.	Y	AN	60		Provided by HRM
80	Deliver To- Provider Last Name	Report Recipient Last Name is as entered in HRM.	Y	AN	60		Provided by HRM
81	Deliver To - Provider ID	UserID identifying the recipient of the report.	Y	AN	9		<p>Provided by HRM</p> <p>The CPSO number of the physician or the CNO number of the nurse identified as the recipient of the HRM report.</p> <p>HRM will generate one report per unique recipient.</p> <p>Format:</p> <p>1) D#####</p> <ul style="list-style-type: none"> D for Doctor ##### - 5 or 6 digit CPSO number <p>2) N#####</p> <ul style="list-style-type: none"> N for Nurse Practitioner ##### - 7 or 8 alphanumeric CNO number

2. REPORT IDENTIFICATION GUIDANCE

2.8 Duplicate and Changed Reports

This section is provided to support the EMR functional requirements for HRM. Specifically, this section is meant to:

- Define the various scenarios when duplicate or changed reports will be received by an EMR; and,
- Provide guidance to EMR vendors in terms of the appropriate business logic to process and inform end-users about these types of reports

Background

Many data fields are provided as part of the HRM transmission. These data fields and the business rules associated with reports received by the EMR Offering need interpretation to allow EMR vendors to develop their products to support the management of duplicate or changed reports. The following are principles that are related to duplicate and changed reports:

1. EMR Offering must not allow duplicate reports to appear within the EMR patient chart.
2. EMR Offering must identify duplicate reports and avoid an attended (manual) process for users to manage these reports as part of their workflow.
3. EMR Offering must automatically identify report changes in the patient's chart and inform the EMR user of the change when the change occurs and subsequently when the changed report(s) are viewed.
4. HRM does not receive a discrete field containing a Report Revised Date from the sending facility. As such, it is important for users to have access to revisions of the report to determine what if any content was changed.
5. HRM cannot control the sequencing of reports that originate from a sending facility (e.g., hospital). This can have an impact on the chronological filing of reports within the patient's chart and potentially mislead the user (e.g., a baseline chest x-ray that is delivered after a follow-up x-ray or an x-ray follow-up report is sent electronically after the EMR interface to HRM is active and the user scans/inputs the original baseline x-ray report afterwards). As a result, EMR vendors need to consider a function to allow users to re-arrange the order of reports within the patient's chart or inform the user that the report order may be out of sequence.
6. A sending facility may indicate multiple electronic report recipients per report. HRM creates a separate replicated report instance for each electronic report recipient as defined by the sending facility (e.g., hospital). Each of these report instances will have an identical Message Unique ID (#78) but a different DeliverToProvider ID (#82) value, i.e., report recipient(s).

2.8.1 Definitions & Distinguishing Characteristics

1. **Unique Report:** A report that originates from a sending facility (e.g., hospital) to HRM and contains new report content.
 - a. Distinguishing Characteristics of a Unique Report: An electronic report can be considered unique when HRM sends a unique report to a report recipient and assigns a Message Unique ID (which is regarded as unique per sending facility report).
2. **Exact Duplicate Report:** A report that originates from a sending facility (e.g., hospital) to HRM which has the exact same report content. This type of report contains one or more electronic report recipient(s) and HRM subsequently creates one report per electronic report recipient.
 - a. Distinguishing Characteristics of an Exact Duplicate Report: An electronic report may appear to be a duplicate based on the Source Facility ID (#71), Source Facility Report Number (# 72) and Deliver To Provider ID; however, the following needs to be accounted for:
 - i. A sending facility may reuse Source Facility Report Number for the same patient and the same Deliver To Provider ID
 - ii. The Message Unique ID is used for logging and support and must not be used in its entirety by the EMR Offering to distinguish duplicate or changed reports. Any exact duplicate reports re-sent by the Source Facility ID to report recipient(s) will have a different Message Unique ID.
3. **Changed Report:** A report that originates from a sending facility (e.g., hospital) to HRM and contains modified report content including the identity of one or more electronic report recipient(s).
 - a. Distinguishing Characteristics of a Changed Report: An electronic report may appear to be changed based on any of the following situations:
 - i. the Report Status (Signed or Cancelled);
 - ii. patient identity change (i.e., original report sent for the wrong patient);
 - iii. changed report content including the Event Occurred Date / Time (#65) for MR reports or Observation Date/Time (#76) for DI reports; or
 - iv. addition or removal of content with some description noted by the sending facility that the report was changed.
 - b. The Source Facility ID, Source Facility Report Number, Deliver To Provider ID (excluding the Message Unique ID) are key fields that will guide EMR Offerings to automatically detect changed reports.
 - c. As a further note, some sending facilities may issue a new report with a new Source Facility Report Number in lieu of using the same report number. Although this will not impact an automated approach to detecting changed reports it is worth noting that different sending facilities have their own policies governing the creation of changed reports.

2.8.2 Recommendations for EMR Vendors

The EMR Offering needs to be able to distinguish the difference between duplicate and changed reports. Options for resolving these situations where one or more reports contain the same Source Facility ID, Source Facility Report Number and DeliverToProvider ID:

- Temporarily replace the HRM Process Date (Component 1 of Message Unique ID #78) component of the Message Unique ID with a null or single uniform text character/value and perform a checksum on the file for each report recipient.
- Maintain or generate a checksum associated with each report instance on this basis.
- Compare checksums by exception:
 - If checksums match, then the report can be considered a duplicate. The recipient needs to be aware of this duplicate report state and to have the EMR resolve this situation.
 - If checksums do not match, then the report is not considered to be a duplicate and contains changed content. In this situation, the report is expected (but not guaranteed) to apply to the same patient. If the report does belong to the same patient, the EMR user will need to know that an updated report exists and they must have access to it in order to view any changed content. If the report belongs to a different patient (i.e., to reflect a correction provided by the sending facility) the EMR user will need to be aware of the original report (for a different patient) and that the report has changed to correct the patient information.
 - HRM is dependent on the order that reports are sent by each sending facility. If a sending facility sends reports out of chronological sequence and the content has changed then the user will need a means of identifying this situation. The Message Unique ID contains a component called Message Date (Component 6 of Message Unique ID #78) which is provided by the sending facility. The EMR Offering might consider referencing this date and time to sequence changed reports. This information is provided to advise EMR vendors about the chronology of reports, however, it is important to disclaim that this derived Message Date component of the Message Unique ID is generated by the sending facility and OntarioMD cannot guarantee its use.

3. HRM XSD SCHEMA – CHANGES

2.9 XML Elements – Remove, Update and Amend

This section consists of the XML data elements within report_manager.xsd or report_manager_dt.xsd that have been added (new), removed, updated or amended, however, there might be changes to HRM - XSD Schema that might occur after the publication of this document.

For the complete list of changes to the report_manager.xsd or report_manager_dt.xsd, please refer to Data Dictionary & Mapping / XML_ChangeLog tab. It is essential that implementers keep current regarding any changes to the HRM - XSD Schema.