

Electronic Medical Records

SPECIFICATION

Appendix A – EMR Baseline Requirements

FINAL

Date: January 17, 2011
Version: 4.0



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1. INTRODUCTION

1.1 SCOPE / PURPOSE OF THE DOCUMENT

Appendix A is the central document for the EMR specification document set. It describes the high level and detail requirements central to the EMR application. It also identifies the discrete data elements within each group that comprises the Core Data Set (CDS). Other high level system sections such as interfaces, system architecture and auditing are included. Further, this document identifies accompanying appendices, reference tables and documents.

1.2 DEFINITIONS, ACRONYMS AND ABBREVIATIONS

TERM	MEANING
CPSO	College of P hysicians and S urgeons of O ntario
HRM	H ospital R eport M anager
OHIP	O ntario H ealth I nsurance P lan
OHN	O ntario H ealth N umber
MOHLTC	M inistry of H ealth and L ong- T erm C are
MRP	M ost R esponsible P hysician - the attending physician who is primarily responsible for the day-to-day care of patient. In absence, the covering physician will fulfill the MRP role.
Provider	A person who provides healthcare services to patients or an organization that facilitates such services
SOAP	S ubjective, O bjective, A ssessment, and P lan. The SOAP note is a format for documenting patient encounters.
WHO	W orld H ealth O rganization

1.3 RELATED DOCUMENTS AND REFERENCES

The following table lists all documents related to, or referenced by, the Software Requirements Specification:

DOCUMENT NAME	VERSION	DATE
Appendix A – EMR Baseline Requirements	Final / v4.0	17-Jan-2011
Appendix B – Data Portability Requirements	Final / v4.0	17-Jan-2011
Appendix C –Chronic Management Disease Requirements	Final / v4.0	17-Jan-2011
Appendix D – Reporting of Diabetes Data Requirements	Final / v4.0	17-Jan-2011
Appendix E – EMR/OLIS Interface Requirements	Final / v4.0	17-Jan-2011
Appendix F – Hospital Report Management Requirements	Final / v4.0	17-Jan-2011
Appendix G - Preliminary CIHI Health System Use Data Extract Requirements	Final / v4.0	17-Jan-2011
CPSO Policy Statement #5-05 Medical Records	N/A	March/April -2006
Canadian Immunization Guide	Seventh Edition	2006

2. EMR REQUIREMENTS

This section consists of the functional requirements for Certified EMR Offerings under EMR Specification v4.0.

Scoring Key: **M** = Mandatory criteria for certification
W = Weighted criteria

Status Key: **N** = New requirement for EMR Specification 4.0
P = Previous requirement from CMS Specification 3.0
U = Updated from a previous CMS Specification 3.0 requirement
R = Retired from previous CMS Specification 3.0

2.1 FUNCTIONAL REQUIREMENTS

2.1.1 DEMOGRAPHICS REQUIREMENTS

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Maintains all mandatory patient demographic data defined in sections: 2.2.1.1.1 – Patient Identification and 2.2.1.1.2 – Patient Contact Information.		M	P	
b) Maintains the status of enrolled patients rostered to each Physician Group.	<p>The definitive roster used for payment is kept by the Ministry of Health and Long Term Care, not by the EMR. However, the EMR must keep a roster for reconciliation purposes and Physician Group preventive care bonus purposes.</p> <p>Functional requirements must include a historical enrolment status of patients.</p> <p>Patients are rostered to a specific physician within a Physician Group, not to the Physician Group as a whole.</p> <p>Physicians may have both rostered and non-rostered patients.</p>	M	U	Updated Guidelines
c) Maintains multiple contacts. Must have distinct field(s) designated for storing contact information (at least mandatory data elements described in section 2.2.1.1.3 – Patient Alternative Contact)	<p>A contact is a person named by the patient as someone who should be contacted in specific types of situations.</p> <p>Each contact must support multiple contact purposes/roles.</p> <p>Substitute decision maker and emergency contacts are mandatory in EMR Offering.</p>	M	U	Updated Requirement

Requirement	Guidelines	M/W	Status	Discussion/Comments
d) Provides an automated method of identifying and preventing duplicate patient records.	<p>Duplicate records are identified by a name match, or by a health card number match.</p> <p>System should provide a method of preventing the creation of duplicate patient records.</p> <p>A health card number with a different version code should be considered the same patient record.</p>	M	P	
e) Supports merging of duplicate patient records.	<p>Merging of patients refers to the merging of the entire patient medical record (not only patient demographics).</p> <p>Before merging of records occurs, the user must be notified of the permanence of the action and given an opportunity to confirm the merging of duplicate patient records in order to avoid errors.</p> <p>There is no requirement to undo merge.</p>	M	U	<p>Changed scoring from W to M</p> <p>Updated Guidelines</p>
f) System allows for the identification of static cohorts of patients for the purpose of chronic disease, or other tracking.	<p>To satisfy this requirement the provider must be able to define the name and population of their own cohort(s).</p> <p>Each patient in the EMR can belong to more than one cohort, if desired by the provider.</p> <p>Examples:</p> <ul style="list-style-type: none"> ▪ A list of 100 selected patients for the purposes of tracking and surveillance. 	M	P	
g) Maintains all mandatory provider demographic data defined in sections: 2.2.1.2.11 – Physician Information.		M	N	

2.1.2 ELECTRONIC MEDICAL RECORD (“EMR”) REQUIREMENTS

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Maintains current/ongoing problem/diagnosis list (at least mandatory data elements described in section 2.2.1.2.1 - Ongoing/ Current Health Conditions/Problem List).		M	P	
b) Maintains past problems, medical and surgical history (at least mandatory data elements described in section 2.2.1.2.2 – Past Medical and Surgical History).		M	P	
c) Maintains allergy data (at least mandatory data elements described in section 2.2.1.2.6 – Allergies and Adverse Reactions).	Documented patient allergies.	M	P	
d) Maintains adverse reaction (intolerance) data (at least mandatory data elements described in section 2.2.1.2.6 – Allergies and Adverse Reactions).	Documented patient side effects.	M	P	
e) Maintains family medical history (at least mandatory data elements described in section 2.2.1.2.9 – Family Medical History).		M	P	
f) Maintains medical alerts and special needs (at least mandatory data elements described in section 2.2.1.2.8 – Alerts and Special Needs).		M	P	
g) Maintains immunizations data (at least all mandatory data elements described in section 2.2.1.2.3 – Immunizations).		M	P	
h) Maintains risk data (at least mandatory data elements described in section 2.2.1.2.7 – Risk Factors).		M	P	
i) Maintains a record of preventive care/screening activities (i.e. procedures and dates performed).	Additional fields (such as due dates, notes, etc.) are allowed.	M	P	
j) Preventive care activities in the patient’s EMR automatically become visually distinct when past due.	Cannot be a work queue item. Must be visible within the EMR. Can be for any health maintenance activity.	M	P	

Requirement	Guidelines	M/W	Status	Discussion/Comments
k) Provide the ability to modify the medical record of a patient to ensure accuracy in accordance with CPSO Policy Statement on Medical Records.	<p>Intent of the requirement is to ensure accurate information informs care decisions and changes to the medical record are documented.</p> <p>Any information modified within the medical record must be available for review. The record must also indicate who made the change, and when the change was made.</p> <p>This may be available within the system audit trail.</p> <p>Refer to CPSO Medical Records policy: http://www.cpso.on.ca/uploadedFiles/policies/policies/policyitems/medical_records.pdf. Page 4 from the policy document states: "Corrections must be made in such a manner as to ensure that the correct information is recorded and the incorrect information is either severed from the record and stored separately, or maintained in the record but clearly labeled as being incorrect."</p> <p>The Vendor is required to conform to all subsequent releases of the CPSO Medical Records policy.</p>	M	U	Updated Guidelines
l) Provides the user the ability to know the status of data from requirements 2.1.2 a) through h) on a past date.	<p>System users must be able to see which information was known at the time a medical decision was made.</p> <p>It is not sufficient for a user to search through the audit trail in order to find the status of patient data on a particular date.</p>	M	P	

2.1.3 ENCOUNTER DOCUMENTATION

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Provides forms or templates for common encounters that can be modified by user.	Examples: SOAP, Annual Physical, Ante-natal, etc.	W	P	
b) The system automatically includes a user identifier in each part of the encounter note to support shared creation of encounter documentation. Requiring user to access audit logs to view entry information would not meet the requirement.	Manual entry of identification (e.g. initials) would not meet the requirement. The ability to configure the application to only display the final signature is acceptable. Allowing users to toggle identifying information within the encounter documentation view is acceptable, as long as identifier information can be retrieved. Example: Started by nurse, completed by physician.	M	U	Updated Guidelines
c) Supports free form text notes that are tied to each encounter.		M	P	
d) Provides the ability to view and print all encounter documentation in chronological order.	Based on Ontario Regulation 114/94, Section 20 (4).	M	P	
e) Provides the ability to view and print all encounter documentation in chronological order by date range as selected by the user.	At a minimum, the user should be able to select both a start date (day, month, year), and an end date for the date range to satisfy this requirement.	W	P	
f) Provides the ability to capture more than one diagnosis for a single encounter.	Whether the EMR Offering supports free text, coding or other data discipline of capturing multiple diagnoses within a single office visit note, each method should distinctly capture at the physicians discretion.	M	U	Updated Guidelines
g) Provides the ability to compile the components of a multi-part visit to create an encounter note that represents a single office visit per physician.	Intent of the requirement is to allow for a logical grouping of encounter documentation that clearly indicates multiple activities within a single office visit. Example: Vitals and reason for visit entered by an RN; urinalysis entered by a lab tech; physician conducts a history, physical, assessment and plan; all during a single office visit.	M	P	

2.1.4 MEDICATION MANAGEMENT

For the purposes of this section, the following terms are defined:

Current Medications – medications that are part of the patient’s treatment plan. This includes all active long-term and active short-term medications at the time of viewing the record.

Long-term Medications - A medication which is expected to be continued beyond the present order and which the patient should be assumed to be taking unless explicitly stopped (also referred to as Continuous/Chronic). These are medications which the prescriber has identified as a part of the patients ongoing treatment plan.

Short-term Medications – A medication which the patient is only expected to consume for the duration of the current order and which is not expected to be renewed (also referred to as Acute). These are medications the prescriber has not identified as part of the patients long-term treatment plan.

Past Medications - medications which are no longer part of the patient’s treatment plan.

PRN - A medication which the patient will consume intermittently based on the behavior of the condition for which the medication is indicated (also referred to as “As Needed”). Applies to both Long-term and Short-term medications.

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Maintains complete documentation of patient medications including: <ul style="list-style-type: none"> ▪ medications ordered by other health care providers; ▪ over-the-counter medications including herbal and nutritional supplements; and ▪ past and current medications ▪ active and inactive prescriptions 	It is important to distinguish that there is a difference between the status of a medication in the treatment plan and the status of a prescription for that medication.	M	U	Updated Requirement Updated Guidelines
b) The system provides the ability to create patient prescription records (including all mandatory data elements in section 2.2.1.2.4 – Medications).	Prescription record provides the ability to identify if a medication was/is prescribed by both an internal and external provider, such as a specialist, including first and last name. Prescriptions may be new, or may be a record of a past prescription.	M	P	
c) Provides the ability to prescribe/add a prescription for a drug not in the out-of-box drugs list (e.g. for a compound script).	The system must also have the capability to add the drug to the medications list for the patient.	M	P	
d) Supports creation of user - defined medication list.	EMR Offering to allow creation of the user’s predefined list based on provider or condition. This supports workflow time-saving.	M	P	

Requirement	Guidelines	M/W	Status	Discussion/Comments
e) The system provides the ability for a provider to print a prescription for a patient.	<p>Printed prescription must be able to include:</p> <ul style="list-style-type: none"> ▪ provider information (name, address, phone number) ▪ patient information.(name, address, phone number) ▪ name of medication ▪ strength and strength unit, ▪ form ▪ dosage ▪ frequency, ▪ repeats, ▪ quantity and/or duration, ▪ start date, ▪ notes to pharmacist <p>It is acceptable that prescriptions are printed to a standard 8.5 x 11 sheet of paper.</p> <p>If prescription spans multiple pages, all demographic info and signatures must be repeated.</p> <p>Multiple prescriptions can be printed on a single form.</p> <p>The System must identify user who printed the prescription (e.g. Prescription printed by office staff on behalf of the provider). Accessing the audit log for this information is not an acceptable solution.</p>	M	U	Updated Guidelines
f) Performs drug-to-drug interaction checking: <ul style="list-style-type: none"> ▪ indicating severity; ▪ allowing override; and ▪ using a drug interaction database with Canadian drug codes <p>This decision support tool must be a publicly available, commercial off-the-shelf (COTS) database.</p>	<p>For this requirement to be met a drug interaction database that is current must be used.</p>	M	P	
g) Performs drug-to-allergy and drug-to-intolerance interaction checking: <ul style="list-style-type: none"> ▪ indicating severity; ▪ allowing override; and ▪ using an interaction database with Canadian drug codes 	<p>This decision support tool must be a publicly available, commercial off-the-shelf (COTS) database.</p>	M	U	Updated Requirement

Requirement	Guidelines	M/W	Status	Discussion/Comments
h) Performs expanded drug interaction review.	One or more of: <ul style="list-style-type: none"> ▪ drug / condition interactions, ▪ drug / lab interactions, ▪ recommended dosing, ▪ therapeutic alternatives 	W	P	
i) Provides a view of the current medication treatment plan, allowing the ability to change the view of medications between Current, Past, and All.	Purpose of this requirement is to assist providers in organizing the view of medication information for a particular patient. To maintain an accurate view of a patient's medication treatment plan, the ability to display current medications, rather than a chronological list of medication prescribing activities is essential. Current medications and historical medications do not have to be separate screens, as long as the current medications are grouped, displayed and identified as current. Provide views for current and past treatment plans showing drug name, and prescription date at a minimum. The CPSO medical records policy requires the ability to display at a minimum a list of the chronic medications in the patient's treatment plan.	M	U	Updated Requirement Updated Guideline Updated Scoring from W to M
j) Presents a patient's medication dosage information over time for a user-selected medication. At a minimum, medication name, dosage, and start date must be displayed. User must be able to select any medication in the patient's medication list. Information must be printable.	Printed information must include all data elements referenced in the requirement.	M	P	
k) Provides the ability for a user to view the date of the last update to the drug database.	At a minimum, date of last update information must be viewable from within the medication module of the EMR (e.g. from a menu item accessible from the medications module). It is strongly recommended this date is included within a centralized source of dates and licensing information. User is not required to have administrative permissions to view date of last update.	M	N	

Requirement	Guidelines	M/W	Status	Discussion/Comments
l) Provides updates to the EMR drug database at a minimum frequency of every two months.	In order to pass this requirement, EMR vendor must provide documentation to describe how the system will be updated with up-to-date drug information. It is acceptable for vendors to notify and provide access to updates for customers to update their on-site systems.	M	N	
m) EMR provides options to manage medication alerting for drug-drug interactions at the provider level.	Options may include: a) The ability to set the threshold for the display of medication alerts at the user (provider) level. b) After the first time a warning is presented to a user, the user should be provided the option to default to “managed” that particular warning in subsequent viewings. If a previously managed alert does not display, in the situation where information in the interaction database or the condition of the patient is updated, alerts previously defaulted to “managed” will retrigger.	M	N	
n) EMR provides options to manage medication alerting for drug-drug interactions at the organization level.	The ability to set the threshold for the display of medication alerts at organization level. If a previously managed alert does not display, in the situation where information in the interaction database or the condition of the patient is updated, alerts previously defaulted to “managed” will retrigger.	W	N	
o) EMR provides options to manage medication alerting for drug-drug interactions at the per patient/per provider level.	The ability to set the display of medication alerts at the per patient/per provider level. If a previously managed alert does not display, in the situation where information in the interaction database or the condition of the patient is updated, alerts previously defaulted to “managed” will retrigger.	W	N	
p) Provide the ability to capture a refill quantity or duration (days supply) which differs from the first dispensing.	To support more complex prescription writing. Example. Metoprolol 25 mg T, 2 Tabs by mouth twice daily #120, Refill #240 or 60 days x 4	M	N	This is aligning with e-Prescribing requirements.

2.1.5 LAB TEST MANAGEMENT

For the purposes of this section, the following terms are defined:

Lab Report means a response from one laboratory at one date/time concerning one patient. A Lab Report may contain several Lab Results.

Test Code means each Lab Result will have a Test Code that defines the type of test (e.g. platelet count vs. glucose).

Lab Result means a single result of a single laboratory test.

See section 2.4.2 for Commercial Laboratory interface requirements.

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Provides a visually distinct method of indicating a new Lab Report to the ordering provider through a work queue and the patient chart.	Other authorized users must see the new Lab Report in patient's chart.	M	U	Updated Requirement
b) EMR must provide a visually distinct indication of abnormal laboratory reports through a work queue and the patient chart.	Each entry point into a lab should provide a visually distinct way to identify abnormal reports. <ul style="list-style-type: none"> ▪ Lab reports must display an 'abnormal' flag without opening the actual result ▪ Lab reports need to be "sort able" so after being sorted, abnormal lab reports appear at the top of the list 	M	U	Updated Requirement Updated Guidelines
c) Clearly identifies which Lab Result(s) within a Lab Report are abnormal.		M	P	
d) Records Lab Result values and normative range values as separate data fields (refer to Section 2.1.2.1.2.5 – Laboratory Results).		M	P	
e) Graphically presents Lab Results and normal reference ranges over time from a user-selected Test Code. Graph must show: Test Codes (or Test Name), Lab Results, Normal Reference Ranges, and Test Dates. Scales must be appropriate to the data. Graph must be printable.	Printed graph must include all data elements referenced in the requirement. If available, the Test Date should be the Collection Date.	M	P	
f) In a table format, presents Lab Results over time from a user-selected Test Code. Table must show: Test Code(s), Lab Results, Test Dates. Table must be printable.	If available, the Test Date should be the Collection Date.	W	P	

Requirement	Guidelines	M/W	Status	Discussion/Comments
g) Displays, as data points, user-selected patient medications or other interventions directly on the graph identified in requirement (e) in this section.	The use of mouse hovering or tool tips does not meet the requirement. Printed graph must include all data elements referenced in the requirement.	W	P	
h) Prints lab summaries and explanations for patients in lay terms, or in language that is easy for the patient to understand.	A lab summary is a printed summary of Lab Results in tabular or graphical format, grouped by Test Code. An explanation can be provided via the provider appending notes through the system, or via templates that are specific to the Test Codes on the lab summary.	W	P	
i) Automatically populates and prints the demographic information for patient and provider in the appropriate fields on the Ontario Lab Requisition Form.	Standard laboratory requisition form may be updated at MOHLTC discretion. Current form available at: http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/GetFileAttach/014-4422-84~1/\$File/4422-84.pdf	M	P	
j) Supports scanning of Lab Reports into the EMR with the ability to indicate the Lab Reports with abnormal results.		M	P	
k) Supports free form text notes that are tied to each Lab Report.	These are notes added by the physician.	M	U	Updated Requirement
l) Capable of reconciling Lab Results with orders so that outstanding results can be identified.	User must be able to simultaneously view and compare the requested and received lists. Reconciliation may be automatic, manual, or a combination of both. Some lab orders may exist without matched results (i.e. patient did not go to a lab). The system must provide the ability to remove an order from the reconciliation list, if desired.	M	U	Updated Guidelines
m) Lab Reports/Results can be associated with a specific patient record.	Relates to any lab results received by the system: <ul style="list-style-type: none"> ▪ received through an interface, ▪ scanned into the system, or ▪ manually entered reports 	M	P	
n) Incorporates functionality that allows EMR users to cross-reference Test Codes from different laboratory proprietary standards, or manually entered lab results.	Mapping of test codes may be provided by vendor, or the EMR must provide the ability for a user to perform this mapping manually. Example: User has the ability to determine that HbA1C lab results from a commercial lab (using a commercial lab code) and from a hospital lab (using a LOINC code) are equivalent tests.	M	P	
o) Test codes mapped from requirement 2.1.5 (n) include mapping to LOINC codes as specified in the OLIS Nomenclature Standard.	Refer to OLIS nomenclature standard documentation available at OHISC Standards Knowledge Management Tool (http://www.skmtportal.cred.ca/skmt.aspx).	W	P	

Requirement	Guidelines	M/W	Status	Discussion/Comments
<p>p) Provide the ability to complete the Ontario Lab Requisition Form electronically, prior to printing for the patient.</p> <ul style="list-style-type: none"> ▪ A copy of the requisition record must be maintained in the EMR, including date/time when the requisition was created. ▪ System must support checking of appropriate boxes, as well as adding text entry within the appropriate sections of the standard form. 	<p>Creation of the lab requisition from within the EMR does not require a preview of the completed form, but the requested tests must be maintained within the record.</p> <p>Clinician/Practitioner Signature is still required on completed form.</p> <p>Standard laboratory requisition form may be updated at MOHLTC discretion.</p> <p>Current form available at: http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?OpenForm&ACT=RDR&TAB=PROFILE&ENV=WWE&NO=014-4422-84.</p>	W	P	
<p>q) Allow test results to be received and associated to a patient record without requiring the creation of a requisition.</p>	<p>The lab result needs to be received and associated with a patient record without the manual or automated creation of a lab requisition.</p> <p>Some test results received by clinics do not have requisitions for various reasons (e.g. the lab was not ordered by the receiving physician such as when the family physician was cc-ed on a lab ordered by a specialist, recurring requisitions (INR q wkly x 5), requisition made by a walk-in clinic doctor, etc).</p>	M	N	
<p>r) Provide EMR users the ability to manage partial lab reports in a way that does not clutter the medical record.</p>	<p>The default view is the most recent report in the patient chart.</p> <p>The user should be able to identify that there are annotations related to any lab report, both partials and final.</p> <p>The EMR must also provide a view to any partial report along with corresponding annotations.</p>	M	N	

2.1.6 EXTERNAL DOCUMENT MANAGEMENT

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Supports a variety of referral letter templates, specific to specialty.	<p>The letter templates will:</p> <ul style="list-style-type: none"> ▪ integrate patient demographics (i.e. name, age, DOB, sex, OHN) from the EMR; ▪ be able to be edited to provide letter specific content; ▪ include provider's letterhead, referring provider's name and address; and ▪ be able to integrate clinical data from the patient record e.g. Lab Results, progress notes (encounter notes), consultation notes (received) and the addition of diagnostic images as selected by the referring provider. <p>Any letter generated from the template must be saved in its original form. (e.g. viewing a letter will display the date the letter was generated, rather than displaying the current date).</p>	M	P	
b) Able to import external documents (e.g. consult reports, discharge summaries, and other correspondence) in electronic text format to become part of the EMR. To satisfy this requirement, external documents must have data associated, as identified in section 2.2.1.2.10 – Attached Files.	<p>Copying and pasting the text from the original document into the EMR would not meet the requirement.</p> <p>Example: file format is TXT, DOC</p>	M	P	
c) Able to import external documents (e.g. consult reports, discharge summaries, and other correspondence) in scanned format to become part of the EMR. To satisfy this requirement, external documents must have data associated, as identified in section 2.2.1.2.10 – Attached Files.	<p>Example: file format is JPEG, PDF</p>	M	P	
d) EMR tracks referrals and provides a reminder if outstanding.	<p>Reminders must:</p> <ul style="list-style-type: none"> ▪ be visually distinct; ▪ be in patient record, ▪ identify referral provider; and ▪ be able to be turned off at user discretion. <p>System must maintain an exact copy of the information sent via referrals (i.e. letters, CPP printouts).</p>	M	P	

Requirement	Guidelines	M/W	Status	Discussion/Comments
e) External documents from requirements 2.1.6 (b) and 2.1.6 (c) can be associated with a specific patient record.	Relates to any documents received by the system for a patient (e.g. scanned into the system, or manually entered reports). All a patient's documents stored within the EMR must be viewable within the patient record, even if not yet viewed or signed-off by responsible provider.	M	U	Updated Guidelines

2.1.7 CUMULATIVE PATIENT PROFILE (“CPP”) REQUIREMENTS

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Displays Cumulative Patient Profile (refer to CPSO Medical Records Policy), clearly identifying the summary patient information as outlined from requirements b) through h).	Refer to with CPSO policy on Medical Records for information about CPP.	M	P	
b) Displays Current/Ongoing Problem List.		M	P	
c) Displays Past Medical and Surgical History.		M	N	
d) Displays Family History.		M	P	
e) Displays Allergies and Adverse Reactions.		M	P	
f) Displays medication summary.	Can display ongoing medication treatment plan as the default. Also can include current acute medications.	M	U	Updated Guidelines
g) Displays Risk Factors.		M	P	
h) Displays medical alerts and special needs.	Examples: needs interpreter, mobility constraints.	M	P	
i) Provide the ability to manage and update the CPP summary from the encounter data.	Examples: Provider can select which medications view displays in CPP. Provider can select which problems/diagnoses are added to the ongoing problem list. Provider can choose which data from encounter notes display on the CPP.	M	P	
j) Must be able to customize the view to manage one or more sections of the CPP to reduce clutter.	The user must be able to <ul style="list-style-type: none"> ▪ add, or remove CPP categories for display ▪ add or remove columns from within the CPP categories for display To meet this requirement, any customizations must be maintained in subsequent logins by the EMR user.	M	U	This requirement was previously part of h) and has been separated.
k) CPP can be tailored by user.	To meet this requirement, any customizations must be maintained in subsequent logins by the EMR user. Example: Resizing CPP categories to optimize data display or scrolling.	W	P	
l) CPP can be printed to a single document as a single operation.	Sections of the CPP must be clearly identifiable within the printed document. Printed document may exceed one page.	M	P	

Requirement	Guidelines	M/W	Status	Discussion/Comments
m) Provides a method of re-ordering/sorting the items in lists outlined in requirements 2.1.7 b) through h), at the user's discretion.	User must be able to order the list in any way they choose. Allowing user to sort alphabetically will not satisfy this requirement. Example: User can re-order the Ongoing Problem List by severity - so that breast cancer appears above allergic rhinitis in the user interface.	W	P	

2.1.8 REPORTING, QUERY AND COMMUNICATIONS REQUIREMENTS

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) All EMR data must be able to be produced in a hardcopy format so that individual patient records as well as practice management records can be properly filed as per the College of Physicians and Surgeons of Ontario. This function must be able to be invoked at the user's control.	In order for this requirement to be met this must be user-administered and does not require a EMR vendor to attend the process. See CPSO Medical Records Policy, Appendix A, Section 20: http://www.cpso.on.ca/uploadedFiles/policies/policies/policyitems/medical_records.pdf . Must be able to print information for a single patient record.	M	P	
b) Generates patient recall list for preventive care activities/programs as defined by the MOHLTC for applicable Physician Group agreements.	Requiring user to re-enter any information (e.g. Demographic and EMR information contained in the correct data fields) already in the system would not satisfy the requirement. Service Enhancement Codes are set by the MOHLTC. See the MOHLTC guidelines.	M	P	
c) Creates patient letters directly from recall lists described in b) in this section, without another patient lookup.	Letters must meet requirements shown in the MOHLTC Service Enhancement Codes. Letters can be produced in a batch, or individually.	M	P	
d) Generates report(s) which determine the percentages needed to submit billings for cumulative preventive care management service enhancement codes as detailed in MOHLTC Service Enhancement Codes prior to certification.	Requiring user to re-enter any information (e.g. Demographic and EMR information contained in the correct data fields) already in the system would not satisfy the requirement. See the MOHLTC guidelines.	M	P	
e) Provide a report writer which allows the user to develop Ad hoc queries and run reports.	The user must be able to create the query and run the report and does not require an EMR vendor to attend the process. Any data fields in section 2.2 satisfied by the EMR can be selected for report parameters. At a minimum, ad hoc reporting functionality should allow for selection of reported fields, and allow for filtering based on "AND", "OR", and "NOT" logic. Ad hoc query facility supports Boolean search capabilities. The tool should be user friendly. Example: Display first and last name for all patient records where sex is female AND age is greater than 50.	M	U	Updated Guidelines
f) Assists providers in consistent data entry to facilitate effective data discipline, coding and extraction (e.g. coding schemes, drop-down lists).	Spell checker is not sufficient.	W	P	

Requirement	Guidelines	M/W	Status	Discussion/Comments
g) Able to search and report on ALL text fields in EMR.	Text fields include any free-form text or notes fields. Able to search within text fields for partial matches.	M	P	
h) Able to search and report on ALL data fields in EMR.	Example: Date type Image data is not required.	M	P	
i) Able to search and report on ALL data and text fields in EMR concurrently – i.e. in a single report. Able to search within text fields for partial matches.	Image data is not required.	W	P	
j) Provides report templates for EMR data that may be modified by the user.		W	P	
k) Provides a means of access to the record of each patient by the patient's name and, if the patient has an Ontario health number, by the health number.	Based on Ontario Regulation 114/94, Section 20 (2).	M	P	
l) Report EMR usage metrics to support the EMR Adoption Program evaluation	Report informs: <ul style="list-style-type: none"> ▪ Compliance with the funding agreement – demonstrate continued usage as per funding agreement. ▪ Practice IT and Adoption program effectiveness – implementation and optimization. ▪ TSP (Transition Support Program) resource allocation. Report Sample Formats are illustrated in Section 3.1	M	N	

2.1.9 WORK QUEUE REQUIREMENTS

To meet the requirements of this section, an Offering must have one or more work queues.

A work queue (also known as an in-basket, in-box or task list) supports the management of tasks. A task must have a description, an assignee (a user or role) and a date. The work queue must provide the capability for items to be removed from the list or marked as completed.

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Supports creation of new ad hoc tasks and their assignment to other specified users.		M	P	
b) Supports creation of new ad hoc tasks and their assignment to others by role.	Example: Any nurse, any receptionist, etc.	M	P	
c) Tasks can be created, accessed, and actionable anywhere in the application.		M	P	
d) Work queue items can be linked to a patient record.	EMR must provide the ability to open the patient record in a single action. Example: can open patient record from work queue without having to perform another search for the patient	M	P	
e) Can store selected work queue tasks and status as part of a patient's medical record.	Storing this information only in this audit log is not acceptable.	M	P	
f) Work queue screens can be customized for different roles.	Work queues can be customized by roles such as Nursing, physicians, receptionists etc. Example: Re-arranging column orders, adding or removing columns, for each of the above roles.	W	P	
g) Supports automated generation of tasks and patient follow-up tasks to a work queue.	This is to emulate a "tickler" or "bring forward" system. The requirement can be met by recall tasks such as outstanding lab requests, outstanding referrals, appointment reminders etc. This requirement does not include preventive care (e.g. preventive care reminders). The requirement is not met if a user only accesses the medical chart in order to see the task.	M	P	
h) Supports classification of task priority.	Priority can be indicated by urgent, low, etc, or a priority checkbox.	M	P	

Requirement	Guidelines	M/W	Status	Discussion/Comments
i) Automatically creates a task for past-due targeted health maintenance activities and assigns it to a pre-defined work queue. The tasks must be generated by the system, not created by a user.	Running a query to generate tasks on all applicable records is acceptable. User should be able to assign/redirect tasks to a particular user or role. User should be able to turn off this functionality. See the MOHLTC guidelines.	M	P	
j) Supports free form text notes that are tied to each task.		M	P	
k) Provides the ability to associate a task with a lab Report/Result.	Lab report/result can be opened from the task. Purpose of requirement is to ensure a task is associated with the correct lab result or report. Assigned user's access to lab information must follow appropriate security permissions for that user.	W	P	
l) Provides the ability to associate a task with an external document.	Document record can be opened from the task. Purpose of requirement is to ensure a task is associated with the correct documentation. Assigned user's access to document must follow appropriate security permissions for that user. Example: document assigned to a Nurse Practitioner for follow up.	W	P	
m) Unsigned patient information must be visible in the patient chart and identified as such. A mandatory concurrent entry must be present in the physicians "inbox" for sign-off.	This applies to all patient information (ie reports) that require sign-off such as: <ul style="list-style-type: none"> ▪ Reports received through an interface ▪ Reports scanned into the system, ▪ Reports manually keyed Example: Lab reports, Hospital reports, Procedure results, Consult reports which are all reports that can be received through an interface, scanned or manually entered.	M	N	

Requirement	Guidelines	M/W	Status	Discussion/Comments
<p>n) The system supports a “sign off” function to indicate data that becomes part of the permanent patient medical record. At a minimum, sign-off should be available for:</p> <ul style="list-style-type: none"> ▪ Encounter documentation ▪ Lab reports ▪ Received (Scanned) External documentation <p>Sign-off date and reviewer identity must be visible on the patient medical record.</p>	<p>Requiring the user to search through the audit trail to view sign-off information will not satisfy this requirement.</p> <p>Examples:</p> <ul style="list-style-type: none"> ▪ When a Lab Report has been reviewed. ▪ When encounter documentation is complete. 	M	P	
<p>o) The system supports a “sign off” function for approval of trainee actions.</p>	<p>Trainee is not necessarily a physician – could be nursing student, etc.</p> <p>Example: Resident could sign off a record, but it remains open until reviewed and confirmed by supervising clinician.</p>	M	P	
<p>p) The system supports multiple “sign offs” that indicates sign-off date and identity on the patient’s chart for the physician’s using the same EMR database</p>	<p>This applies to all patient information (ie reports) that require sign-off such as:</p> <ul style="list-style-type: none"> ▪ Reports received through an interface ▪ Reports scanned into the system, ▪ Reports manually keyed <p>Sign off information must be also captured in audit log. Only 1 copy of the report is posted to the patient’s chart.</p> <p>Example: Two physicians identified on reports (e.g. ordering and cc’d physicians) where both are required to sign-off on report.</p>	M	N	
<p>q) Provide functionality from the “inbox” to allow user to re-display an item which has been signed off.</p>	<p>This applies to all patient information signed off, such as:</p> <ul style="list-style-type: none"> ▪ Reports received through an interface ▪ Reports scanned into the system, ▪ Reports manually keyed <p>In addition, provide the ability to search and review items that were signed-off on a particular date or date range per user. This is not an undo function, but rather the ability to display (return to) previously viewed patient information without requiring the user to recall patient demographic details.</p>	M	N	

2.1.10 SCHEDULING REQUIREMENTS

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Integrates with billing component to avoid duplicate patient data entry. Must transfer at least two of the elements required to complete a billing.	The two elements will typically be patient's Health Card Number (HCN) and service date.	M	P	
b) Able to open a patient medical record directly from a scheduled appointment without having to perform another search for the patient.		M	P	
c) Allows reason for visit to be recorded on appointment.	Examples: Diabetes visit. Pre-natal, Annual checkup.	M	P	
d) Supports view of multi-doctor schedule.	Must display two or more providers per screen. Appointment dates and times are synchronized on screen when scrolling.	M	P	
e) Provides ability to flag appointments as critical (visually distinct).		M	P	
f) Supports searching for next available appointment by all of the following in a single function: <ul style="list-style-type: none"> ▪ provider, ▪ day of week, ▪ time of day, and ▪ appointment type 	Must be an online function, not a report.	M	P	
g) Schedule is printable as day-sheet sorted alphabetically by patient name.		M	P	
h) Schedule is printable as day-sheet sorted chronologically.	Day-sheet should be in ascending order (i.e. Earliest time should appear at the top of the sheet).	M	P	
i) Schedule is printable as day-sheet sorted by chart number.		W	P	
j) Supports pre-configuration of schedule slots or blocks by provider.	Example: Larger blocks for full physicals, block times for drop-ins, etc.	W	P	
k) Supports planned periods of multiple appointments to a single start time.	Ad hoc double booking does not meet the requirement. Must be: <ul style="list-style-type: none"> ▪ visually distinct; ▪ preplanned and configured; and 	W	P	

Requirement	Guidelines	M/W	Status	Discussion/Comments
	<ul style="list-style-type: none"> able to search for next available slot OR overbooking occurs only after the planned period is full 			
l) Supports ad hoc double booking that is: <ul style="list-style-type: none"> visually distinct; and shows on printed schedule 	<p>Ability to book an appointment that overlaps with another appointment(s), without needing to configure the schedule.</p> <p>Examples:</p> <ul style="list-style-type: none"> Provider has multiple appointments booked for the same time slot Provider books one appointment prior to the scheduled end of another appointment 	M	P	
m) Supports schedule viewing both with and without personal patient data showing. User must be able to switch views dynamically.	<p>Acceptable to show patient name on screen without patient data.</p> <p>Cannot display patient data when hovering over appointments.</p>	M	P	
n) Supports drag and drop rescheduling.	Can be cut and paste or any other means of rescheduling without a delete and add process.	W	P	
o) Supports free form text notes that are tied to each appointment. Must be separate from the "reason" field.		W	P	
p) Supports display of the status of the patient in the clinic including: System may have pre-defined status definitions, or allow for user-defined status.	Examples: In Waiting Room, In a specific exam room, waiting for nurse, etc.	M	P	
q) Provides the ability for a provider to view and modify their schedule.		M	P	
r) Provides a view for appointment history for any given patient in the EMR. Includes both past and future appointments.		M	P	

2.1.11 BILLING REQUIREMENTS

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Processes concurrent Ontario billings models of fee-for-service, shadow partial payment billings, and Physician Group bonus codes.	See the MOHLTC guidelines.	M	P	
b) Provides basic error checking. Must alert user if duplicate Health Number entered when registering patients.	At a minimum the basic error checking to be provided for: <ul style="list-style-type: none"> ▪ Ontario Health Number in place - edits for check digit, ▪ Edits for all mandatory billing fields <ul style="list-style-type: none"> ➢ date of service, ➢ provider number, ➢ Health Number, ➢ name, ➢ DOB, ➢ sex, ➢ fee code, and fee claimed ➢ checks all dates are valid dates and in the past 	M	P	
c) Provides automated reconciliation and claim re-submission and prints reconciliation reports. Supports resubmission of rejected claims without the need to re-enter data.	The reconciliation reports can be either the entire MRO data file or include the MOHLTC defined data fields, based on their MRO record type. See the MOHLTC guidelines.	M	P	
d) EMR system is pre-loaded with current OHIP fee schedule including preventive care codes.		M	P	
e) Supports reading a Health Card through a card reader device, and looking up the patient in EMR application database. Must notify of version code discrepancies or automatically update patient record.	EMR can update other demographic data associated with the Health Card such as: name, sex, and DOB.	M	P	
f) Supports WSIB billing through MRI files.		M	P	
g) Can produce a patient billing record directly from encounter information as entered in patient medical record. Must transfer all pertinent billing data that is present in the clinical record.	Can create a claim directly from a patient encounter. Other pertinent data could be: physician information, service date, procedure code, diagnosis, location, hospital number, etc.	W	P	

Requirement	Guidelines	M/W	Status	Discussion/Comments
h) Can transfer and translate diagnostic codes for billing purposes from the EMR component.		W	P	
i) Supports manual entry of non OHIP billing transactions including: <ul style="list-style-type: none"> ▪ Direct to patient ▪ Reciprocal ▪ 3rd Party 		W	P	
j) Provides aged receivables listing: <ul style="list-style-type: none"> ▪ patient ID, service date, outstanding amount; and ▪ includes all billing types (not just OHIP). 	Any aging buckets acceptable. Can be any report to manage outstanding claims.	W	P	
k) System maintains and uses historical OHIP fee schedule for the prior year.	Prior fee schedule information may be required for resubmission purposes.	M	P	
l) Provides lookup of services and diagnoses by their codes as well as their descriptions.		M	P	
m) Forces reconcilable disposition of all scheduled appointments (i.e. provides a screen or report that lists patient appointments which have no billings). User must take some action to remove unbilled appointments from the list.	Deleting appointments does not meet the requirement.	M	P	
n) Supports direct third party billings with invoices. Able to be generated on demand.	At a minimum the third party billings with invoices must include: <ul style="list-style-type: none"> ▪ provider name, ▪ patient name or ID, ▪ payor address, ▪ service date, ▪ service, ▪ itemized amount(s) and ▪ total amount billed 	W	P	

Requirement	Guidelines	M/W	Status	Discussion/Comments
o) Supports direct third party billings with statements. Able to be generated on demand	Receipts are not sufficient. At a minimum the third party billings with statements must include: <ul style="list-style-type: none"> ▪ provider name, ▪ patient name or ID, ▪ payor address, ▪ service date, ▪ service, ▪ itemized amount(s) amount paid, and ▪ balance 	W	P	
p) Supports billing lookup by each of the following: <ul style="list-style-type: none"> • Patient Health Card Number; • patient name; and • OHIP claim # or Accounting #. 	OHIP claim # is assigned by the OHIP claims payment system. Accounting # is assigned by EMR or user to a claim.	M	P	
q) Enable updating of billing codes through OHIP fee schedule master update file as provided by Ministry of Health in Specified format.	Current file available at: http://www.health.gov.on.ca/english/providers/program/ohip/sob/schedule_master.html .	M	P	
r) Notify users of changes to billing codes per the updates in the fee schedule master. Notifications should be provided for: <ul style="list-style-type: none"> • New Effective Date for a code • New Expiration Date for a code 	Users should be made aware of changes to billing codes, and referred to billing updates as provided by MOHLTC.	W	P	
s) Provide access to OMA suggested fees for uninsured services and 3rd Party services, including HST eligibility.	OMA Suggested fees for uninsured services and 3 rd party services can be accessed from scheduling and billing modules, and the patient's medical record. Refer to the document "OMA Third Party and Uninsured Services Guide".	M	N	
t) Provide the capability of correcting a billing entry error without classifying it as a "write-off". Write-offs and errors should be associated to a reason code/reason description.	A 'write off' implies an uncollectable amount. These amounts should be coded and treated as such. An 'error' is an honest error and should be treated as such. Example: A common accounting solution would be to leave the original as is and create a reversing entry to zero out the account/error. The reversing entry would have a specific reason code indicating an error, not a write off, and be associated to the original transaction. Report(s) that show write offs and error corrections should clearly show each.	M	N	

2.1.12 SYSTEM ACCESS MANAGEMENT

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) EMR users must enter a password in order to access system functions. EMR must store passwords in an encrypted format.	Encryption applies to password managed by EMR Offering. Passwords stored and managed by the operating system are already considered encrypted and secure.	M	P	
b) EMR must support passwords that include: <ul style="list-style-type: none"> ▪ mixed case passwords; ▪ passwords of a minimum of 8 characters; ▪ alphanumeric characters; and ▪ special characters 		M	P	
c) EMR must have the following password management capabilities that can be deployed based on user discretion: <ul style="list-style-type: none"> ▪ the ability to set parameters for number of failed login attempts within a certain time period; and ▪ the ability to set time parameters for password expiry 	This applies to all passwords used by the EMR, including the operating system and all applications.	M	P	
d) EMR must be able to share patient data among providers who share the same database. Must maintain proper provider identification.	Patient data must only be shared if permitted by practice rules.	M	P	
e) Provide the capability to create roles. A role is an abstract method for assigning and managing permissions for a group of one or more users independently of individual user security permissions.	Need to be able to create new roles, with customized permissions. If EMR provides only predefined roles, this requirement is not met. Changes applied to a role means that this change is applied to all members of that role. Multiple roles can be assigned to users. For the purposes of roles-based requirements, roles are akin to group permissions in Microsoft Windows.	M	U	Updated Guidelines

Requirement	Guidelines	M/W	Status	Discussion/Comments
f) There are access controls to functions based on roles.	<p>Members of a role have access/restrictions to certain screens and capabilities in the EMR based on the functions assigned to that particular role.</p> <p>Examples:</p> <ul style="list-style-type: none"> ▪ Persons assigned the “Receptionist” role can process billing but not run financial reports. ▪ Persons assigned the “Nurses” role have read-only access to medications ▪ The system must ensure the merge functionality can be assigned to a specific user(s), user role or group. 	M	P	
g) There are access controls to data based on roles.	<p>This means that members of a role cannot access certain data, even though that role can access a function that uses the data. It gives control over what the role can access at the physical or logical record level.</p> <p>Example: Dieticians are not permitted to view psychiatric encounter notes for any patients.</p>	M	P	
h) There are access controls to functions based on user.	<p>This means that a user cannot use certain screens or capabilities of the EMR.</p> <p>Examples:</p> <ul style="list-style-type: none"> ▪ A receptionist who can process billing but not run financial reports. ▪ A nurse who can browse encounter data but cannot update it. 	M	P	
i) There are access controls to data based on user.	<p>This means that a user cannot access certain data, even though that user can access a function that uses the data. It gives control over what the user can access at the physical or logical record level.</p> <p>Examples:</p> <ul style="list-style-type: none"> ▪ A nurse who cannot see his ex-wife’s medical records. ▪ A provider who can only update her own patients. 	M	P	
j) The EMR provides different views to data for roles.	<p>Screen layout, organization, or contents can be customized for different roles.</p> <p>Example: physician, nurse practitioners, and administrative assistants</p>	W	P	
k) Clerical staff that has no permission to view clinical details can enter notes into the EMR.	<p>Notes entered against PMS data (e.g. appointments) would not meet the requirement.</p> <p>Example: Records of phone calls, transcriptions, etc.</p>	W	P	

Requirement	Guidelines	M/W	Status	Discussion/Comments
l) EMR must ensure the encryption of: <ul style="list-style-type: none"> ▪ Passwords transmitted over a WAN. ▪ Data transported across private or public networks. ▪ Data stored off-line (backups, archives, etc. 	In order to pass this requirement, EMR vendor must provide documentation to demonstrate how encryption is managed in each of the cases.	M	P	

2.1.13 IMMUNIZATION MANAGEMENT

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Provides the capability to print an immunization summary for a patient.	<p>Immunization Summary is meant to reproduce the information which would be on the Ontario Immunization Record (Yellow Card) and should be consistent with the content.</p> <p>Immunization Summary includes:</p> <ul style="list-style-type: none"> ▪ Patient Name ▪ Patient Date of Birth ▪ Patient Ontario Health Card Number ▪ Complete list of Patient's Immunizations ▪ Date administered ▪ Name of Primary Physician 	M	N	
b) Immunization data entered through EMR data fields is integrated across the EMR Offering.	<p>User should not be forced to re-enter data.</p> <p>Requiring user to re-enter immunization data in order to maintain Preventive Care), Chronic Disease Management, Reporting of Diabetes or any other current requirements involving immunization data is not an acceptable solution.</p>	M	N	

2.2 DATA REQUIREMENTS

This section contains the data requirements for an Offering.

2.2.1 DISCRETE DATA ELEMENTS

This section details the minimum data requirements.

Each discrete data element listed below is a separate data element included in the Offering for **storing** the specified data. In other words, these elements do not necessarily need to appear in the User Interface when not clinically informative.

- An Offering that can derive the data element upon export would meet the requirement.
- A general-purpose notes field does not fulfill the requirement.

2.2.1.1 PATIENT DEMOGRAPHIC DATA

2.2.1.1.1 PATIENT IDENTIFICATION

Data Required	Guidelines	M/W	Status	Discussion/Comments
a) Name Prefix/Title	Examples: Mr, Mrs, Miss	M	P	
b) Last Name		M	P	
c) First Name		M	P	
d) Name Suffix	Examples: Jr, Sr., III	W	P	
e) Middle Name	Middle name	W	U	Updated Requirement Updated "Second Name" to "Middle Name"
f) Gender		M	P	
g) Date of Birth		M	P	
h) Health Card Number	The Ontario Health Number	M	P	
i) Health Card Version Code	Part of Ontario Health Number	M	P	

Data Required	Guidelines	M/W	Status	Discussion/Comments
j) Health Card Expiry Date		M	P	
k) Health Card Province		M	P	
l) Chart Number	Number used by the medical practice to identify the associated hardcopy chart	M	P	
m) Preferred Official Language	Official languages are English and French.	W	P	
n) Preferred Spoken Language	Indicates in which language a person prefers to communicate.	M	U	Updated Guidelines
o) Person Status	Refers to whether the patient is active, inactive, deceased or other values as supported by the practice.	M	U	Updated Guidelines
p) Person Status Date	Date associated with person status.	M	P	Updated Scoring from W to M
q) Enrolment Status	Indicator for the enrolment status of a rostered patient.	M	P	
r) Enrolment Date	Date the rostered patient was enrolled.	M	P	Updated Scoring from W to M
s) Enrolment Termination Date	Date the enrolled patient was terminated from the roster.	M	P	Updated Scoring from W to M
t) Enrolment Termination Reason	Termination Reason must correspond to termination reasons defined by MOHLTC. Refer to MOHLTC Fact Sheet Fall 2005, Enrolment Report Patient Details Termination Reasons: Enrolment Termination Codes.	W	P	
u) Primary Physician	Primary Physician assigned to a patient record.	M	P	
v) Notes	Additional Notes about the patient.	W	P	
w) Social Insurance Number (SIN)		W	N	

2.2.1.1.2 PATIENT CONTACT INFORMATION

Data Required	Guidelines	M/W	Status	Discussion/Comments
a) Address Type	Examples: business, mailing, residence.	W	P	
b) Street Address		M	P	
c) City/Municipality		M	P	
d) Province/State		M	P	
e) Country		W	P	
f) Postal/Zip Code	Example: A9A 9A9.	M	P	
g) Telephone Type	Examples: business, mobile, residence.	M	P	
h) Telephone Number		M	P	
i) Phone Extension		M	P	
j) E-Mail Address		M	P	

2.2.1.1.3 PATIENT ALTERNATIVE CONTACT

Data Required	Guidelines	M/W	Status	Discussion/Comments
a) First Name		M	P	
b) Last Name		M	P	
c) Contact Purpose/Role	<p>A contact can be one or more of the suggested following values:</p> <ul style="list-style-type: none"> ▪ Emergency Contact , ▪ Next of Kin, ▪ Administrative Staff , ▪ Care Giver, ▪ Power of Attorney, ▪ Insurance ▪ Guarantor ▪ Substitute Decision Maker <p>Any other contact purpose values are accepted.</p> <p>At a minimum, the SDM and Emergency contact must be among the predefined values.</p> <p>The system must allow contact to have multiple Purpose/Role</p> <p>Example: A contact is selected to be both an Emergency Contact and Next of Kin</p>	M	U	Updated Requirement Updated Guidelines
d) Residence Phone		M	P	
e) Cell Phone		M	P	
f) Work Phone		M	P	
g) Work Phone Extension		M	P	
h) Email address		M	P	
i) Contact Note		M	P	

2.2.1.2 PATIENT MEDICAL DATA**2.2.1.2.1 ONGOING/CURRENT HEALTH CONDITIONS/PROBLEM LIST**

Data Required	Guidelines	M/W	Status	Discussion/Comments
a) Date of Onset	System should allow for an exact date, or an approximate date or life stage, if the exact date is unknown	M	P	
b) Life Stage	One of : <ul style="list-style-type: none"> • Newborn: Birth – 28 days • Infant: 29 days < 2 years • Child: 2 years – 15 years • Adolescent: 16 – 17 • Adult: >=18 years 	M	N	
c) Resolution Date	System should allow for an exact date, or an approximate date, if the exact date is unknown.	M	P	
d) Diagnosis		M	P	
e) Problem Description	A description of the problem reported	M	P	
f) Problem Status		M	P	
g) Notes	Field for the provider to capture additional notes about a condition.	M	P	

2.2.1.2.2 PAST MEDICAL AND SURGICAL HISTORY

Data Required	Guidelines	M/W	Status	Discussion/Comments
a) Date of Onset/Occurrence/Incident	<p>System should allow for an exact date, an approximate date, if the exact date is unknown.</p> <p>The system should accommodate:</p> <ul style="list-style-type: none"> ▪ Full Date ▪ Partial date (mm/yyyy or yyyy) 	M	U	Updated Guidelines
b) Life Stage	<p>Life Stage applies to both diagnoses/problems and procedures / interventions.</p> <p>If the dates of onset or procedure date is unknown, then can select one of:</p> <ul style="list-style-type: none"> ▪ Newborn: Birth – 28 days ▪ Infant: 29 days < 2 years ▪ Child: 2 years – 15 years ▪ Adolescent: 16 – 17 ▪ Adult: >=18 years <p>Life Stage Notes applies to both diagnosis/problems and procedures/interventions.</p>	M	N	
c) Date Resolved/Controlled	System should allow for an exact date or an approximate date if the exact date is unknown.	M	P	
d) Diagnosis /Problem		M	P	
e) Procedure Date	System should allow for an exact date or an approximate date if the exact date is unknown.	M	P	Changed Scoring from Weighted to Mandatory.
f) Procedure /Intervention		M	P	
g) Notes	<p>Field to capture additional notes about past medical and surgical history.</p> <p>Notes apply to both problems/diagnosis <i>and</i> procedures /interventions</p>	M	U	Updated Guidelines

2.2.1.2.3 IMMUNIZATIONS

Data Required	Guidelines	M/W	Status	Discussion/Comments
a) Immunization Date	The date the immunization occurred. This is not the date that the entry was created in the EMR, but the actual date the immunization was provided to the patient.	M	P	
b) Immunization Refused Date	The date the immunization was refused.	M	P	
c) Immunization Name	Immunization Name is based on the brand name and can be associated with a DIN as provided by EMR's Drug Database.	M	P	
d) Immunization Type	Immunization Type is the Immunogen component of the Vaccine Type as prescribed in the 'Canadian Immunization Guide'. Refer to Appendix B: <i>Table 8.1 – Canadian Immunization Guide</i>	M	N	
e) Immunization Refused Indicator	Identifies whether an immunization was refused.	M	P	
f) Notes	Field to allow provider to enter additional information about patient immunization.	M	P	
g) Manufacturer		M	P	
h) Lot #	The product lot number corresponding to the administered immunization.	M	P	
i) Route		M	P	
j) Site	The anatomical site of the vaccination.	M	P	
k) Dose		M	P	
l) Instructions		W	P	

2.2.1.2.4 MEDICATIONS

Data Required	Guidelines	M/W	Status	Discussion/Comments
a) Start Date	The start date of the current prescription. The EMR Offering should allow inserting past dates. The EMR Offering should allow for partial dates.	M	P	
b) Prescription Written Date	The written date of the current prescription. This is not the date the prescription was added/inserted into the EMR. The EMR Offering should allow inserting past dates. The EMR Offering should allow for partial dates.	M	U	Updated Guidelines
c) Medication Name	The name assigned to a drug.	M	U	Updated Guidelines Definition has been updated to align with MR2009 Drug Name.
d) Dosage	Dose amount and unit of measure of medication intended to be consumed during a single administration. Unit of Measure is specified when not implicit from the drug form (e.g. puff, inhalation, drops, etc.).	M	U	Updated Guidelines
e) Drug Strength	The quantity of the ingredient in a drug. This is represented/measured in various forms/units including: mg, mg/vol, %, etc. Unit of Measure is specified when not implicit from the drug form (e.g. puff, inhalation, drops, etc.).	M	U	Updated Guidelines
f) Frequency		M	P	
g) Number of Refills/Repeats	Subsequent fills that follow the initial prescription.	M	U	Updated Guidelines
h) Quantity	The quantity of medication to be dispensed for the first administration of the prescription.	M	U	Updated Guidelines

Data Required	Guidelines	M/W	Status	Discussion/Comments
i) Refill Quantity	The quantity of medication to be dispensed for the refills of the prescription. Supports the use cases when refill quantity differs from initial dispense.	M	N	
j) Duration	The duration of medication to be dispensed for the first administration of the prescription.	M	U	Updated Guidelines
k) Refill Duration	The duration of medication to be dispensed for the refills of the prescription. Supports the use cases when refill duration differs from initial dispense. Example: The number of days that each refill is expected to last.	M	N	
l) Drug Form	Indicates the form in which the drug product must be, or has been manufactured or custom prepared.	M	U	Updated Guideline Definition has been updated to align with MR2009 Drug Form.
m) Route	This is the means by which the dispensed drug is to be administered to the patient. Route of administration, as prescribed in the source system.	M	U	Updated Guidelines Definition has been updated to align with MR2009 Route Code.
n) Long-Term Medication	Indicator for Long-Term Medication.	M	P	
o) Treatment Type	Describes the categorization of the treatment type required by the MR2009 message. The EMR Offering needs to support prescription status in future e-Prescribing messages. Valid values are: <ul style="list-style-type: none"> ▪ CHRON – Continuous/chronic ▪ ACU – Acute ▪ ONET – One Time ▪ PRN Long-term – As needed ▪ PRN Short-term – As needed 	M	N	
p) Past Medication Indicator	Indicator for discontinuation of medication from the treatment plan.	M	P	

Data Required	Guidelines	M/W	Status	Discussion/Comments
q) Prescription Status	<p>Describes the lifecycle of the prescription as required by the MR2009 message. Valid statuses are:</p> <ul style="list-style-type: none"> ▪ New ▪ Active ▪ Suspended ▪ Aborted ▪ Completed ▪ Obsolete ▪ Nullified <p>The EMR Offering needs to support prescription status in future e-Prescribing messages.</p>	M	N	
r) Patient Compliance	Indicate whether the patient is compliant with the medication as prescribed.	M	P	
s) Prescription Instructions	<p>Field to capture additional notes the provider may attach to the prescription record to communicate with the pharmacist.</p> <p>Example: "Stop Prescription x, and replace with current prescription".</p>	M	P	
t) Prescribed By Name	The First Name and the Last Name of the prescriber.	M	P	
u) Prescribed By Identifier	OHIP Physician number of the prescriber.	M	P	
v) Drug Code	The Representative Drug Identifier Number.	M	U	Previously "Drug Identification Number (DIN)". Data element name updated to align with MR2009 Drug Code.
w) Notes	Purpose of requirement is to allow the EMR user to add notes about the prescription for reference that are not visible on the written prescription.	M	P	

Data Required	Guidelines	M/W	Status	Discussion/Comments
x) Non Authoritative Indicator	<p>If true, indicates that the electronically stored (and retrieved) prescription is non-authoritative. I.e. A paper copy must be viewed before the prescription can be dispensed.</p> <p>Valid values:</p> <ul style="list-style-type: none"> ▪ Yes (Y) or ▪ No (N) <p>Whether or not an electronically retrieved prescription is authoritative all by itself is a notion that must be explicitly stated. Thus, this field cannot be 'Null'.</p>	M	N	
y) Prescription ID	A unique ID to identify a prescription.	M	N	
z) Prior Prescription Reference	A reference to a previous prescription which the current prescription replaces.	M	N	
aa) Dispense Interval	<p>Indicates a minimum amount of time that must occur between dispenses.</p> <p>EMR to populate this field either as entered by the prescriber or calculated by the system.</p> <p>Though specified as 'AN', the number (e.g. 23) and the unit of time (e.g. d=days) are interpreted separately.</p>	M	N	
ab) Drug Description	<p>A free form textual description of a drug.</p> <p>This usually is only populated for custom compounds, providing instructions on the composition and creation of the compound.</p> <p>This can also be used for complex prescriptions that are not supported by the discreet data elements or data export.</p>	M	N	
ac) Substitution Not Allowed	<p>A prescriber's instruction that a specific prescribed product be dispensed as is, or not.</p> <p>Valid Values:</p> <ul style="list-style-type: none"> ▪ Yes (Y) – substitution not allowed or ▪ No (N) - substitution allowed <p>Whether or not substitution is allowed is a notion that must be explicitly stated. Thus, this field cannot be 'Null'.</p>	M	N	

Data Required	Guidelines	M/W	Status	Discussion/Comments
ad) Targeted Dispensing Facility - Service Location Address	Identifies the physical location of a dispensing service location and also allows for the location to be contacted.	M	N	
ae) Targeted Dispensing Facility - Service Location Name	The name assigned to the dispensing service location. Used for human communication, and for cross-checking of location Id	M	N	
af) Targeted Dispensing Facility - Service Location Identifier	Unique identifier for a dispensing location. Allows for lookup and retrieval of detailed information about a specific service location. Also ensures unique identification of service location.	M	N	
ag) To Be Picked Up When	The earliest date and time on which the dispense is expected to be picked up. Specified as DateTime (Date + Time)	M	N	
ah) Problem Code	A coded form of the problem that is the reason for the current prescription required by the MR2009 message Allows cross-checking the use of a therapy against its indication. Also allows analysis of best practices, etc. The EMR Offering needs to support problem code in the future for e-Prescribing messages	M	N	MR2009 uses the 'DiagnosisValue' or 'SymptomValue' code tables (codes drawn from ICD10-CA or SNOMED-CT classification systems).
ai) Protocol Identifier	A unique identifier for a specific protocol or guideline which the prescription has been written in accordance with. Enables the communication of a reference to a protocol, study or guideline id, specific to the jurisdiction.	M	N	

2.2.1.2.5 LABORATORY RESULTS

Data Required	Guidelines	M/W	Status	Discussion/Comments
a) Collection Date/Time	Date & Time the specimen was collected.	M	P	
b) Laboratory Test Name	Test name as reported by laboratory.	M	P	
c) Test Description/Name	Test Name or description as entered by EMR or system user.	M	P	
d) Test Result Value	Test results may be numeric or text, depending on the requested text.	M	P	
e) Result Unit of Measure	Unit of measure as supplied by the lab associated with the test result value.	M	P	
f) Reference Range Low	Numeric Reference Range limit, when available.	M	P	
g) Reference Range High	Numeric Reference Range limit, when available.	M	P	
h) Reference Range (Text-based)	When lab-provided reference range cannot be depicted numerically.	M	P	
i) Abnormal Indicator	Flag to indicate a test result is deemed normal, abnormal, or unknown.	M	P	
j) Notes from Lab		M	P	
k) Physician Notes	Field to capture additional physician notes about lab result.	M	P	
l) Laboratory Name	Lab responsible for issuing the test result.	M	P	
m) Test Code	Test Code Reported by the Laboratory.	M	P	
n) Accession Number	Accession number issued by lab for the test results or report.	M	P	
o) Lab Requisition Date/Time	Date & Time the lab test was ordered.	M	P	
p) Date/Time results entered in EMR	Date & Time the lab result is received on the EMR.	W	P	
q) Reviewer Identity	Provider who signs off on lab result.	M	P	
r) Review Date/Time	Date & Time lab result was reviewed (signed off)	M	P	
s) Ordering Practitioner	Practitioner who initially ordered a lab result.	M	N	
t) Result Copies To	Practitioner(s) who is (are) copied on a lab result.	M	N	
u) OLIS Test Result Status	The status of the Test Result as provided by OLIS.	M	N	

2.2.1.2.6 ALLERGIES AND ADVERSE REACTIONS

Data Required	Guidelines	M/W	Status	Discussion/Comments
a) Offending Agent	Text description of offending agent, whether drug or non-drug.	M	P	
b) Offending Agent Drug Code	Representative DIN of the offending agent (if drug)	M	P	Updated Scoring from Weighted to Mandatory.
c) Start Date	Start Date of Allergy or Adverse Reaction Allow for an exact date or an approximate date when the exact date is unknown: <ul style="list-style-type: none"> ▪ Full Date ▪ Partial date (mm/yyyy or yyyy) 	M	P	
d) Life stage	If dates are unknown, then can select one of : <ul style="list-style-type: none"> ▪ Newborn: Birth – 28 days ▪ Infant: 29 days < 2 years ▪ Child: 2 years – 15 years ▪ Adolescent: 16 – 17 ▪ Adult: >=18 years 	M	N	
e) Severity	Severity of the allergy or adverse reaction as identified by the provider.	M	P	
f) Reaction Type	Identifies reaction as an allergy or adverse reaction (includes intolerance and side effects).	W	U	Updated Guidelines
g) Reaction Description		M	P	
h) Recorded Date	Date the allergy/adverse reaction is recorded in the EMR.	W	P	
i) Notes	Field to capture additional notes about an allergy or adverse reaction.	M	P	

2.2.1.2.7 RISK FACTORS

Data Required	Guidelines	M/W	Status	Discussion/Comments
a) Risk Factor	Examples: nicotine, alcohol, asbestos, etc.	M	P	
b) Exposure Details	Specific agent details of the exposure Example: 2 packs per day; 10 bottles of wine per week, etc	M	P	
c) Age at Onset		W	P	
d) Start Date	Allow for an exact date or an approximate date when the exact date is unknown: <ul style="list-style-type: none"> ▪ Full Date ▪ Partial date (mm/yyyy or yyyy) 	W	P	
e) End Date		W	P	
f) Life Stage	If the age/dates are unknown, then can select one of : <ul style="list-style-type: none"> ▪ Newborn: Birth – 28 days ▪ Infant: 29 days < 2 years ▪ Child: 2 years – 15 years ▪ Adolescent: 16 – 17 ▪ Adult: >=18 years 	M	N	
g) Notes	Field to capture additional notes about a risk factor.	M	P	

2.2.1.2.8 ALERTS AND SPECIAL NEEDS

Data Required	Guidelines	M/W	Status	Discussion/Comments
a) Date Active	Start Date of medical alert/special need Allow for an exact date or an approximate date when the exact date is unknown: <ul style="list-style-type: none"> ▪ Full Date ▪ Partial date (mm/yyyy or yyyy) 	W	P	
b) End Date		W	P	
c) Alert Description		M	P	
d) Notes	Field to capture additional notes about an alert or special need.	M	P	

2.2.1.2.9 FAMILY MEDICAL HISTORY

Data Required	Guidelines	M/W	Status	Discussion/Comments
a) Start Date	Start Date of family patient's condition. Allow for an exact date or an approximate date when the exact date is unknown: <ul style="list-style-type: none"> ▪ Full Date ▪ Partial date (mm/yyyy or yyyy) 	W	P	
b) Age at Onset		W	P	
c) Life Stage	If the age/dates are unknown, then can select one of : <ul style="list-style-type: none"> ▪ Newborn: Birth – 28 days ▪ Infant: 29 days < 2 years ▪ Child: 2 years – 15 years ▪ Adolescent: 16 – 17 ▪ Adult: >=18 years 	M	N	
d) Diagnosis / Problem Description	A description that identifies the family history item or a problem.	M	P	
e) Treatment	Type or nature of the treatment delivered.	M	P	
f) Relationship	Relationship of the family member to the patient.	M	P	
g) Notes	Field to capture additional notes about family history.	M	P	

2.2.1.2.10 ATTACHED FILES

Data Required	Guidelines	M/W	Status	Discussion/Comments
a) Receipt Date	Date File Received by the medical practice and should allow backdating.	M	U	Updated Guidelines
b) Creation Date	Date File Created in the source system.	M	U	Updated Guidelines
c) Source	Origin of attachment. Examples: Specialist, Hospital, Clinic, Physician Name	M	P	
d) Report Class	Classification of attachments.	M	P	
e) File type		W	P	
f) Notes	Field to capture additional notes about an attached file.	M	P	
g) Responsible Provider	Owner of the attached file.	W	P	
h) Reviewer Identity	Provider who signs off on attached file.	M	P	
i) Review Date/Time	Date & Time attached file was reviewed.	M	P	
j) Report Sub-Class	Sub-classification of an attachment. Example: If report class is Diagnostic Imaging Report, sub-class may be Chest X-ray.	M	N	
k) Sending Facility ID	Unique ID for a sending facility.	M	N	
l) Sending Facility Report Number	Unique ID for a report at the sending facility.	M	N	
m) Accompanying Sub-Class	Accompanying Sub-Class will be provided as received by the sending facility for CRT / DI reports only.	M	N	
n) Accompanying Mnemonic	An Accompanying Mnemonic is an abbreviated term used by the sending facility to describe procedures/studies for CRT/DI reports.	M	N	
o) Accompanying Description	Description provides an explanation for the Accompanying Mnemonic (procedure mnemonics) as provided by sending facility for CRT / DI reports.	M	N	
p) Observation Date/Time	Date and time of the associated observation(s) for a report.	M	N	
q) HRM Result Status	Status of message from Hospital Report Manager.	M	N	

2.2.1.2.11 PHYSICIAN INFORMATION

Data Required	Guidelines	M/W	Status	Discussion/Comments
a) Physician First Name		M	P	
b) Physician Last Name		M	P	
c) Role	Healthcare Practitioner Type Reference: CC e-Health Standards Code Tables to Support the Request and Clinical Care Data Set v1.0	W	U	Updated Guidelines
d) Physician ID	Physician's OHIP billing number.	M	P	
e) CPSO Number	Physician's CPSO (College of Physicians and Surgeons of Ontario) registration number.	M	N	

2.2.2 DATA MANAGEMENT

Requirement	Guidelines	M/W	Status	Discussion/Comments
<p>a) There will be a complete audit trail of medical records in accordance with the CPSO requirements.</p> <p>Each patient record in the system must have a distinct audit trail.</p> <p>All activity (i.e. data viewed, updated, deleted) against medical records maintained by the EMR must be captured in the audit trail.</p> <p>Data must not be altered, removed or deleted, just marked as altered, removed or deleted.</p> <p>Audit trail includes who accessed the data and when the data was accessed.</p> <p>Audit trail must be printable.</p>	<p>Printed audit trail cannot contain system references that are meaningless outside of the system context.</p> <p>Audit Trail functionality is mandatory per CPSO requirements.</p> <p>See CPSO Medical Records Policy, Appendix A, Section 20: http://www.cpso.on.ca/uploadedFiles/policies/policies/policyitems/medical_records.pdf.</p>	M	P	
<p>b) Each record in the EMR will include a date/time stamp and user ID for the update of that record.</p>	<p>Can be visible either on the chart or through an audit trail.</p>	M	P	
<p>c) EMR must retain medical records information.</p>	<p>It is recommended to maintain records for a minimum of 15 years.</p> <p>See CPSO Medical Records Policy: http://www.cpso.on.ca/uploadedFiles/policies/policies/policyitems/medical_records.pdf.</p>	M	P	
<p>d) EMR must retain billing transaction details for at least 7 years.</p>	<p>This standard may be updated by MOHLTC.</p>	M	P	
<p>e) The EMR application must have audit trail for all add/change/delete operations on all EMR system (non-medical record) data, including permission metadata.</p> <p>Data must not be altered, removed or deleted, just marked as altered, removed or deleted.</p> <p>Updated information retains original data entry as well.</p>	<p>Examples:</p> <p>Creation of a new role, Creation of a new system user, Update of a users permissions, Creation of a new patient record.</p>	M	P	
<p>f) The Offering must not allow for the capability to disable the audit trail. This applies to medical and non-medical records within Offering.</p>	<p>This functionality is mandatory per CPSO regulations (see CPSO Medical Records Policy)</p>	M	N	

2.3 DATA PORTABILITY REQUIREMENTS

This section consists of the data portability requirements for an Offering.

See **Appendix B** for data portability requirements for EMR Offerings.

2.4 INTERFACE REQUIREMENTS

The vendor will be required to interface their Offering to other related systems.

Interface requirements are specified below and must be in place when an Offering is submitted for validation. New interfaces may be specified in the future and certified Offerings will, at a minimum, be subject to the interface owner's change management process.

EMR Vendors are required under the EMR Certification Agreement (see in particular the Covenants Representations & Warranties applicable to a certified Offering) to stay current with new releases of interface specifications. From time to time, interface owners may issue new or modified specifications for these interfaces and EMR vendors will be required to bring their Offerings into compliance with the new interface specification.

Technical details of interfaces (such as message structure, frequency of update, push or pull) are available from interface owners. References to various web-site links are provided for vendors, wherever possible. OntarioMD has made reasonable efforts to direct EMR vendors to supporting information available through other organizations' web-sites. However, OntarioMD shall not be responsible for the accuracy of any web-site links or for any information contained on such web-sites. EMR vendors must contact the appropriate party to access the required information if links to these web sites are no longer available or if there is any doubt about accuracy.

The following table summarizes the vendor requirements for interfaces.

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Claims and Incentive Payments.	Refer to: http://www.health.gov.on.ca/english/providers/pub/ohip/tech_specific/tech_specific_mn.htm	M	P	
b) Commercial Laboratories – must support one of the following: <ul style="list-style-type: none"> • Canadian Medical Laboratories. • Gamma-Dynacare Laboratories. • LifeLabs (formerly MDS). 	For this requirement to be met the vendor must obtain a letter certifying the successful interface. The letter must be dated within the previous twelve (12) months.	M	P	
c) Commercial Laboratories – supports more than one of the following: <ul style="list-style-type: none"> ▪ Canadian Medical Laboratories. ▪ Gamma-Dynacare Laboratories. ▪ LifeLabs (formerly MDS). 	For this requirement to be met the vendor must obtain a letter certifying the successful interface. The letter must be dated within the previous twelve (12) months.	W	P	

Requirement	Guidelines	M/W	Status	Discussion/Comments
d) Health Card Validation – EMR supports one or more of the following: <ul style="list-style-type: none"> ▪ OBEC (Overnight Batch Eligibility Checking). ▪ HCR (Health Card Reader). 	Refer to MOHLTC Health Card Validation Manual.	M	P	Merged Requirements
e) Ontario Laboratory Information System (OLIS) – support receipt of lab results through the OLIS web service.	Refer to Appendix E: EMR-OLIS Interface Requirements for integration requirements	M	N	
f) Hospital Report Manager interface and functionalities.	Refer to Appendix F – EMR – Hospital Report Manager Requirements	M	N	

2.4.1 CLAIMS AND INCENTIVE PAYMENTS

The MOHLTC Claims system processes provider claims, creates payments and provides error reports and remittance advice back to providers. Vendors are required to implement the current interface specification and to remain current with this specification and any changes thereto.

Detailed specifications for both submitting claims and receiving error reports and remittance advice, as well as contact information for testing the interface, can be found at the following link: http://www.health.gov.on.ca/english/providers/pub/ohip/tech_specific/tech_specific_mn.html

2.4.2 COMMERCIAL LABORATORIES

An EMR Offering's ability to receive laboratory results from major commercial labs will be verified as a part of the validation process. Compliance is subject to the following pre-conditions:

- the laboratory has made their interface specification publicly available; and
- the potential electronic transactions for the laboratory represent at least 5% of the overall Ontario volume of electronic laboratory transactions.

The specifications for electronic interfaces for three commercial laboratories meeting the above conditions can be obtained directly from the laboratories themselves.

- CML Healthcare Inc. – www.cmlhealthcare.com
- Gamma-Dynacare Medical Laboratories – www.gamma-dynacare.com
- LifeLabs (Formerly MDS Inc.) – www.lifelabs.com

2.4.3 HEALTH CARD VALIDATION

The MOHLTC Health Card Validation (HCV) system allows health care providers to validate the eligibility of the cardholder and the status of his or her health card and version code.

The Health Card Validation Reference Manual, containing detailed specifications for current health card validation access options, as well as contact information for testing the interface, can be found at the following link:

http://www.health.gov.on.ca/english/providers/pub/ohip/ohipvalid_manual/ohipvalid_manual_mn.html

Please note that the Ministry of Health and Long-Term Care is currently developing the new Health Card Validation web service. The production web service will be delivered in the near future.

Although the Health Card Validation web service was not able to be included in EMR Specification 4.0, vendors are strongly encouraged to include this feature in their products once the details of this service are made available through the Ministry of Health and Long-Term Care. Updates regarding this service can be found at the above link.

EMR vendors are reminded to use the 'Certified Offering Change Notification' process once they have upgraded their Specification 4.0 certified applications to include the new Health Card Validation web service.

2.4.4 OLIS INTERFACE

This section consists for OLIS Interface Requirements for an Offering.

See **Appendix E** for the interface requirements.

2.4.5 HRM INTERFACE

This section consists for HRM Interface Requirements for an Offering.

See **Appendix F** for the interface requirements.

2.5 INFORMATION TECHNOLOGY REQUIREMENTS

This section consists of the information technology requirements.

2.5.1 ARCHITECTURE

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Provides the ability for multiple users to access the EMR concurrently.	Single user systems not accepted.	M	P	
b) Provides the ability for concurrent users to simultaneously view the same record.	Refers to practice management information, as well as clinical information.	M	P	
c) Provides protection to maintain the integrity of clinical data during concurrent access.	To prevent users from simultaneously attempting to update a record with resultant loss of data. Examples: <ul style="list-style-type: none"> ▪ Record is read-only if it is already opened by another user. ▪ User cannot update a progress note already opened by another user. 	M	P	
d) EMR supports a minimum of 20,000 patient records. EMR supports up to 10 years of data for 20,000 patients without the need to upgrade DBMS, OS or other software components.	Vendor must provide substantiation that databases with inherent limitations, such as MSDE or MS Access, are capable of meeting this requirement.	M	P	
e) EMR provides a complete system (applications and data) backup and recovery process.	Based on Ontario Regulation 114/94, Section 20 (7). Backup can be full or incremental, etc. Recovery can be to last backup, point of failure, etc.	M	P	
f) External documentation from section 2.1.6 – External Document Management must be stored using a database solution.	Examples: a document management system, within the EMR database. A solution that stores documents in the file system (server or client) only does not satisfy the requirement.	W	P	

Requirement	Guidelines	M/W	Status	Discussion/Comments
g) EMR encrypts patient data and clinical management data resident on server(s) to strength of at least 128-bits.	A solution that only encrypts data as it is transmitted over the network does not satisfy the requirement.	W	N	Purpose of the requirement is so that critical data cannot easily be used if EMR servers are stolen or compromised.
h) Harden the EMR server in preparation for server level encryption.	<p>Server hardening consists of creating a baseline for the security of the application server. Threats to Personal PHI breaches via external access are greatly reduced by eliminating entry points and minimizing system software.</p> <p>The physical security is elevated when all application data and information is encrypted.</p> <p>This guideline does not apply to ASP versions.</p> <p>Please refer to the Server Hardening Checklist document on the OntarioMD Website.</p>	M	N	
i) An anti-malware solution and EMR must be able to co-exist without conflicts.	Vendor must recommend to providers anti-malware solutions that do not negatively impact the EMR application and that both solutions can co-exist on the same server without creating any conflicts.	M	N	

2.5.2 AUDITING AND LOGGING

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Audits and logs all logins, successful and failed, at the EMR server. The log must include: timestamp, user ID/application ID, originating IP address, port accessed or computer name. Both local and remote logins must be auditable.		M	P	
b) Audits and logs traffic that indicates unauthorized activity encountered at the EMR server. The log must include: timestamp, user ID/application ID, originating IP address, port accessed or computer name.	Anonymous access for services installed and running on the server (e.g. FTP, Telnet, Web) is not allowed. If the EMR does not require any additional services, i.e. the services are disabled, this requirement is then met.	M	P	
c) Audits and logs access to components of the medical record from outside the EMR, including: <ul style="list-style-type: none"> ▪ external ODBC connections used to execute SQL queries; ▪ EMR data stored external to the database such as attachments; and ▪ all data files used to meet other EMR Local requirements (e.g. reporting requirements). The log must include: timestamp, user ID/application ID and data base operation.		W	U	Updated Guidelines
d) EMR must synchronize the system time with a NTP server	System time must be synchronized with a trusted source to maintain audit trail integrity.	M	N	

2.5.3 WORKSTATION SECURITY

Requirement	Guidelines	M/W	Status	Discussion/Comments
<p>a) Provides a way to quickly “lock” a user workstation if left unattended.</p> <p>Must be quick – for example a screen saver after 30 minutes is not acceptable.</p> <p>EMR data must not be accessible.</p> <p>Must preserve context when unlocked.</p>	<p>User must be required to enter a valid password in order to unlock workstation.</p> <p>Acceptable solutions are:</p> <ul style="list-style-type: none"> ▪ user initiated lock (e.g. hot key); and ▪ screen lock with a timeout period 	M	P	
<p>b) Ensures security when one user is logged on at multiple workstations.</p> <p>Must be able to log on to EMR through a second workstation with the same user credentials without logging out of the first workstation.</p>		M	P	
<p>c) Ensures security when several users use the same workstation in quick succession to access a) a single patient record or b) multiple patient records.</p> <p>Must be able to log on to EMR with a second set of user credentials without logging out the first user.</p> <p>Second user cannot see first user’s data and vice versa.</p>	<p>If offering uses operating system features (e.g. Windows XP fast user switching) to meet this requirement, then a version of the OS that provides this feature must be included as part of the EMR.</p>	W	P	

2.5.4 REMOTE ACCESS

Requirement	Guidelines	M/W	Status	Discussion/Comments
<p>a) Supports Remote Access through internet connections using VPN.</p> <p>Must be able to use all EMR functions when connected remotely.</p>	<p>A VPN must be supported to offer remote connections (e.g. access from home).</p>	M	P	

2.6 SUPPORT REQUIREMENTS

This section consists of the support requirements. EMR Support means that a representative of the vendor is available to assist customers with any questions about, or issues encountered with the vendor's EMR Offering within the defined availability.

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Provides EMR support from 8AM – 8PM Monday through Thursday, 8AM – 5PM Friday, and 9AM – 2PM Saturday (Eastern Time Zone).		M	P	
b) Provides additional EMR support (e.g. 7 x 24 support).		W	P	
c) EMR Vendor is able to troubleshoot common technical/user issues via electronic/remote support.	<p>In order to satisfy this requirement, EMR vendor must be able to provide support by viewing EMR user interface without physically being at a site, provided appropriate consent has been given to the vendor to do so.</p> <p>Considerations must be made with respect to the privacy and security of Personal Health Information.</p>	M	N	
d) EMR Vendor is able to remotely provide simple upgrades and code corrections.	<p>In order to satisfy this requirement, EMR vendor must be able to</p> <ul style="list-style-type: none"> ▪ Push updates and administrator to download, accept and execute. ▪ Schedule a time with user and make updates remotely 	M	N	
e) EMR User documentation is available in electronic format.	<p>Documentation must be comprehensive of all available EMR functionality.</p> <p>To satisfy this requirement, documentation must either be distributed to, or made available for download by customers.</p> <p>Document should be searchable.</p>	M	N	

Requirement	Guidelines	M/W	Status	Discussion/Comments
f) EMR provides context-sensitive help within the application.	<p>Help must be invoked from within the EMR user interface and specific to the screen, function or function groups being used.</p> <p>The use of tool tips to provide a brief description of a function does not satisfy this requirement.</p> <p>Opening up the entire training document and doing a search does not satisfy this requirement.</p> <p>Example: clicking help while writing a prescription loads only help documentation related to medications and/or prescriptions.</p>	W	N	

2.7 IMPLEMENTATION REQUIREMENTS

This section consists of the implementation requirements.

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Offers EMR training.	<p>At a minimum, training must be offered on all baseline functionality.</p> <p>“Baseline functionality” refers to the functionality described in this version of the EMR Specification.</p>	M	P	

2.8 PRIVACY REQUIREMENTS

The Offering must comply with all applicable laws and regulations now or hereafter in force relating to privacy and the protection of personal information, including personal health information and enable health information custodians to comply with the requirements set out therein.

2.9 ONTARIOMD.CA WEBSITE CONNECTIVITY REQUIREMENTS

This section consists of the requirements for connectivity to the OntarioMD website. Refer to www.ontariomd.ca/emr for additional information about the website interface. The OntarioMD.ca – Automated Authentication Developer’s Guide provides information on how to interface with the OntarioMD.ca website.

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Support Single Sign-On from EMR Application to OntarioMD website.	Single sign-on should occur without requiring user to re-enter stored website user credentials, if desired.	M	P	
b) Initiate a Drug Search on OntarioMD website from EMR.	Examples: <ul style="list-style-type: none"> ▪ Context sensitive search (e.g. user has prescribed a drug and wants to search for results for that specific drug); or ▪ General search (e.g. user enters a search term for a drug for which they are interested, from the EMR interface. 	M	P	

2.10 CHRONIC DISEASE MANAGEMENT REQUIREMENTS

This section consists of the chronic disease management requirements for an Offering.

See **Appendix C** for chronic disease management requirements for EMR Offerings.

2.11 REPORTING OF DIABETES DATA REQUIREMENTS

This section consists of the requirements for the standardized reporting of diabetes-related information from the EMR.

See **Appendix D** for diabetes reporting requirements for EMR Offerings.

2.12 CANADIAN INSTITUTE OF HEALTH INFORMATION - PRIMARY HEALTH INDICATORS DATA REQUIREMENTS

This section consists of the requirements for a file extract in support of the Canadian Institute of Health Information (CIHI) Primary Health Care (PHC) EMR Content project.

See **Appendix G** for PHC reporting requirements for EMR Offerings.

2.13 LICENSING REQUIREMENTS

This section consists of the requirements for the licensing of EMRs to be eligible for sale in Canada/Ontario.

Requirement	Guidelines	M/W	Status	Discussion/Comments
a) Vendor to be ISO 13485:2003 certified and maintain the certification as long as the Offering remains Approved.		M	N	

2.14 DATA SHARING

The following describes the clarifications to *EMR Specification 4.0 Appendix A – EMR Baseline Requirements* in order to provide better guidelines for Data Sharing for Local EMR offerings. These apply only to 'Configuration 1' Local implementations where data needs to be shared across multiple (and different) instances of the Offering in multiple locations.

These clarifications are applicable in the following sections of Appendix A:

- 2.1.1 – Demographic Requirements
- 2.1.3 – Encounter Documentation
- 2.1.4 – Medication Management
- 2.1.5 – Lab Test Management
- 2.1.9 – Work Queue Requirements
- 2.1.10 – Scheduling Requirements
- 2.1.11 – Billing Requirements
- 2.5.1 - Architecture
- 2.5.2 - Auditing and Logging

All clarifications are mandatory and reflect the scoring status of the current requirements.

Two entities are involved in this solution:

- **Primary** doctor/clinic/EMR – this is the 'home' of the patient.
- **Covering** doctor/clinic/EMR – this is where the patient goes, either physically or virtually, for care in lieu of the Primary.

2.14.1 REQUIREMENTS CLARIFICATION

Spec 4.0	Clarifying Guideline	Additional Guidelines
2.1.1 b	a) From the Covering EMR, the Covering clinic must be able to find a reference to a patient as long as that patient exists and is associated to a doctor or clinic that is part of the data sharing group.	Covering clinic selects the Primary doctor from a list of associated data sharing doctors. Covering clinic is then presented with a list of matching patients based on health card number, name or other identifying data.
2.1.1 b	b) For patients that present with no Primary doctor or clinic, the Covering clinic must be able to search all patients among data sharing doctors/clinics.	Scenarios exist where a patient has visited several clinics recently but has no Primary doctor. The Covering doctor will need to see all the records from all the clinics that have records.
2.1.1 a	c) Covering clinic must be able to update demographic information of the patient on the Primary EMR.	Scenarios exist where Primary doctors/clinics will not want Covering doctors/clinics updating demographic information. Primary clinic is able to limit who updates demographic information in Primary EMR based on roles.
2.1.9 a	d) Covering doctor must be able to flag the record for follow-up by the Primary doctor.	Appropriate flagging includes sending the record to the Primary doctors' inbox or creating a task for the Primary doctor/clinic to review. Any flagged record is highlighted for the Primary doctor regardless of how their inbound record option is set.
2.5.1 b 2.5.1 c 2.5.2 all	e) The full encounter note including all documents, ordered labs, meds, etc. must be synchronized between the Primary EMR and Covering EMR within 30 minutes.	The full, dynamic record must exist in the Primary EMR. A PDF or other form of static copy is not acceptable. A full, dynamic record should exist in the Covering EMR and is preferred; however, a PDF or static copy in the Covering EMR is acceptable, so long as it captures all the information related to the encounter including the full audit log associated to the encounter. The record must be directly associated to the patient on both Primary and Covering EMR. Time, date and doctor stamps document the Covering doctor and clinic. Audit logs show where the data was entered directly and where the data was synchronized. Any document that is attached to the patient record by the Covering doctor or clinic must be synchronized between the Primary EMR and Covering EMR and form part of the patient's record. The Primary doctor must have the option of what to do with new data that has not been flagged by the Covering doctor/clinic. The record may be treated as a lab result and appear in the inbox for signing/approval, or may automatically be signed and incorporated into the patient file.

Spec 4.0	Clarifying Guideline	Additional Guidelines
2.5.1 b	f) Covering doctor or clinic must have the ability to view the full patient record via the Covering EMR.	An interface similar to the regular dynamic interface is to be utilized. A PDF or static copy of the record is not acceptable. Primary clinic is able to limit who views records in Primary EMR using existing security methods.
2.1.5 p	g) Any labs or tests ordered by the Covering doctor are automatically copied to the Primary doctor when generated and updated to the patient's record in the Primary EMR.	
2.1.9 a	h) Covering doctor is able to create tasks or other follow-up items for the Primary doctor or clinic. Tasks or follow-ups are reflected in the patients' record in the Primary EMR.	
2.1.3 d 2.1.3 e	i) Covering doctor or clinic is able to print any part of the patient record as needed using a local printer.	
2.1.4 f	j) When prescribing drugs and doing drug-drug/drug-allergy checks, the Covering system checks the patients' record in the Primary EMR for patients' current drug and allergy information.	The intent is to use the most current patient drug and allergy information available. If, as part of another requirement, the current information was transferred to the Covering EMR, it would not be necessary to consult the Primary EMR.
2.1.10 d	k) All appointment scheduling information is kept on the Covering EMR.	A note of the appointment must be made in the Primary EMR. Scenarios exist where the Covering clinic/doctor does not make a medical note.
2.1.10 a	l) Correct billing information is generated from the Covering EMR.	Billing information will only be kept in the EMR that actually bills for the service provided.
2.1.11 a	m) All information related to preventive care and associated bonuses are distributed so that the correct doctor or clinic is compensated properly.	For example, when the Covering doctor delivers a flu shot, the Covering doctor will be paid for delivering that service, but the Primary doctor may receive credit for it for preventive care bonus purposes.

3. SUPPORTING INFORMATION

3.1 REPORTING SAMPLE FOR REQUIREMENT 2.1.8 (L)

Vendor can produce reports related to EMR use metrics (sample below).

EMR Usage Report

Provider: Dr. J. Doe

Date: 01/01/10 – 01/03/10

Practice Profile

Practice Size: _____

Age and Gender Distribution:

Age Group - Years	Percentage	Male	Female
0 - 19	30%	65%	45%
20 - 44	20%	20%	80%
45 - 64	30%	45%	55%
65 - 84	25%	40%	60%
85+	5 %	25%	75%

Number of unique patient visits (kept) which demonstrate use of the following EMR functionality in the identified time frame2:

Scheduled Appointments	Billing	Encounter Note ⁴	Problem List ⁵	Stored documents ⁶	Prescriptions new/renewals	Use of reminders / alerts ⁷	Labs ⁸
100	98	100	75	50	46	100	25

1. Metrics reflect meaningful use of the EMR for realization of benefits and align with funding Terms and Conditions.
2. One or more entries indicates use
3. Bill for services – includes OHIP, WSIB, other Provincial plans, private insurance and uninsured (self pay, third parties) invoicing
4. Enter encounter notes for patients seen - progress note entry associated with a kept patient office visit
5. Enter problem lists for patients seen – presence of CPP problem list entry. If an application allows for “none” in the CPP category of Problem List/Ongoing Problems this is an acceptable entry.
6. Store documents not originated from an EMR – includes any scanned documents or external documents delivered through an electronic interface e.g. through Hospital Report Manager.
7. Generate automated alerts / reminders to support care delivery– includes medication alerts (drug-drug, drug-allergy, drug-condition); preventive care and chronic disease management reminders
8. Receive lab results electronically, directly into the EMR from private labs - includes electronic interfaces with hospital labs.

4. RETIRED REQUIREMENTS / DISCRETE DATA

4.1 RETIRED REQUIREMENT

The following requirements have been retired from EMR Specification Appendix A v4.0.

Refer to Appendix A v3.02 for complete information about the following retired requirements.

#	Requirement	Guidelines	W/M	Status	Discussion/Comments
2.1.2 Electronic Medical Records					
R1	Supports free form text notes as part of patient medical record.	Can appear anywhere on the EMR.			
2.1.4 Medication Management					
R2	Supports free form text notes that are tied to each prescription.		M	P	This requirement is covered by discrete field 2.2.1.2.4 (w)
R3	Allow prescription writer to add additional free-text notes/instructions on a printed prescription	Purpose of requirement is to allow the writer of the prescription to create additional notes or instructions on the printed prescription for the pharmacist. Field to capture additional notes the provider may attach to the prescription record to communicate with the pharmacist.	M	P	This requirement is covered by discrete field 2.2.1.2.4 (s)
2.1.6 External Management					
R4	Supports free form text notes that are tied to each imported document from requirements.	Purpose of requirement is for EMR user to add their own notes or commentary to imported documentation, without modifying the original imported document.	M	P	This requirement is covered by discrete Note field 2.2.1.2.10 (f)
2.1.7 Cumulative Patient Profile					
R5	Displays status for each problem in the problem list.	Examples: Active, resolved, chronic, and inactive, etc. – can be communicated via notes.	M	P	This requirement is covered by discrete field by 2.2.1.2.1 (f)
R6	Supports free form text notes which are tied to each of sections b) through h) of the CPP.	Notes can be for the section or individual entries within the section.	W	P	This requirement is covered by discrete data fields in Section 2.2.1.2 – Patient Medical Data
R7	Ensure separation of problems that are active and inactive.	Active = unresolved, chronic, current, ongoing Inactive, = past, resolved	W	P	This requirement is covered by requirements 2.1.4 (a) and (i).

#	Requirement	Guidelines	W/M	Status	Discussion/Comments
2.1.8 Reporting, Query and Communications Requirements					
R8	Able to search and report on ALL text fields in practice Management System ("PMS"). Able to search within text fields for partial matches.	Text fields include any free-form text or notes fields.	M	P	This requirement is covered by requirement 2.1.8 (g). The term "EMR" includes the PMS.
R9	Able to search and report on ALL data fields in PMS.	Image data is not required.	M	P	This requirement is covered by requirement 2.1.8 (h).
R10	Able to search and report on ALL text fields in PMS and EMR concurrently – i.e. in a single report. Able to search within text fields for partial matches.	Text fields include any free-form text or notes fields.	M	P	This requirement is covered by requirement 2.1.8 (g). The term "EMR" includes the PMS.
R11	Able to search and report on ALL data fields in PMS and EMR concurrently – i.e. in a single report.	Image data is not required.	M	P	This requirement is covered by requirement 2.1.8 (h). The term "EMR" includes the PMS.
R12	Provides report templates for PMS data that may be modified by the user.		W	P	This requirement is covered by requirement 2.1.8 (j). The term "EMR" includes the PMS.
R13	Provides report templates for concurrent clinical and practice management that may be modified by the user.		W	P	
2.2.2 Data Management					
R14	Exports electronically the EMR data elements as specified in Schedule B - Data Portability Requirements.		M	P	This requirements is covered by Section 2.3 - Data Portability Requirements
2.9 OntarioMD.ca Website Connection					
R15	Provide link to OntarioMD website disease sections from EMR.		M	P	

4.2 RETIRED DISCRETE DATA

Following discrete data elements have been retired from EMR Specification Appendix A v4.0

Refer to Appendix A v3.02 for complete information about the following retired data elements.

ID	Data Required	Definition	M/W	Status	Discussion/Comments
2.2.1.1.1 Patient Identification					
R1	Substitute Decision Maker		W	P	This discrete data element is covered by discrete field 2.2.1.1.3 (c)
2.2.1.2.4 Medications					
R2	End Date		M	P	Vendors may continue to use as implemented in their applications.
R3	Last Refill Date		M	P	Vendors may continue to use as implemented in their applications.