OntarioMD

OntarioMD Inc.

Clinical Management Systems

SPECIFICATION

FINAL

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1. ADMINISTRATIVE INFORMATION

1.1 TERMINOLOGY

Baseline Requirements means those elements of the CMS Specification that are identified herein as the Baseline Requirements applicable to a particular type of Offering.

Certificate means the document issued by OntarioMD to the vendor, following the successful completion of the Validation of the Offering, confirming that such Offering met or exceeded, as of the date of completion of the Validation process, the applicable Baseline Requirements.

CMS means an automated Clinical Management System capable of providing the required practice and clinical management functionality set out in the CMS Specification. The CMS includes both an EMR and PMS component.

CMS Certification Agreement means the agreement between OntarioMD and the Vendor.

CMS Specification means the baseline requirements that are applicable to a particular type of Offering. The Offering must meet or exceed the requirements of the CMS Specification to gain a Certificate.

Managed Private Network means the network provided by Smart Systems for Health Agency that will be used to deliver CMS functionality to a Subscriber.

Mandatory Requirement ("M") means an Offering must have this function or provide this service.

OntarioMD means OntarioMD Inc., a wholly owned subsidiary of the OMA.

Physician Group means a group of funding eligible physicians.

Primary Care IT Funding Plan is the plan that provides MOHLTC funding to Physician Groups.

Specification means the OntarioMD CMS Specification, as amended from time to time and published by OntarioMD.

Subscriber means the physician, Physician Group, clinic, other healthcare provider, or representation of any of the foregoing, who is the signatory to the Subscriber Agreement.

Subscriber Agreement means, collectively, the Vendor's forms of agreements with subscribers for an Offering (including lease agreements, subscription agreements and other Ontario physician-facing agreements).

Validation refers to the activities of OntarioMD, as carried out according to the CMS Certification Agreement.

Weighted Requirement ("W") means the Offering will receive a point value if the requirement is met.

1.2 ACRONYMS

Acronym/Abbreviation	Description
AN	Alphanumeric
ASP	Application Service Provider
CDS	Core Data Set
CMS	Clinical Management System
CPP	Cumulative Patient Profile
DIN	Drug Identification Number
DP	Data Portability
ECG	Electrocardiogram
EDT	Electronic Data Transfer
EHR	Electronic Health Record
EMR	Electronic Medical Record
ePP	ePhysician Project
HISCA	Health Information Standards Committee for Alberta
ISO	International Standards Organization
IT	Information Technology
M	Mandatory
MOHLTC	Ministry of Health and Long-Term Care
MPN	Managed Private Network
MRI	Machine Readable Input
MRO	Machine Readable Output
NM	Not Mandatory
NUM	Numeric
ODB	Ontario Drug Benefit Program
OHIP	Ontario Health Insurance Program
OLIS	Ontario Laboratory Information System
OMA	Ontario Medical Association
PHIPA	Personal Health Information Protection Act
PMS	Practice Management System
RFP	Request for Proposals
SNOMED	Systematized Nomenclature of Medicine
SSHA	Smart Systems for Health Agency
TSP	Transition Support Program
VPN	Virtual Private Network
W	Weighted
WSIB	Workplace Safety Insurance Board
XML	Extensible Mark-up Language

2. INTRODUCTION

OntarioMD is publishing this CMS Specification within the context of the Clinical Management System Certification Program, which it manages on behalf of the Ministry of Health and Long-Term Care ("MOHLTC"). This program details OntarioMD requirements for vendors managing the life-cycle of a CMS Offering. The following are key program activities:

- determining, through OntarioMD's Validation process, if an Offering meets or exceeds the Baseline Requirements in the CMS Specification applicable to it, as such specification is published by OntarioMD (each a "**Specification**");
- publishing Specifications and withdrawing published Specifications;
- specifying future and/or ongoing requirements for an Offering that OntarioMD determines, after completion of the Validation process, must be implemented as part of the terms of a Certificate for such Offering;
- issuing and withdrawing, if applicable under the provisions of this Agreement and the Validation process, the Certificate in respect of an Offering;
- validating a certified Offering for ongoing qualification where there is any Change to such Offering to determine whether a Certificate should be issued or withdrawn by OntarioMD;
- validating a certified Offering for qualification against another published Specification to determine whether a Certificate should be issued under that Specification for such Offering;
- withdrawing certification for an Offering if, over time: (a) the Offering no longer meets or exceeds the Baseline Requirements set out in the applicable Specification, (b) there is non-compliance with the Vendor Obligations; (c) the Specification under which an Offering was certified has been withdrawn by OntarioMD; or (d) certain other events, set out in this Agreement.

All CMS vendors may apply to have offerings Validated under the Clinical Management System Certification Program.

Only those CMS ASP Offerings that have been selected and certified through the Request for Proposals posted on MERX by OntarioMD on March 30, 2007 may participate in the Program. Currently, certified Offerings are deemed by MOHLTC to be funding eligible for Physician Groups.

To have an offering certified under CMS Specification v.2.0 Vendors will be required to successfully complete the Validation of their Offering against the specification and meet all requirements contained in the Certification Agreement.

A CMS Specification (usually identified by a version number) can be withdrawn by OntarioMD at any time. As part of the process to withdraw a Specification, OntarioMD will also indicate the effective withdrawal date. Please refer to http://www.ontariomd.ca/cms for more details on the process and the withdrawal date for

CMS Specification v.1.3. (As of the withdrawal date for a Specification, Offerings will no longer be certified under that Specification.

3. CONTEXT

3.1 BACKGROUND

3.1.1 PRIMARY CARE RENEWAL

In 1998 the Ontario Government and the OMA launched a pilot project to change the provision of primary health care services in Ontario. Primary Care Networks were formed in fourteen (14) communities, involving more than 160 physicians and 260,000 patients. The four key goals of this project were:

- improved patient access;
- improved quality and continuity of care;
- increased patient and provider satisfaction; and
- increased cost-effectiveness of health care services.

The MOHLTC has continued to support primary care renewal through the ePhysician Project and its successor, the Physician IT Program.

3.1.2 THE ePHYSICIAN PROJECT AND THE PHYSICIAN IT PROGRAM

In October 2001, the MOHLTC and the OMA initiated the ePhysician Project. The ePhysician Project was intended to support the expansion of primary care renewal groups by enabling and promoting the efficient and effective implementation of information technology to primary care physicians in Ontario.

The ePhysician Project was intended to create sustainable delivery models for the ongoing support and delivery of IT solutions beyond the tenure of the ePhysician Project. As a result, the OMA set up OntarioMD Inc. (formerly OMA e-Services Inc.) to manage the ongoing operation of the elements of the ePhysician Program through the Physician IT Program.

OntarioMD now delivers the following services:

- **Clinical Management Systems Certification Program,** provide a choice of approved CMS Offerings to physicians and their staff, while maintaining the CMS specifications (see http://www.ontariomd.ca/cms for more details);
- **Primary Care IT Funding Plan,** which manages funding for eligible Primary Care Renewal groups to acquire approved IT systems. Details on the Plan and eligible groups are available through http://www.ontariomd.ca/tsp;
- **Transition Support Program (TSP),** supports the adoption of Clinical Management Systems (CMS) for Primary Care physicians in Ontario. (see http://www.ontariomd.ca/tsp for more details); and
- **OntarioMD.ca**, OntarioMD.ca is a comprehensive website connecting physicians and their staff to online medical research, resources, tools and applications personalized by practice area.

3.1.3 CLINICAL MANAGEMENT SYSTEMS

A Clinical Management System, supporting both clinical and practice management requirements is a critical component of information technology for Physician Groups.

Clinical Management Systems are available through both an Application Service Provider ("ASP") model and a Local model. Offering both models lets physicians select different service and payment options that best fit their practice.

a) The Local model provides access to the CMS through a local server model. Three different configurations may be provided to Subscribers (see http://www.ontariomd.ca/cms for more details).

b) The ASP model provides access to the CMS through a subscription-based, central server model using technology infrastructure provided by third party vendors such as SSHA. Vendors are selected to provide their Offering on an ASP basis through a Request for Proposals (RFP) process.

4. CERTIFICATION

Gaining and maintaining Certification of an Offering against a CMS Specification must occur in order for Vendors to provide funding eligible CMS Offerings to Physician Groups.

The following are a number of key vendor activities associated with Validation. For detailed information, please refer to the CMS Certification Agreement.

a) Submit an Application – interested vendors can submit an application for an Offering to undergo Validation. The completed application together with the application fee is required.

b) Sign the CMS Certification Agreement – a vendor seeking to have an Offering certified will be required to sign the most current CMS Certification Agreement.

c) Validation Process – a vendor must demonstrate that the Offering is able to meet or exceed applicable Baseline Requirements as set out in the applicable Specification through the process described in CMS Validation Process on http://www.ontariomd.ca/cms

d) Submission of Deliverables – submit a set of deliverables itemized in the CMS Certification Agreement, Obligations Schedule. Examples of Vendor deliverables include profile requirements, standardized pricing scenarios, and standard Subscription Agreements. See CMS Certification Agreement for more information regarding deliverables required to receive a Certificate for an Offering and ongoing contractual requirements.

Currently, certified Offerings are deemed by MOHLTC to be funding eligible under the Primary Care IT Funding Plan.

5. CMS SPECIFICATION V.2.0

5.1 OVERVIEW OF REQUIREMENTS

CMS Specification v.2.0 includes several components:

a) CMS Local Solution - Baseline Requirements– the Local CMS Baseline Requirements specify the requirements for all Local CMS Offerings.

   The Baseline Requirements have been updated to reflect changes in standards and technology and were restructured to make Specification v.2.0 more readable and manageable for the vendor. The profile requirements and standardized pricing scenarios previously included with the CMS Specification v.1.3, Baseline Requirements, are now to be submitted separately from Validation itself.

b) Data Portability Requirements – this new requirement defines export-import standards and includes: (i) a CMS Core Data Set schema; (ii) data and media format requirements for data transfer from one CMS to another; and (iii) export and import event logs.

The Offering must be compliant with the following components of the CMS Specification (see Table 1 below).

Table 1: CMS Specification - Release 2.0

CMS Specification v. 2.0 Requirements	Local CMS Only	Both Local and ASP CMS
CMS Local Solution - Baseline Requirements – Schedule A	X	
Data Portability Requirements – Schedule B		X

The Vendor represents that it has obtained all necessary permissions, licenses, consents and has the authority and right to provide access to, and the right to use, such licensed technology as set out in the CMS Certification Agreement.

New CMS Specifications may be published by OntarioMD.

The contractual requirements for all vendors seeking to provide a Certified Offering are set out in sections 5.2 and 5.3.

5.2 CMS CERTIFICATION AGREEMENT

The CMS Certification Agreement defines the ongoing obligations of the CMS vendor necessary to gain and maintain certification.

All vendors will be required to sign a CMS Certification Agreement before beginning the validation process against CMS Specification v. 2.0. Some of the CMS Local vendors will be required to sign an updated Agreement.

At a minimum, the CMS Certification Agreement includes the following:

- an Offering's Schedule containing a description of the Offering;
- a General Information Schedule containing general information for the vendor and OntarioMD;
- an Obligations Schedule listing certain vendor obligations ;
- a Payments Schedule which contains the fee payable for Validation;
- Covenants, Representations and Warranties of the vendor for a specific Offering; and
- a Certificate tied to a specific version of an Offering.

5.3 SUBSCRIBER AGREEMENT

The Subscriber Agreement defines the business arrangement between a physician, group of physicians or corporation on behalf of physicians (i.e. a "Subscriber") and the vendor.

SCHEDULE A
CMS LOCAL SOLUTION - BASELINE REQUIREMENTS

Schedule A contains the CMS Specification v.2.0 Baseline Requirements for CMS Local solutions.

1.1 FUNCTIONAL REQUIREMENTS

This section consists of the functional requirements for CMS Local solutions under CMS Specification v. 2.0.

Some of the functional requirements refer to MOHLTC guidelines. Ministry set guidelines are available through various sources. These include:

- http://www.health.gov.on.ca/english/providers/program/ohip/bulletins/bulletin_mn.html;
- http://www.health.gov.on.ca/; and
- http://www.ontariomd.ca/cms.

OntarioMD will make reasonable efforts to post information received from the MOHLTC on its web site(s), however vendors are responsible for obtaining the necessary information to meet the Baseline Requirements. OntarioMD shall not be responsible for the accuracy of the web-site links that are contained in this document or for any information contained on such web-sites. Respondents 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.

1.1.1 DEMOGRAPHICS REQUIREMENTS

Requirement	Guidelines	Scoring
a) Maintains all mandatory patient demographic data defined in sections 1.2.1.1.1 – Identification and 1.2.1.1.2 – Address.		M
b) Maintains the status of enrolled patients rostered to each Physician Group. Patients are rostered to a specific physician within a Physician Group, not to the Physician Group as a whole. Physicians may have both rostered and non-rostered patients.	The definitive roster used for payment is kept by the Ministry of Health and Long Term Care, not by the CMS. However, the CMS must keep a roster for reconciliation purposes and Physician Group preventive care bonus purposes. Functional requirements may include, but do not require a historical roster of enrolled patients.	M
c) Maintains alternate patient contact	Example: Guardian, spouse, relative, or	W

Requirement	Guidelines	Scoring
information. Must have distinct field(s) designated for storing contact information.	friend. Can store contact name, nature of contact, means of contact – could be in a single text field.	
d) Supports loading of patient demographics from a text file including all mandatory patient demographic data defined in sections 1.2.1.1.1 – Identification and 1.2.1.1.2 – Address.		W
e) Supports merging of duplicate patient records or provides an automated method of identifying duplicate patient records.	Merging of patients can be a manual process. No requirement to undo merge.	W

1.1.2 ELECTRONIC MEDICAL RECORD ("EMR") REQUIREMENTS

Requirement	Guidelines	Scoring
a) Maintains medical and surgical data (at least one data element described in section 1.2.1.2.2 - Past Medical and Surgical History.		M
b) Maintains allergy data (i.e. allergen, dates and/or age at onset, reactions and severity).		M
c) Maintains adverse reaction data (at least one data element described in section 1.2.1.2.6 - Adverse Reaction History).	Offending drug code can be DIN.	M
d) Maintains problem list (at least one data element described in section 1.2.1.2.1 - Ongoing Health Conditions).		M
e) Maintains diagnosis list (at least one data element described in section 1.2.1.2.1 - Ongoing Health Conditions).		M
f) Maintains family medical history (at least one data element described in section 1.2.1.2.9 - Family History of Disease).		M
g) Maintains medical alerts and special needs (at least one data element described in section 1.2.1.2.8 - Alerts and Special Needs).		M

Requirement	Guidelines	Scoring
h) Maintains immunizations/screening data (all mandatory data elements described in section 1.2.1.2.3 - Immunization History).		M
i) Maintains a record of preventive care activities (i.e. procedures and dates performed).	Additional fields (such as due dates, notes, etc.) are allowed.	M
j) Supports free form text notes as part of patient medical record.	Can appear anywhere on the EMR.	M
k) Preventive care activities on 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.	W

1.1.3 ENCOUNTER DOCUMENTATION

Requirement	Guidelines	Scoring
a) Provides forms or templates for common encounters that can be modified by user.		W
b) The system automatically includes a user identifier in each part of the encounter note to support shared creation of encounter documentation.	Example: Started by nurse, completed by physician. Manual entry of initials would not meet the requirement	W
c) Supports free form text notes that are tied to each encounter.		W

1.1.4 MEDICATION MANAGEMENT

Requirement	Guidelines	Scoring
a) Supports online prescription creation (including all mandatory data elements in section 1.2.1.2.4 - Medication History) and printing. Printed prescription must be able to include: name of medication, form, dosage, frequency, repeats, quantity, duration, start date, notes, physician name, physician address, physician phone number, and patient name.	It is acceptable that prescriptions are printed to a standard 8.5 x 11 sheet of paper. Multiple prescriptions may be printed on a single form.	M

Requirement	Guidelines	Scoring
b) Performs drug-to-drug interaction checking: • indicating severity; • allowing override; and • using a drug interaction database with Canadian drug codes. This decision support tool must be a publicly available, commercial off-the-shelf (COTS) database.	For this requirement to be met a drug interaction database that is current must be used.	M
c) Maintains complete list of patient medications including: • medications ordered by other health care providers; • over-the-counter medications including herbal and nutritional supplements; and • past and current prescriptions.	Shows active and inactive status, drug name, and prescription date.	M
d) Performs drug-to-allergy interaction checking: • indicating severity; • allowing override; and • using an interaction database with Canadian drug codes. This decision support tool must be a publicly available, commercial off-the-shelf (COTS) database.		M
e) Supports creation of limited lists of favourite drugs.	Example: Based on physician or condition.	W
f) Performs expanded drug interaction review (i.e. one or more of: drug / condition interactions, best dosing, therapeutic alternatives, contraindications).		W
g) Supports free form text notes that are tied to each prescription.		W

1.1.5 LAB TEST MANAGEMENT

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

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

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. blood sugar).

See section 1.4.1.2 for commercial laboratory interface requirements.

Requirement	Guidelines	Scoring
a) Provides a visually distinct method of alerting the ordering physician (or delegate) to new Lab Reports through an in-basket or task list.		M
b) Sorts or highlights abnormal Lab Reports to bring them to the physician's attention.	Need to see the 'abnormal' flag without opening the actual result.	M
c) Clearly identifies which Lab Result(s) within a Lab Report are abnormal.		M
d) Records Lab Result values and normative range values as separate data fields (refer to Section 1.2.1.2.5 - Laboratory Results History).		W
e) Graphically presents Lab Results and normal reference ranges over time from a user-selected Test Code. Graph must show: Test Codes, Lab Results, normal reference ranges, and test dates. Scales must be appropriate to the data.		W
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.		W
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.	W

Requirement	Guidelines	Scoring
h) Prints lab summaries for patients in language appropriate for patients.	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 physician appending notes through the system, or via templates that are specific to the Test Codes on the lab summary.	W
i) Prints the demographic information for patient and physician in the appropriate fields on the Ontario Lab Requisition Form.		W
j) Supports scanning of Lab Reports into the EMR with the ability to indicate the Lab Reports with abnormal results.		W
k) Supports free form text notes that are tied to each Lab Report or Lab Result.		W
l) Capable of reconciling Lab Results with orders so that outstanding results can be identified.	User comparison of requested and received lists on two different screens does not meet the requirement.	W

1.1.6 EXTERNAL DOCUMENT MANAGEMENT

Requirement	Guidelines	Scoring
a) Supports a variety of referral letter templates, specific to specialty. The letter templates will: • integrate patient demographics (i.e. name, age, DOB, sex, OHN) from the CMS; • be able to be edited to provide letter specific content; • include physician's letterhead, referring physician name and address; and • be able to integrate CPP 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 physician.		M

Requirement	Guidelines	Scoring
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. Imported documents must be identified as to: • source (who created the report); • type (classification - e.g. consultation report, MSWord, RTF); • receipt date (date report received); and • creation date (date document created).	Source, type and one date must be stored as discrete fields to satisfy requirements in section 1.2.1.2.10 - Attached Files). Date imported into EMR does not meet requirements.	W
c) Able to import external documents (e.g. consult reports, discharge summaries, and other correspondence) ***in scanned format*** to become part of the EMR. Imported documents must be identified as to: • source (who created the report); • type (classification - e.g. consultation report, tif, jpg); • receipt date (date report received); and • creation date (date document created).	Source, type and one date must be stored as discrete fields to satisfy requirements in section 1.2.1.2.10- Attached Files). Date imported into EMR does not meet either of the date requirements	W
d) Supports free form text notes that are tied to each document.		W
e) CMS tracks referrals and provides a reminder if outstanding. Reminders must: • be visually distinct; • be in patient record, not work queue; • identify referral physician; and • be able to be turned off at user discretion.	Cannot be only on task list.	W

1.1.7 CUMULATIVE PATIENT PROFILE ("CPP") REQUIREMENTS

Requirement	Guidelines	Scoring
a) Displays Cumulative Patient Profile, clearly identifying the patient with data from requirements b) through f).		M

Requirement	Guidelines	Scoring
b) Displays problem list.		M
c) Displays family history.		M
d) Displays allergies and adverse reactions.		M
e) Displays medication summary.	Can show original or last renewal for frequent medications.	M
f) Displays risk factors (e.g. smoking, alcohol, lifestyle).	Risks can appear under 'problems' or 'social history', but need to be visually distinct.	M
g) CPP summary information can be automatically updated from encounter data at physician's discretion. Must be able to tailor the view to manage one or more sections of the CPP to reduce clutter.	Physician can select which medications show in CPP. Medication renewals do not add to CPP. Physician can select which problems are added to the problem list. Physician can choose which data from encounter notes are shown on the CPP.	M
h) Shows status for each problem.	Examples: Active, resolved, chronic, and inactive, etc. – can be communicated via notes.	W
i) Displays medical alerts and special needs.		W
j) Summary screen customizable by user (e.g. by specialty, or user preference).		W
k) Supports free form text notes which are tied to each of sections b) through f) and i) (above) of the CPP.	Notes can be for the section or individual entries within the section.	W
l) CPP can be printed to a single document as a single operation.	Can exceed one page.	W

1.1.8 REPORTING, QUERY AND COMMUNICATIONS REQUIREMENTS

Requirement	Guidelines	Scoring
a) All CMS 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.		M
b) Generates patient recall list for preventive care activities/programs as defined by the MOHLTC for applicable Physician Group agreements prior to certification.	Service Enhancement Codes are set by the MOHLTC. See the MOHLTC guidelines.	M
c) 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.	See the MOHLTC guidelines.	M
d) Ad hoc query and report writer provided.		W
e) Ad hoc query facility supports Boolean search capabilities (e.g. find all patient records where sex is female AND age is greater than 50).		W
f) Assists physicians in consistent data entry to facilitate effective data extraction (e.g. coding schemes, drop-down lists).	Spell checker is not sufficient.	W
g) Able to search and report on **ALL** text fields in EMR. Able to search within text fields for partial matches.	Text fields include any free-form text or notes fields.	W
h) Able to search and report on **ALL** data fields in EMR.	Image data is not required.	W
i) 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.	W
j) Able to search and report on **ALL** data fields in PMS.	Image data is not required.	W

Requirement	Guidelines	Scoring
k) 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.	W
l) 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.	W
m) Able to search and report on **ALL** data and text fields in PMS and EMR concurrently – i.e. in a single report. Able to search within text fields for partial matches.	Image data is not required.	W
n) Provides report templates for PMS data that may be modified by the user.		W
o) Provides report templates for clinical management (EMR data) that may be modified by the user.		W
p) Provides report templates for concurrent clinical and practice management that may be modified by the user.		W
q) 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.	W

1.1.9 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 or task list) supports the management of tasks. A task must have a description, an assignee (a user or role) and a date (either created or due). The work queue must provide the capability for items to be removed from the list or marked as completed.

Requirement	Guidelines	Scoring
a) Supports creation of new ad hoc tasks and their assignment to other specified users.		W

Requirement	Guidelines	Scoring
b) Supports creation of new ad hoc tasks and their assignment to others by role.	Example: Any nurse, any receptionist, etc.	W
c) Task assignments are fully integrated across clinical management functions (i.e. can create a task anywhere in the application and view it anywhere in the application).		W
d) Tasks can be linked to a patient record (i.e. can open patient record from task without having to perform another search for the patient).		W
e) Can store selected work queue tasks and status as part of a patient's medical record.		W
f) Work queue screens can be customized for different roles.	Example: Nursing, physicians, medical records, etc.	W
g) Supports automated generation of recall tasks and patient follow-up tasks to a work queue.	The requirement can be met by recall tasks other than preventive care, such as outstanding lab requests, outstanding referrals, etc. The requirement is not met if a user only accesses the medical chart in order to see the task. The due date may be scheduled by a physician or system process.	W
h) Supports classification of task priority.	Priority can be indicated by urgent, low, etc, or a priority checkbox.	W
i) Automatically creates a task for past-due targeted health maintenance activities and assigns it to a 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. See the MOHLTC guidelines.	W
j) Supports free form text notes that are tied to each task.		W

1.1.10 SCHEDULING REQUIREMENTS

Requirement	Guidelines	Scoring
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 ID and service date.	M
b) Able to open a patient medical record directly from a scheduled appointment without having to perform another search for the patient.		M
c) Allows reason for visit to be recorded on appointment.		W
d) Supports view of multi-doctor schedule. Must display two or more physicians per screen. Appointment dates and times are synchronized on screen when scrolling.		W
e) Provides ability to flag appointments as critical (visually distinct).		W
f) Supports searching for next available appointment by all of the following in a single function: physician, day of week, time of day, and appointment type.	Must be an online function, not a report.	W
g) Schedule is printable as day-sheet sorted alphabetically by patient name.		W
h) Schedule is printable as day-sheet sorted chronologically.		W
i) Schedule is printable as day-sheet sorted by chart number.		W
j) Supports pre-configuration of schedule slots or blocks by physician.	Example: Larger blocks for full physicals, block times for drop-ins, etc.	W

Requirement	Guidelines	Scoring
k) Supports planned periods of multiple appointments to a single start time. Must be: • visually distinct; • preplanned and configured; and • able to search for next available slot OR overbooking occurs only after the planned period is full.	Ad hoc double booking does not meet the requirement.	W
l) Supports ad hoc double booking that is • visually distinct; and • shows on printed schedule.	Ability to book an appointment with the same starting time as another appointment, without needing to configure the schedule.	W
m) Supports schedule viewing both with and without personal patient data showing. User must be able to switch views dynamically.	Acceptable to show patient name on without screen. Cannot display patient data when hovering over appointments.	W
n) Supports drag and drop rescheduling.	Can be cut and paste or any other means of rescheduling without a delete and add process.	W
o) Supports free form text notes that are tied to each appointment. Must be separate from the “reason” field.		W

1.1.11 BILLING REQUIREMENTS

Requirement	Guidelines	Scoring
a) Processes concurrent Ontario billings models of fee-for-service, shadow partial payment billings, and Physician Group bonus codes.	See the MOHLTC guidelines.	M
b) Provides basic error checking (i.e. Ontario Health Number in place, edits for check digit, edits for all mandatory billing fields (date of service, provider number, Health Number, name, DOB, sex, fee code, and fee claimed, - see interface specification)) checks all dates are valid dates and in the past. Must alert user if duplicate Health Number entered when registering patients.		M

Requirement	Guidelines	Scoring
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
d) System is pre-loaded with current OHIP fee schedule including preventive care codes.		M
e) Supports reading a Health Card through a card reader device, and looking up the patient in CMS application database. Must notify of version code discrepancies or automatically update patient record.	CMS can update other demographic data associated with the Health Card such as: name, sex, and DOB.	M
f) Supports WSIB billing through MRI files.		M
g) Can produce a patient billing record directly from visit information in patient medical record. Must transfer patient, and at least two other data points.	Can create a claim directly from a patient encounter. Other data points could be: physician information, service date, procedure code, diagnosis, location, hospital number, etc.	W
h) Can transfer and translate diagnostic codes for billing purposes from the EMR component.		W
i) Supports direct manual entry of billing transactions.		W
j) Provides aged receivables listing: • 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
k) System maintains and uses historical OHIP fee schedule for the prior year.		W
l) Provides lookup of services and diagnoses by their codes as well as their descriptions.		W
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.	W

Requirement	Guidelines	Scoring
n) Supports direct third party billings with invoices, which include at a minimum: • physician name, patient name or ID, payor address, service date, service, itemized amount(s) and total amount billed. Able to be generated on demand.		W
o) Supports direct third party billings with statements, which include at a minimum: • physician name, patient name or ID, payor address, service date, service, itemized amount(s) amount paid, and balance. Able to be generated on demand	Receipts are not sufficient.	W
p) Supports billing lookup by each of the following: • Patient Health Number; • patient name; and • OHIP claim # or Accounting #.	OHIP claim # is assigned by the OHIP claims payment system. Accounting # is assigned by CMS or user to a claim.	W

1.1.12 SYSTEM ACCESS MANAGEMENT

Requirement	Guidelines	Scoring
a) CMS must store passwords in an encrypted format. CMS must transfer passwords over a WAN in an encrypted format.	This only applies to password managed by applications. Passwords stored and managed by the operating system are already considered encrypted and secure.	M
b) CMS must allow for passwords that include: • mixed case passwords; • passwords of a minimum of 8 characters; • alphanumerics; and • special characters.		M

Requirement	Guidelines	Scoring
c) CMS must have the following password management capabilities that can be deployed based on user discretion: • 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 CMS, including the operating system and all applications.	M
d) CMS must be able to share patient data among physicians who share the same database. Must maintain proper physician identification.	Do not need to share data between physically distinct servers/offices.	M
e) The CMS provides 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. Capable of applying changes to a role to all members of that role.	If CMS provides only predefined roles, this requirement is not met.	W
f) Users can be assigned to roles.	This is met if a CMS provides/allows two or more roles.	W
g) The CMS provides different views to data for roles (e.g. physician, nurse practitioners, and administrative assistants).	Screen layout, organization, or contents can be customized for different roles.	W
h) There are access controls to functions based on roles.	This means that members of a role cannot use certain screens or capabilities of the CMS. Some examples are: • Receptionists who can process billing but not run financial reports. • Nurses have read-only access to medications.	W

Requirement	Guidelines	Scoring
i) There are access controls to data based on roles.	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. Some examples are: • Nurse Practitioners are not permitted to view psychiatric encounter notes for any patients. • A physician can only update patient records where they are the principal physician.	W
j) There are access controls to functions based on user.	This means that a user cannot use certain screens or capabilities of the CMS. Some examples are: • A receptionist who can process billing but not run financial reports • A nurse who can browse encounter data but cannot update it	W
k) There are access controls to data based on user.	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. Some examples are: • A nurse who cannot see his ex-wife's medical records. • A physician who can only update her own patients.	W
l) The system supports a "sign off" function to indicate data that becomes part of the permanent patient medical record. Sign-off date and reviewer identity must be visible on the patient medical record.	Examples: Once an encounter is complete. Once a Lab Report has been reviewed. Sign-off time is not required to be visible.	W
m) Clerical staff who have no permission to view clinical details can enter notes into the EMR.	Example: Records of phone calls, transcriptions, etc. Notes entered against PMS data (e.g. appointments) would not meet the requirement.	W

1.2 DATA REQUIREMENTS

This section contains the data requirements for an Offering.

1.2.1 DISCRETE DATA ELEMENTS

This section details the minimum data requirements for a CPP.

Each discrete data element listed below is a separate data element included in the Offering for storing the specified data.

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

1.2.1.1 PATIENT DEMOGRAPHIC DATA

1.2.1.1.1 IDENTIFICATION

Data Required	Scoring
a) Health Number (The Ontario Health Number)	M
b) Version Code (Part of OHN)	M
c) Last Name	M
d) First Name	M
e) Second Name	W
f) Title	W
g) Sex	M
h) Birth Date	M
i) Language Preference Code	W
j) Substitute Decision Maker	W
k) Emergency Contact	W

1.2.1.1.2 ADDRESS

Data Required	Scoring
a) Address Type (e.g. business, home)	W
b) Street Address	M

Data Required	Scoring
c) Municipality	M
d) Province/State	M
e) Country	W
f) Canadian Postal Code (i.e. A9A 9A9)	M
g) Telephone Type (e.g. business, fax)	M
h) Telephone Number	M
i) Extension	M
j) E-Mail Address	W

1.2.1.2 PATIENT MEDICAL DATA

1.2.1.2.1 ONGOING HEALTH CONDITIONS

Data Required	Scoring
a) Date of Onset	W
b) Diagnosis	W
c) Problem	W
d) Notes	W

1.2.1.2.2 PAST MEDICAL AND SURGICAL HISTORY

Data Required	Scoring
a) Date of Onset/Occurrence/Incident	W
b) Date Resolved/Controlled	W
c) Diagnosis /Problem	W
d) Procedure Date	W
e) Procedure /Intervention	W
f) Notes	W

1.2.1.2.3 IMMUNIZATION HISTORY

Data Required	Scoring
a) Date	M
b) Date Refused	M
c) Type	M
d) Notes	M

1.2.1.2.4 MEDICATION HISTORY

Data Required	Scoring
a) Start Date	M
b) End Date	W
c) Prescription Written Date	M
d) Medication	M
e) Dosage	M
f) Frequency	M
g) Repeats	M
h) Quantity	M
i) Route	W
j) Duration	W
k) Long Term Medication Indicator	W
l) Notes	W
m) Patient Compliance	W

1.2.1.2.5 LABORATORY RESULTS HISTORY

Data Required	Scoring
a) Date / Time of Test (if provided)	M
b) Laboratory Test Description	M

Data Required	Scoring
c) Test Result	M
d) Unit of Measure	M
e) Reference Range (Normal)	M
f) Abnormal Indicator	M
g) Notes	W

1.2.1.2.6 ADVERSE REACTION HISTORY

Data Required	Scoring
a) Offending Agent	W
b) Offending Drug Code	W
c) Start Date	W
d) Severity	W
e) Adverse Reaction Type	W
f) Notes	W

1.2.1.2.7 RISK FACTORS

Data Required	Scoring
a) Risk Factor	W
b) Exposure	W
c) Age at Onset	W
d) Start Date	W
e) End Date	W
f) Notes	W

1.2.1.2.8 ALERTS AND SPECIAL NEEDS

Data Required	Scoring
a) Date Active	W

Data Required	Scoring
b) End Date	W
c) Alert Type	W
d) Notes	W

1.2.1.2.9 FAMILY HISTORY OF DISEASE

Data Required	Scoring
a) Start Date	W
b) Age at Onset	W
c) Diagnosis / Problem	W
d) Treatment	W
e) Relationship	W
f) Notes	W

1.2.1.2.10 ATTACHED FILES

Data Required	Scoring
a) File type	W
b) Date	W
c) Note	W

1.2.1.2.11 ATTENDING PHYSICIANS

Data Required	Scoring
a) Physician Name	W
b) Role	W

1.2.1.2.12 PRINCIPAL PHYSICIAN (ONE)

Data Required	Scoring
a) Physician Name	W

Data Required	Scoring
b) Role	W

1.2.2 DATA MANAGEMENT

Requirement	Guidelines	Scoring
a) There will be a complete audit trail in accordance with the CPSO requirements. See CPSO Medical Records Policy: http://www.cpso.on.ca/policies/medicalrec.htm		M
b) Each record in the EMR will include a date/time stamp and user ID for the update of that record.	Can be visible either on the chart or through an audit trail.	M
c) Exports electronically the CMS data elements as specified in Schedule B - Data Portability Requirements.		M
d) CMS must retain medical records information. See CPSO Medical Records Policy: http://www.cpso.on.ca/policies/medicalrec.htm	It is recommended to maintain records for a minimum of 15 years.	M
e) CMS must retain billing transaction details for at least 7 years. This standard may be updated by MOHLTC.		M
f) The CMS application must have audit trail for all add/change/delete operations on all CMS data, including permission metadata. Data must not be altered, removed or deleted, just marked as altered, removed or deleted. Updated information retains original data entry as well.		W

1.3 DATA PORTABILITY REQUIREMENTS

This section consists of the data portability requirements for an Offering. See **Schedule B** for data portability requirements for CMS solutions**.**

1.4 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 (see Schedule C - Future Requirements) and certified Offerings will, at a minimum, be subject to the interface owner's change management process.

The interface owner is the entity (e.g. MOHLTC) which:

- provides specifications for the interface;
- defines and conducts testing of the interface; and
- authorizes other entities (e.g. CMS vendor) to implement an interface and make it operational.

CMS Vendors are required under the CMS 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 CMS vendors will be required to bring their Offerings into compliance with the new interface specification.

The following table summarizes the vendor requirements for interfaces. Refer to section 1.4.1 for additional information relating to specific interfaces.

Requirement	Guidelines	Weight
a) Claims and Incentive Payments.		M
b) Commercial Laboratories – must support one of the following: • Canadian Medical Laboratories • Gamma-Dynacare Laboratories • MDS Diagnostic Services	For this requirement to be met the vendor must obtain a letter certifying the successful interface. The letter must be dated within the current calendar year.	M
c) Commercial Laboratories –supports more than one of the following: • Canadian Medical Laboratories • Gamma-Dynacare Laboratories • MDS Diagnostic Services	For this requirement to be met the vendor must obtain letters certifying the successful interfaces. The letters must be dated within the current calendar year.	W

1.4.1 INTERFACE REQUIREMENTS – ADDITIONAL INFORMATION

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 CMS 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. CMS 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.

1.4.1.1 CLAIMS AND INCENTIVE PAYMENTS

The MOHLTC Claims system processes physician claims, creates payments and provides error reports and remittance advice back to physicians. CMS Specification v.2.0 requires vendors 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

1.4.1.2 COMMERCIAL LABORATORIES

Local CMS vendors will be rated on how the interfaces in their Offering receive laboratory results from major commercial labs. 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
- MDS Inc. – www.mdsdx.com

1.5 INFORMATION TECHNOLOGY REQUIREMENTS

This section consists of the information technology requirements

Physicians may chose to use SSHA to transfer data and information through a secure, managed private network (“MPN”). For more information on SSHA network products and other SSHA services provided to physicians see http://www.ssha.on.ca/our-clients/doctors.asp.

1.5.1 ARCHITECTURE

Requirement	Guidelines	Scoring
a) CMS supports multiple concurrent physicians through application, operating system and database.	Single user systems not accepted	M
b) CMS supports a minimum of 15,000 patient records. CMS supports up to 10 years of data for 15,000 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
c) CMS provides a complete system (applications and data) backup and recovery process.	Backup can be full or incremental, etc. Recovery can be to last backup, point of failure, etc.	M

1.5.2 AUDITING AND LOGGING

Requirement	Guidelines	Scoring
a) Audits and logs all local and remote logins, successful and failed, at the CMS server. The log must include: timestamp, user ID/application ID, originating IP address, port accessed or computer name.		M
b) Audits and logs traffic that indicates unauthorized activity encountered at the CMS 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 CMS does not require any additional services, this requirement is then met.	W
c) Audits and logs access to components of the medical record from outside the CMS, including: • external ODBC connections used to execute SQL queries; • CMS data stored external to the database such as attachments; and • all data files used to meet other CMS Local requirements (e.g. reporting requirements). The log must include: timestamp, user ID/application ID and data base operation	Files created for the deliberate export of data (see section 1.2.2 c) will meet audit requirements specified in section 1.3 – Data Portability Requirements. If the database is encrypted when viewed by any user (including administrator) using any external tool, this would meet the requirement.	W

1.5.3 WORKSTATION SECURITY

Requirement	Guidelines	Scoring
a) Provides a way to quickly "lock" a user workstation if left unattended. Must be quick – for example a screen saver after 30 minutes is not acceptable. CMS data must not be accessible. Must preserve context when unlocked.	Entire workstation does not need to be locked. Acceptable solutions are: • user initiated lock; and • screen lock with a timeout period.	W
b) Ensures security when one user is logged on at multiple workstations. Must be able to log on to CMS through a second workstation with the same user credentials without logging out of the first workstation.		W
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. Must be able to log on to CMS with a second set of user credentials without logging out the first user. Second user cannot see first user's data and vice versa.	If offering uses operating system features (e.g. Windows XP fast user switching) to meet this requirement, only versions of OS that provide this feature can be specified in requirement.	W

1.5.4 REMOTE ACCESS

SSHA facilitates remote access requirements to Local CMS servers. Refer to http://www.ssha.on.ca/our-clients/doctors.asp for information on One™ Network Remote.

Requirement	Guidelines	Scoring
a) Supports Remote Access through internet connections using VPN. Must be able to use all CMS functions when connected remotely.	A VPN must be supported to offer remote connections (e.g. access from home).	W

1.6 SUPPORT REQUIREMENTS

This section consists of the support requirements.

Requirement	Guidelines	Scoring
a) Provides CMS support from 8AM – 8PM Monday through Thursday, 8AM – 5PM Friday, and 9AM – 2PM Saturday (Eastern Time Zone).		M
b) Provides additional CMS support (e.g. 7 x 24 support).		W

1.7 IMPLEMENTATION REQUIREMENTS

This section consists of the support requirements.

Requirement	Guidelines	Scoring
a) Offers CMS training.		M

1.8 PRIVACY REQUIREMENTS

See CMS Certification Agreement for privacy obligations of vendors with respect to Certified Offerings.

SCHEDULE B
DATA PORTABILITY REQUIREMENTS

Schedule B contains the Data Portability Requirements, including associated Appendices, for an Offering.

1.3 DATA PORTABILITY

General terminology referred to in 1.1 applies throughout the CMS Specification v.2.0, except where identified within a specific section. Where the terminology for a specific section varies, the terminology in the section will apply.

Core Data Set ("CDS") means a grouping of CDS data that is represented in the following three categories: (i) Practice Management ("PM"), (ii) Cumulative Patient Profile ("CPP"), or (iii) Extended Patient Information.

CDS Schema means a data structure that is used to export data to a CDS for a single instance of a CMS that is used by one or more physicians in a primary care medical practice. A CDS is comprised of CDS categories. A single instance of a CMS has its own patient registration application. E.g. If two different CMS products co-exist on the same system that would represent two separate CMS instances. In this case each CMS would export data to a separate CDS.

Data Portability ("DP") means the import-export process by which the CDS is being transferred between two instances of a Clinical Management System.

Extended Patient Information Categories means one of the three CDS Categories, which includes the following data:

- laboratory results;
- physician's "my clinical notes";
- reports received;
- images (may be scanned reports left in image form and other images); and
- scanned or transcribed documents (e.g. converted to text or codes).

Practice Management ("PM") Categories means one of the three CDS Categories, which includes the following data: appointments and patient demographics.

Structured Field means a data element, which data element is described in Appendix 1 - CDS Schema and behaves according to the definitions contained in the CDS Schema in Tables 1 to 13, and 13.1.

Summary Line means a descriptive line summarizing a particular situation or event contained within each CPP Category. There may be one or more summary lines in a category that need to be organized according to the order that the information was entered into the CMS that produced the export file(s). The information can be represented in a text string, or as an industry code (e.g. ICD-9 code) and other descriptive data (e.g. Year). Example of a Summary Line:

Appendectomy 1993. See Appendix 2 for more information on the Summary Line.

Residual Data means the extra CPP Category data within each CPP Category that does not fit into the Structured Fields as defined within the CDS schema described in Schedule B, Appendix 1 - CDS Schema (e.g. the institution number of the hospital where the procedure was performed, or the name of the anaesthetist). The information in the Residual Data will be structured as per the CDS XML Schema - Definition and CDS XML Schema - Data Type (see http://www.ontariomd.ca/cms for supporting documentation). See Appendix 1 for more information on the Residual Data.

1.3.1 DATA EXPORT REQUIREMENTS

Requirement	Guidelines	Scoring
a) Supports export of all provisioned CDS data for a physician.	In order for this requirement to be met this must be physician administered and does not require a CMS vendor to attend the process. • At a minimum the export processes must function in a batch mode.	M
b) Enables physician to select specific CDS Categories and conditions of data to be exported.	Example: Enable export of only one patient record.	W
c) Generates files that contain available data elements as described in Appendix 1 CDS Schema.	In order for this requirement to be met one file per patient must be generated.	M
d) Generates files in XML format that comply with the schema as described in the CDS XML Schema - Definition and CDS XML Schema - Data Types.	See http://www.ontariomd.ca/cms for supporting documentation.	M
e) Creates a ReadMe.txt file as described in Appendix 4 - ReadMe.txt.	In order for this requirement to be met ReadMe.txt must be output to a text file and printed.	M
f) Creates an Export Event Log file as described in Appendix 5 - Export Event Log.	In order for this requirement to be met Export Event Log must be output to a text file and printed.	M
g) Compresses and encrypts export files (i.e. CDS data, ReadMe.txt and the Export Event Log) using a standard software utility. Provides the user with the ability to select the media device for the export files. Supports the following standard media devices that will be read-only: CD-R,	In order for this requirement to be met, PGP utility must be supported. Please refer to http://www.pgpi.org/ and http://www.pgp.com for additional information.	M

Requirement	Guidelines	Scoring
DVD-R, and USB II device. Supports the ability to move the files to the media device.		
h) Documents the steps to move export files (i.e. CDS data, ReadMe.txt and the Export Event Log) to the standard media devices and provides a password to secure and access the media. Documents the user steps for decryption and un-compression of export files.		M

1.3.2 IMPORT REQUIREMENTS

Requirement	Guidelines	Scoring
a) Documents user instructions to move export files (i.e. CDS data, ReadMe.txt and the Export Event Log) from media type to importing system.		M
b) Supports import of all provisioned CDS data for a physician.	In order for this requirement to be met this must be physician administered and does not require a CMS vendor to attend the process. • At a minimum the import processes must function in a batch mode.	M
c) Documents CMS vendor processes and/or tools for import support.	In order for this requirement to be met CMS vendor must provide documentation of the support services and their associated costs. E.g.: • telephone support • on-site detailed application support • application tools to aid in the CDS import	W
d) Creates an Import Event Log file as described in Appendix 6 - Import Event Log.	In order for this requirement to be met Import Event Log must be output to a text file and printed.	M

Requirement	Guidelines	Scoring
e) Uploads export files (i.e. CDS data, ReadMe.txt and the Export Event Log) into the importing system and generates error log file for each record that failed to upload, the reason for failure and a pointer to or a copy of the file.	In order for this requirement to be met the CDS data must be uploaded into the CMS and an error log file must be output to a text file and printed.	M

APPENDIX 1 – CDS SCHEMA

This Appendix identifies CDS data categories using the following headings:

1. Patient Demographic
2. Personal History
3. Family History
4. Past Health
5. Problem List
6. Risk Factors
7. Allergies & Adverse Reactions
8. Medications & Treatments
9. Immunizations
10. Laboratory Results
11. Appointments
12. Physician's My Clinical Notes
13. Reports Received

General terminology referred to in 1.1 applies throughout the CMS Specification v.2.0, except where identified within a specific section. Where the terminology for a specific section varies, the terminology in the section will apply.

The tables in this section use the following abbreviated terms: Mandatory (M), Non-Mandatory (NM), Alphanumeric (AN), Alphabetic (AB) and Numeric (NUM).

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

" * " this symbol means the category, or a subsection within a category, which category or subsection may be repeated. An example of a category that may be repeated is a patient that is on more than one medication or immunization (i.e. more than one note under My Clinical Notes or Reports). An example of a subsection that repeats as a group is a patient demographic that contains a group of related fields (such as related contact person information for more than one contact) that will repeat together.

Alphanumeric means the data that does not have restrictions on special characters (e.g. * ' -).

Code Source means the source of the coding system or specific codes that are valid for a given data element.

Data Element means a unit of data as set out in the CDS schema. "Data Element" means that data in column 1 of all tables in the CDS Schema.

Data Type means the characteristic of the data listed. Data types are numeric (NUM), alphanumeric (AN), date, etc. Data Type may include a delimiter denoted by pipe bar (ie: **“ | “**) that is used to separate date and time.

Definition means a detailed description of the Data Element.

Form means a predefined data format designed to further define the Data Element (e.g. text, numeric, code, date format).

Length means the maximum number of characters that is represented in a particular Data Element.

Mandatory means the data element is a mandatory requirement. A data element that is mandatory (i.e. marked as M) must export and import the CDS data. A data element that is not mandatory (i.e. marked as NM) must export and import the CDS data if it is available, otherwise the data field will be left blank.

Report Level means any reports received by a medical practice and stored within a CMS in accordance to the four levels described in Table 13.

1. *PATIENT DEMOGRAPHIC*

Table 1: Patient Demographics

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
1. Name Prefix	NM	An honorific title used when addressing a person by name.	AN	Code	6	HISCA - Stakeholder Client Data Set v1.0 http://www.health.gov.ab.ca/about/HISCA_Stakeholder.pdf	
2. (*) Name Part	M	A part of a name. Typical name parts for person names are given names and family names. A name part may have a type signifying the role of the part in the whole name, and a qualifier for more detail about the name part type.	AN	Text	50		At a minimum Family Name and Given Name must be provided. See Appendix 3
3. (*) Name Part Type	M	Indicates whether the name part is a given name, middle name or initial, family name.	AN	Code	4	Continuing Care eHealth Standards Code Tables: Name Part Type http://www.ontariomd.ca/cms	See Appendix 3
4. (*) Name Part Qualifier	M	For any corresponding name a qualifier is required to distinguish the persons name	AN	Code	2	Continuing Care eHealth Standards Code Tables: Name Part Qualifier. http://www.ontariomd.ca/cms	See Appendix 3
5. (*) Name Purpose	M	If more than one name is recorded, a Name may have a code advising a	AN	Code	2	Continuing Care eHealth Standards Code Tables: Name	Current Legal name is the minimum requirement.

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
		system or user which name in a set of names to select for a given purpose.				Purpose http://www.ontariomd.ca/cms	See Appendix 3
6. Last Name Suffix	NM	An additional term placed after a person's name	AN	Code	3	HISCA - Stakeholder Client Data Set v1.0 http://www.health.gov.ab.ca/about/HISCA_Stakeholder.pdf	
7. Date of Birth	M	The date on which a person was born.	NUM	Date YYYY MMDD	8		
8. Health Card	NM	Health Card identifier for the person's primary healthcare insurance (e.g. OHN)	AN	Text	20		
9. Health Card Version	NM	Currently OHN version code associated with Health Card	AB	Text	2		
10. Health Card Expiry Date	NM	Currently OHN Health Card Expiry Date	NUM	Date YYYY MMDD	8		
11. Health Card Province	NM	Province pertaining to Health Card	AB	Code	5	Continuing Care eHealth Standards Code Tables: Province/State/Territory http://www.ontariomd.ca/cms	
12. Chart Number	NM	Number used by the medical practice to identify the associated hardcopy chart	AN	Text	15		
13. Gender	M	The reported sexual identity of a person for	AN	Code	1	Continuing Care eHealth Standards	

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
		administrative purposes. This attribute may or may not be sufficient to describe a client's physiological sex or gender identity, especially in relation to society or culture.				Code Tables: Administrative Gender http://www.ontariomd.ca/cms	
14. Unique Vendor ID Sequence	M	System-specific internal unique key (has no contextual meaning) to uniquely identify the person. Must be unique for per patient record.	AN	Text	20		
15. Mailing Street Address line 1	NM	A line of text that may include unit and street address information or postal delivery information within a municipality.	AN	Text	50		
16. Mailing Street Address line 2	NM	A line of text that may include unit and street address information or postal delivery information within a municipality.	AN	Text	50		
17. Mailing City	NM	A line of text that includes the city for postal delivery purposes	AN	Text	80		
18. Mailing Country & Province/State	NM	A code associating a country subdivision to an address	AB	Code	7	ISO 3166-2 Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes http://www.iso.org/iso/en/ISOOnline.frontpage	
19. Mailing Postal/Zip Code	NM	A code that is assigned by a country's postal service to	AN	Code	10		No spaces.

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
		a postal delivery area.					
20. Residence Street Address line 1	NM	A line of text that may include unit and street address information or postal delivery information within a municipality.	AN	Text	50		
21. Residence Street Address line 2	NM	A line of text that may include unit and street address information or postal delivery information within a municipality.	AN	Text	50		
22. Residence City	NM	City where the person lives	AN	Text	80		
23. Residence Country & Province/State	NM	A code associating a country subdivision to an address.	AB	Code	7	ISO 3166-2 Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes http://www.iso.org/iso/en/ISOOnline.frontpage	
24. Residence Postal/Zip Code	NM	A code that is assigned by a country's postal service to a postal delivery area.	AN	Code	10		No spaces.
25. Residence Phone	NM	Phone number where person lives	NUM	Text	25		
26. Preferred Phone	NM	Identify the preferred phone for person contact	AB	Code	1	Residence (R), Cell (C) or Work (W).	
27. Cell Phone	NM	Preferred cell phone number for person contact	NUM	Text	25		
28. Work Phone Extension	NM	A number used after dialling the telephone number in order to access a person's personal telephone within an	NUM	Text	5		

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
		organization.					
29. Work Phone	NM	A person's work telephone or organization phone number where the person is works	NUM	Text	25		
30. Preferred Official Language	NM	English or French language	AN	Code	3	English (ENG) French (FRE)	May repeat Preferred Spoken Language if it also represents Preferred Official Language
31. Preferred Spoken Language	NM	Indicates in which language a person prefers to communicate.	AN	Text	25	ISO 639-2 Codes for the representation of names of languages http://www.iso.org/iso/en/ISOOnline.frontpage	May repeat Preferred Official Language if it also represents Preferred Spoken Language
32. Contact Purpose (*)	NM	The type of a contact person	AN	Code	2	Emergency Contact (EC), Next of kin (NK), Administrative Staff (AS), Care Giver (CG), Power of Attorney (PA), Insurance (IN) and Guarantor (GT)	Allow for N number of contacts and associated contact data element attributes
33. (*) Contact Last Name (*)	NM	Contact Last Name	AN	Text	50		
34. (*) Contact First Name	NM	Contact First Name	AN	Text	50		
35. (*) Contact Middle Name	NM	Contact Middle Name	AN	Text	50		
36. (*)Contact Residence Phone	NM	The telephone of the contact person.	AN	Text	25		
37. (*) Contact Cell Phone	NM	The telephone of the contact person.	AN	Text	25		
38. (*) Contact Work	NM	The telephone of the	AN	Text	25		

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
Phone		contact person.					
39. (*) Contact Work Phone Extension	NM	A number used after dialling the telephone number in order to access a Contact's telephone within an organization.	NUM	Text	5		
40. (*) Contact email Address	NM	The email address preferred by the contact person	AN	Text	50		One primary email address per contact. Validate the email has an "@" sign and a valid extension after the period (e.g. .ca, .com, .net)
41. (*) Note about Contact Person	NM	General Note about the contact person if available	AN	Text	200		
42. Note About Patient	NM	Additional Notes about the patient	AN	Text	64k		
43. Patient Warning Flags	NM	If alerts on file about the person this flag is set to 1 otherwise default is 0	NUM	Code	1	1 = alert, 0 = no alert Default is blank	
44. Enrolment Status	M	Rostered Patients.	NUM	Code	1	1 – yes; 0- no	
45. Enrolment Date	NM	Date the Patient was Rostered	NUM	Date YYYY MMDD	8		Mandatory if enrolment status is set to M
46. Enrolment Termination Date	NM	Date the patient was terminated from the roster	NUM	Date YYYY MMDD	8		If patient status is "active" termination date must be empty or prior to enrolment date.
47. Termination Reason	NM	Reason the patient was terminated	NUM	Code	2	Ministry of Health and Long Term Care: Fact Sheet Fall 2005, Enrolment Report Patient Details Termination Reasons: Enrolment Termination	

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
						Codes http://www.ontariomd.ca/cms	
48. Primary Physician ID	M	Physician's OHIP Billing Number	NUM	Text	6		OHIP Billing Number
49. Primary Physician First Name	M	First Name of Primary Physician	AN	Text	50		
50. Primary Physician Last Name	M	Last Name of Primary Physician	AN	Text	50		
51. Person email	NM	The email address preferred by the person / patient	AN	Text	50		Validate the email has an @ sign and extension after the period
52. Family Member Link	NM	System-specific internal unique key (has no contextual meaning) to uniquely identify the person. Link to one or more family members	AN	Text	20		
53. Person Status	M	Active or Inactive or deceased status of the person/patient	AN	Code	1	Active (A), Inactive (I) or Deceased (D)	Refer to Death indicator for decease otherwise must be Active or Inactive
54. Person Status Date	NM	The date on which the person was legally declared to have died or became inactive	NUM	Date YYYY MMDD	8		Associated with Person Status.
55. SIN	NM	Social Insurance Number	NUM	Text	9		

2. *PERSONAL HISTORY*

No structured data elements were identified for Personal History.
May contain multiple records to represent Personal History.
Personal history records should be listed in chronological order.

Table 2: Personal History

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
56. Category Summary Line	M	Summary of Patient Personal History. Chronological Descending order. May include Additional Notes and Alerts.	AN	Text	64k		May contain multiple summary records. It is preferred that a date corresponding to the personal history event also be included.
57. Residual Data Element Name(*)	NM	Name of the data field	AN	Text	no limit		The descriptive or reference name of the data item within the source CMS.
58. Residual Data Element Description(*)	NM	Description of the data field	AN	Text	no limit		Description of the data element within the source CMS.
59. Residual Data Element Type(*)	M (if Name is provided)	Name of the data type	AN	Text	no limit	Can be any primitive XML datatype (see http://www.w3.org/TR/xmlschema-2/)	The datatype by which the Value is to be interpreted.
60. Residual Content(*)	M (if Name is provided)	Name of the data value	Based on Type	Text	no limit		The data value encoded according to the specified type.

3. *FAMILY HISTORY*

May contain multiple records to represent Family History.

Table 3: Family History

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
61. Category Summary Line	M	A text string, summarizing the content of the following more structured fields and information contained about family history	AN	Text	64k		May contain multiple Summary lines.
62. Residual Data Element Name(*)	NM	Name of the data field	AN	Text	no limit		The descriptive or reference name of the data item within the source CMS.
63. Residual Data Element Description(*)	NM	Description of the data field	AN	Text	no limit		Description of the data element within the source CMS.
64. Residual Data Element Type(*)	M (if Name is provided)	Name of the data type	AN	Text	no limit	Can be any primitive XML datatype (see http://www.w3.org/TR/xmlschema-2/)	The datatype by which the Value is to be interpreted.
65. Residual Content(*)	M (if Name is provided)	Name of the data value	Based on Type	Text	no limit		The data value encoded according to the specified type
66. Start Date	NM	Known date or partial date related to the Family History issue/concern	NUM	Date YYYY MMDD	8		Date may be a partial date if known.
67. Age at Onset	NM	Age at Onset. A start date may be present or not.	NUM	Text	3		
68. Diagnosis/Problem Description	NM	A description that identifies the family history item or a problem	AN	Text	250		Required if diagnosis code provided
69. Diagnosis Code	NM	A code that is recorded by the healthcare provider	AN	Text	20		Code entered by healthcare provider
70. Diagnosis Code	NM	The name of the coding	AN	Text	250		Code Source – identified

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
System Name		system used for the diagnosis code and/or problem description					by the CMS Vendor. Consistent definition required. Required if description &/or code provided. i.e. Code convention that identifies the coding source used, Example: ENCODE-FM, SNOMED-CT, ICD9, ICD10-CA, ICPC-2, etc
71. Treatment	NM	Type or nature of the treatment delivered	AN	Text	250		
72. Relationship	NM	Relationship to person	AN	Text	50		Only refer to blood relationship that would not include step-father, or step-sister, etc.
73. Notes	NM	General notes about the specific Family member health issue/concern	AN	Text	32k		

4. *PAST HEALTH*

May contain multiple records to represent each past health situation

Table 4: Past Health

DATA ELEMENT	MANDA-TORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
74. Category Summary Line	M	A text string, summarizing the content of the above more structured fields and information contained about past health	AN	Text	64k		May contain multiple summary lines
75. Residual Data	NM	Name of the data field	AN	Text	no limit		The descriptive or

DATA ELEMENT	MANDA-TORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
Element Name(*)							reference name of the data item within the source CMS.
76. Residual Data Element Description(*)	NM	Description of the data field	AN	Text	no limit		Description of the data element within the source CMS.
77. Residual Data Element Type(*)	M (if Name is provided)	Name of the data type	AN	Text	no limit	Can be any primitive XML datatype (see http://www.w3.org/TR/xmlschema-2/)	The datatype by which the Value is to be interpreted.
78. Residual Content(*)	M (if Name is provided)	Name of the data value	Based on Type	Text	no limit		The data value encoded according to the specified type
79. Past Health Problem Description or Procedures	NM	Description of Health Condition	AN	Text	250		
80. Medical/Surgical Flag	NM	Qualifies Past Health	AN	Text Code	1	Medical (M) Surgical (S), Obstetrical (O) Psychiatric (P) Trauma (T),or Unknown (U)	
81. Onset or Event Date	NM	Date or period of Onset of the condition	NUM	DATE YYYY MMDD	8		May contain exact date or approximate date
82. Resolved Indicator	NM	Indicates whether the condition is ongoing or resolved	AN	Text	250		May contain a note
83. Resolved Date	NM	Date or approx. time of resolution of condition	NUM	DATE YYYY MMDD	8		May contain exact date if known or approximate date of resolution
84. Diagnosis / Procedure Coding System Name	NM	Description of coding system used to code health conditions or procedures	AN	Text	250		An identifier for the coding system used for the diagnosis code and/or description Code Source

DATA ELEMENT	MANDA-TORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
							– identified by the sending CMS. Consistent definition required. Required if diagnosis code &/or description provided.
85. Diagnosis Code	NM	A code that is recorded by the healthcare provider	AN	Code	20		Code entered by healthcare provider
86. Diagnosis / Procedure Code Description	NM	Description for code selected, if available from the coding system	AN	Text	250		Preferred if diagnosis code provided. May be the same or different than Past Health Problems or Procedures data element.
87. Notes	NM	General notes about the specific Past Health situation	AN	Text	64k		

5. *PROBLEM LIST*

May contain multiple records to represent each health problem, sign or symptom.

Table 5: Problem List

DATA ELEMENT	MANDA TORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
88. Category Summary Line	M	A text string, summarizing the content of the following more structured fields and information contained about the current relevant problem(s), signs and symptoms	AN	Text	64k		May contain multiple summary lines
89. Residual Data Element Name(*)	NM	Name of the data field	AN	Text	no limit		The descriptive or reference name of the

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
							data item within the source CMS.
90. Residual Data Element Description(*)	NM	Description of the data field	AN	Text	no limit		Description of the data element within the source CMS.
91. Residual Data Element Type(*)	M (if Name is provided)	Name of the data type	AN	Text	no limit	Can be any primitive XML datatype (see http://www.w3.org/TR/xmlschema-2/)	The datatype by which the Value is to be interpreted.
92. Residual Content(*)	M (if Name is provided)	Name of the data value	Based on Type	Text	no limit		The data value encoded according to the specified type
93. Diagnosis Code	NM	A code that identifies the problem, sign or symptom from a coding system (e.g. ENCODE-FM, SNOMED, ICD10-CA, ICPS-2, etc.)	AN	Text	20		Problem code as entered by the healthcare provider
94. Diagnosis Code Description	NM	Description of the diagnosis code selected by the healthcare provider, if available from the coding system	AN	Text	250		Preferred if diagnosis code provided. May be the same or different than Past Health Problems or Procedures data element.
95. Diagnosis Code System Name	NM	Description of coding system used to code diagnosis	AN	Text	250		An identifier for the coding system used for the diagnosis code and/or description Code Source – identified by the sending CMS. Consistent definition required. Required if problem code or description provided. i.e. Code convention that identifies the coding source used, Example: ENCODE-FM, SNOMED-

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
							CT, ICD9, ICD10-CA, ICPC-2, etc
96. Problem Description	NM	A description of the problem reported	AN	Text	250		May be blank if no problem reported
97. Problem Status	NM	The activity of the problem	AN	Text	50		Status as defined by the sending CMS
98. Onset Date	M	Date of onset	NUM	DATE YYYY MMDD	8		May contain exact or partial date if known
99. Resolution Date	NM	Date problem resolved	NUM	DATE YYYY MMDD	8		May contain exact or partial date if known
100. Notes	NM	Any information the source provider recorded as medically relevant and stored in the source system as a note.	AN	Text	64k		

6. *RISK FACTORS*

May contain multiple records to represent each Risk Factor.

Table 6: Risk Factors

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
101. Category Summary Line	M	A text string, summarizing the content of the following more structured fields and information contained about the Risk Factors	AN	Text	64k		May contain multiple summary lines. Risk Factor Full Description Summary Examples are: Smoker 25 cigarettes /day,

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
							14 alcoholic drinks per week, Gambler, Current recreational drug use: THC, Sedentary lifestyle, Work: chemical exposure, solvents
102. Residual Data Element Name(*)	NM	Name of the data field	AN	Text	no limit		The descriptive or reference name of the data item within the source CMS.
103. Residual Data Element Description(*)	NM	Description of the data field	AN	Text	no limit		Description of the data element within the source CMS.
104. Residual Data Element Type(*)	M (if Name is provided)	Name of the data type	AN	Text	no limit	Can be any primitive XML datatype (see http://www.w3.org/TR/xmlschema-2/)	The datatype by which the Value is to be interpreted.
105. Residual Content(*)	M (if Name is provided)	Name of the data value	Based on Type	Text	no limit		The data value encoded according to the specified type
106. Risk Factor	NM	Factors placing person at health risk	AN	Text	120		E.g. Nicotine, alcohol, asbestos, etc.
107. Exposure Details	NM	Specific agent details of the exposure	AN	Text	120		E.g. 2 packs per day; 10 bottles of wine per week; mined asbestos for 20 years
108. Age of Onset	NM	Age at Onset. A start date may be present or not	NUM	Text	3		
109. Start Date	NM	Date the patient was first exposed to the risk factor	NUM	DATE YYYY MMDD	8		May contain partial date containing year
110. End Date	NM	Date the patient was last exposed to the risk factor	NUM	DATE YYYY MMDD	8		May contain partial date containing year

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
111. Notes	NM	General Notes	AN	TEXT	64k		

7. *ALLERGIES & ADVERSE REACTIONS*

May contain multiple records to represent each allergy & adverse reaction.

Table 7: Allergies and Adverse Reactions

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
112. Category Summary Line	M	Text string incorporating all individual elements and summarizing allergies & adverse reactions that would be displayed in the CPP	AN	Text	64k		May contain multiple summary lines May be blank if no allergies or adverse reactions.
113. Residual Data Element Name(*)	NM	Name of the data field	AN	Text	no limit		The descriptive or reference name of the data item within the source CMS.
114. Residual Data Element Description(*)	NM	Description of the data field	AN	Text	no limit		Description of the data element within the source CMS.
115. Residual Data Element Type(*)	M (if Name is provided)	Name of the data type	AN	Text	no limit	Can be any primitive XML datatype (see http://www.w3.org/TR/xmlschema-2/)	The datatype by which the Value is to be interpreted.
116. Residual Content(*)	M (if Name is provided)	Name of the data value	Based on Type	Text	no limit		The data value encoded according to the specified type

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
117. Offending Agent Description	NM	text description of agent, whether drug or non-drug (if drug then use generic or brand name)	AN	Text	120		Coding available should be collected only if drug related currently and use the representative Drug Identifier Number (DIN). If the person says that they are allergic to penicillin or beta blocker then a representative DIN code needs to be included.
118. Property of Offending Agent	NM	Agent that caused the related allergy or adverse reaction	AN	Code	2	Drug (DR); Non-drug (ND) and Unknown (UK)	
119. Code Type	NM	DIN is the only code type supported currently	AN	Text	3		Required where code value provided is a drug related DIN
120. Code Value	NM	Representative DIN #	AN	Text	20		E.g. If the allergy or adverse reaction is related to a drug, then a representative DIN code needs to be included. If someone is found to have an allergy to adhesive (non-drug) then this would not be currently coded.
121. Reaction Type	NM	Identifies the type of reaction as allergy or adverse reaction	AB	Code	2	Allergy (AL) or Adverse Reaction (AR)	
122. Start Date	NM	Start Date of Allergy or Adverse Reaction	NUM	DATE YYYY MMDD	8		May contain partial date

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
123. Severity	NM	The severity is coded to determine its significance	AB	Code	2	No Reaction (NO), Mild (MI), Moderate (MO) and Severe Life Threatening (LT)	4 levels of severity
124. Reaction	NM	Reaction Description	AN	Text	120		A short text field to note reaction, e.g. Rash, Lip swelling, etc.
125. Known Allergies	NM	Captures patient allergy status	AN	Text	1	0 = No allergies 1 = Yes, Blank = Question not asked	"0" indicates that the patient has been asked by the physician if they're allergic to anything and they replied No "1" indicates there are no current allergies listed. "Blank" is the default value
126. Recorded Date	NM	Date corresponding to Known Allergies	NUM	DATE YYYY MMDD	8		Partial Date is acceptable
127. Notes	NM	Additional Notes about Allergies &/or Adverse Reactions	AN	Text	32k		
128. Healthcare Practitioner Type	NM	Role of the healthcare professional that created the information about allergies or adverse reactions	AN	Code	10	Continuing Care eHealth Standards Code Tables: Care Practitioner Type http://www.ontariomd.ca/cms	Role only e.g. nurse, physician, etc.

8. *MEDICATIONS & TREATMENTS*

All medications and treatments current and past that are recorded need to be exported and imported.
May contain multiple records to represent each medication & treatment.
In the case of the same medication being prescribed multiple times then there will be one such record for each prescription.

Table 8: Medications and Treatments

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
129. Category Summary Line	M	Text string incorporating all individual elements and summarizing medications and treatments that would be displayed in the CPP	AN	Text	64k		May contain multiple summary lines
130. Residual Data Element Name(*)	NM	Name of the data field	AN	Text	no limit		The descriptive or reference name of the data item within the source CMS.
131. Residual Data Element Description(*)	NM	Description of the data field	AN	Text	no limit		Description of the data element within the source CMS.
132. Residual Data Element Type(*)	M (if Name is provided)	Name of the data type	AN	Text	no limit	Can be any primitive XML datatype (see http://www.w3.org/TR/xmlschema-2/)	The datatype by which the Value is to be interpreted.
133. Residual Content(*)	M (if Name is provided)	Name of the data value	Based on Type	Text	no limit		The data value encoded according to the specified type
134. Prescription Written Date	NM	The written date of the current prescription	NUM	DATE YYYY MMDD	8		Partial date is acceptable
135. Start Date	NM	The start date of the current prescription	NUM	DATE YYYY MMDD	8		Must be on or after the written date
136. End Date	NM	The end date of the current	NUM	DATE	8		Must be on or after the start

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
		prescription		YYYY MMDD			date. This date may also be used as the discontinued date.
137. Drug Identification Number (DIN)	NM	Representative Drug Identifier Number	AN	Text	20		Required if it is a medication and coded within the exporting CMS's drug database. The exporting CMS must then translate to DIN.
138. Name	M	The name of the medication or treatment	AN	Text	120		
139. Strength	NM	Drug strength	NUM	Text	10		
140. Strength Unit	NM	Drug Strength unit of measure	AN	Text	20		
141. Number of Refills	NM	The number of the allowed refill	NUM	Text	100		
142. Last Refill Date	NM	The date of the last refill	NUM	DATE YYYY MMDD	8		
143. Dosage	NM	Dose amount and measure	AN	Text	120		
144. Form	NM	Form	AN	Text	120		
145. Route	NM	Route of administration	AN	Text	120		
146. Frequency	NM	Frequency of prescribed use	AN	Text	120		
147. Duration	NM	Number of duration days	NUM	Text	1k		One or the other in terms of end date or duration
148. Quantity	NM	Quantity	NUM	Text	1k		
149. Long Term Medication	NM	Indicator for Long-Term Medication	AN	Text	1		Yes (Y) or No (N)
150. Past Medications	NM	Indicator of discontinued medication	AN	Code	1		Yes (Y) indicates that the medication or treatment has been discontinued. No (N) indicates a current medication. Yes (Y) or

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
							No (N)
151. Prescribed By Last Name	NM	Last name of prescriber	AN	Text	50		
152. Prescribed By First Name	NM	First name of prescriber	AN	Text	50		
153. Prescribed By Identifier	NM	OHIP Physician number of prescriber	NUM	Text	6		
154. Notes	NM	General text which provider may add to the prescription	AN	Text	32k		
155. Prescription Instructions	NM	Refers to directions for use	AN	Text	32k		Strength, Strength Unit, Dosage, Form, Route, Frequency - if not parsed will go into this field
156. Patient compliance	NM	Typically used to indicate that the patient is compliant with the medication as prescribed	AN	Text	1		The values for this data element must be “Y”, “N”, or blank. If blank the physician is unaware of the patient’s compliance with their medication.

9. *IMMUNIZATIONS*

May contain multiple records to represent each immunization.
In the case of the same immunization, vaccine and or booster administered multiple times then there will be one such record for each occurrence.

Table 9: Immunizations

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
157. Category Summary Line	M	The summary line of text that the CMS displays in its CPP about immunizations	AN	Text	64k		May contain multiple summary lines

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
158. Residual Data Element Name(*)	NM	Name of the data field	AN	Text	no limit		The descriptive or reference name of the data item within the source CMS.
159. Residual Data Element Description(*)	NM	Description of the data field	AN	Text	no limit		Description of the data element within the source CMS.
160. Residual Data Element Type(*)	M (if Name is provided)	Name of the data type	AN	Text	no limit	Can be any primitive XML datatype (see http://www.w3.org/TR/xmlschema-2/)	The data type by which the Value is to be interpreted.
161. Residual Content(*)	M (if Name is provided)	Name of the data value	Based on Type	Text	no limit		The data value encoded according to the specified type
162. Immunization Name	M	See Table 9.1 – Immunization Name. Allow for expansion of new classes.	AN	Text	120		The DPT vaccine is abbreviated for "Diphtheria, Tetanus and Pertussis" has several representative DINs that can be used ref. http://www.sanofipasteur.ca/sanofi-pasteur/front/index.jsp?codeRubrique=53&lang=EN&siteCode=AVP_CA It is preferred that full names (can include multiple names) be used instead of an abbreviation.
163. Manufacturer	NM	Manufacturer corresponding to the administered immunization	AN	Text	120		
164. Lot #	NM	The product lot number corresponding to the administered immunization	AN	Text	120		
165. Route	NM	Route or method of immunization used	AN	Text	120		

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
166. Site	NM	Site location corresponding to the administered immunization	AN	Text	120		
167. Dose	NM	Dose amount and unit of measure corresponding to the administered immunization	AN	Text	120		
168. Immunization Code	NM	A coded identifier for the immunization	AN	Text	20		Use DIN where the immunization has a representative DIN
169. Coding Vocabulary	NM	Vocabulary to denote the immunization code (currently “DIN”)	AN	Text	3		Representative DIN currently
170. Date	NM	Date that the immunization was administered or refused	NUM	DATE YYYY MMDD	8		
171. Refused Flag	M	A flag to indicate that the immunization was not given but refused	AB	Text	1		Default is N. Either Yes (M) or No (N)
172. Instructions	NM	May include dose, route and site	AN	Text	250		May be included in Notes
173. Notes	NM	May include lot #, reaction to immunization, etc.	AN	Text	32k		May contain Reason for refusal or immunization

Table 9.1 – Immunization Name

Immunization Name	Immunization Name Examples
Immunization Types	Varicella, cholera, diphtheria toxoid, globulin (human), immune, haemophilus b conjugate vaccine, hepatitis A vaccine, hepatitis, vaccine, human papillomavirus vaccine, influenza virus vaccine, Japanese encephalitis virus vaccine, varicella, measles, meningococcal [all types], meningococcal polysaccharide, meningococcal conjugate, mumps, pertussis, pneumococcal [all types], pneumococcal polysaccharide, pneumococcal conjugate, polio, rabies vaccine, rotavirus vaccine, rubella, tetanus toxoid, tuberculosis vaccine, typhoid vaccine, yellow fever vaccine

10. *LABORATORY RESULTS*

May contain multiple records to represent each of the electronically received or manually entered Laboratory Results.
It is mandatory to export all available Laboratory Results electronically received or manually entered into the CMS

Table 10: Laboratory Results

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
174. Laboratory Name	M	Name of the Lab delivering the Test Results	AN	Text	120		Lab responsible for issuing the test result (not necessarily the lab performing the test)
175. Test Name Reported by Laboratory	NM	Test name reported by Laboratory	AN	Text	120		
176. Test Code	NM	Test Code Reported by the Laboratory	AN	Text	50		
177. Test Name	NM	CMS vendor or physician description of the name	AN	Text	120		E.g. Hemoglobin

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
		used to identify the lab test					
178. Accession Number	NM	Accession number issued by lab for the test result(s) report	AN	Text	120		Required if Lab provides this information
179. Result Value	NM	The numeric result value	AN	Text	120		Required where there is a numeric test result. Include decimal places
180. Result Unit of Measure	NM	Unit of Measure as supplied by the Lab associated with the Result Value	AN	Text	120		Includes unit quantity and unit of measure numeric and alpha numeric. Required where a test result value is provided
181. Reference Range Low Limit	NM	A numeric value where it exists	NUM	Text	1k		Required where there is a numeric test result. Include decimal places
182. Reference Range High low	NM	A numeric value where it exists	NUM	Text	1k		Required where there is a numeric test result. Include decimal places
183. Reference Range Text	NM	Where lab sends high and/or low data that can't be parsed as high or low reference range	AN	Text	1k		
184. Lab Requisition Date/Time	NM	Date & Time that the lab test was ordered	NUM & Delimiter	DATE|TIME YYYYMMDD|HHMM	13		The delimiter is the pipe bar character. Use 24 - hour (Military) clock.
185. Collection Date/Time	M	The date and time that the specimen was collected	NUM & Delimiter	DATE|TIME YYYYMMDD|HHMM	13		Date followed by Time as recorded by the Testing Lab. The delimiter is the pipe bar character. Use 24 - hour (Military) clock.

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
186. Date/Time Result received by CMS	NM	The date the lab result is received on the CMS	NUM & Delimiter	DATE| TIME YYYY MMDD| HHMM	13		Date followed by Time as recorded by the Testing Lab. The delimiter is the pipe bar character. Use 24 - hour (Military) clock.
187. Date/Time Result Reviewed	NM	The date the lab result is reviewed	NUM & Delimiter	DATE| TIME YYYY MMDD| HHMM	13		Date followed by Time as recorded by the Testing Lab. The delimiter is the pipe bar character. Use 24 - hour (Military) clock.
188. Result Reviewer	NM	Person authorized that reviewed result	AN	Text	50		OHIP number representing physician that reviewed the result. Otherwise First & Last Name of reviewer
189. Result Reviewer First Name	NM	The First Name of the authorized person that reviewed result	AN	Text	50		
190. Result Reviewer Last Name	NM	The Last Name of the authorized person that reviewed result	AN	Text	50		
191. Result Reviewer OHIP Physician Number	NM	The OHIP Physician Number of the authorized person that reviewed result	AN	Text	6		
192. Result Normal / Abnormal Flag	M	A flag set by the lab to indicate a test result is deemed normal, abnormal or unknown	AN	Code	1	Abnormal (Y), Normal (N) or Unknown (U)	If there is no CDS Data available in this data field the CMS must translate the value of this data field to Unknown (U)
193. Text – Test Results Information reported	NM	Results Information reported by the Laboratory	AN	Text	32k		It is important to delineate lines with a carriage return

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
by the Laboratory		that must be left unstructured (e.g. microbiology results, cytology, etc.)					where there are multiple lines of text
194. Notes from Lab	NM	Notes Associated from Results reported by Lab	AN	Text	32k		
195. Text – Physician's notes	NM	Physicians Notes Associated with Results Reported	AN	Text	32k		

11. *APPOINTMENTS*

May contain multiple records for past and future appointments for a patient.
All appointments must be exported and imported if the exporting CMS contains patient appointment information.

Table 11: Appointments

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
196. Appointment Time	M	Appointment Time	NUM	HHMM	4		Use 24 - hour (Military) clock.
197. Sequence Index	NM	Identifying different patients in the same time slot	NUM	Text	2		Always start at 1
198. Duration	NM	Length of appt. in minutes	NUM	Text	1k		
199. Appointment Status	NM	Status of the appointment	AN	Text	250		Example uses of this field: Confirmed, Cancelled, no-Show, no- cancellation Allowed, Other descriptors possible
200. Appointment Date	M	Date of appointment	NUM	DATE YYYY	8		

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
				MMDD			
201. Provider Last Name	NM	Last name of Provider that patient is expected to visit	AN	Text	50		
202. Provider First Name	NM	First name of Provider that patient is expected to visit	AN	Text	50		
203. Provider OHIP Physician Number	NM	Provider ID Currently, Provider's OHIP Billing Number where it exists	AN	Text	6		
204. Appointment Purpose	NM	Appointment Purpose / Reason for Visit	AN	Text	250		May contain procedure(s) and other details about the appointment
205. Appointment Notes	M	Summary detailing the patient appointment	AN	Text	32k		Notes to include everything but the patient's name

12. *PHYSICIAN'S MY CLINICAL NOTES*

This section may contain one or more types of clinical notes that the physician and staff record and the physician signs-off.

Table 12: Physician's My Clinical Notes

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
206. Note Type	NM	Heading to identify the type of note as per Business Rules	AN	Text	50		Valid Entries: Physician Progress Note, Nurse Practitioner Note, Referral Note, Insurance Note, Consult Note, Recall Note,Sick Note, Legal Note, Reminder, Alerts, MoHLTC Note, WSIB Note, Patient Consent Note, Other

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
							Correspondence
207. My Clinical Notes Content	NM	Text content of the Clinical Note	AN	Text	32k		Format the note according to the order that the information was entered.
208. Event Occurred Date/Time	NM	Date and Time the event occurred (e.g. Consultation, Visit, Procedure, Follow-up)	NUM & Delimiter	DATE|TIME YYYYMMDD|HHMM	13		The delimiter is the pipe bar character. Use 24 - hour (Military) clock.
209. Note Date and Time Entered	NM	Date and time note was entered	NUM & Delimiter	DATE|TIME YYYYMMDD|HHMM	13		The delimiter is the pipe bar character. Use 24 - hour (Military) clock.
210. Note Date and Time Signed	NM	Date and time note was signed	NUM & Delimiter	DATE|TIME YYYYMMDD|HHMM	13		The delimiter is the pipe bar character. Use 24 - hour (Military) clock.
211. Note Principal Author Last Name	NM	Identity of principal author of the note –Last Name	AN	Text	50		
212. Note Principal Author First Name	NM	Identity of principal author of the note – First Name	AN	Text	50		
213. Note Principal Author Function	NM	Function of the principal author	AN	Text	50		Consistency required by Vendor to identify the principal author function (e.g. Nurse Practitioner; Physician; etc.)
214. Note Principal Author OHIP ID	NM	OHIP Number to Identity the principal author of the note (where it is a physician or OHIP billing provider)	NUM	Text	6		Corresponds with the identity of the principal author in the “Note Principle Author” data element

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
215. Note Signatory OHIP ID	NM	Identity of the physician that signed the note	NUM	Text	6		Provide OHIP id number

13. *REPORTS RECEIVED*

This section may contain one or more Reports Received as text, audio and image files.

Table 13: Reports Received

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
216. Report Media	NM	The media used for the report.	AN	Code	20	Email Download Portable Media Hardcopy	
217. Report Format	NM	The format used for the report.	AN	Code	50	Text Audio File Image	
218. Report Type File Extension & Version	M	Version that pertains to the Report Type (e.g. Microsoft Word 2003)	AN	Text	50		Vendor to consistently specify the format and version (where version exists). E.g. formats: .doc, .txt, .wav, mp3, .jpg, etc.)
219. Report Content	NM	Text content of the Report (i.e. may be text, image or audio)	AN	Text	10MB		Report content to be organized according to the way it was entered by the user or received electronically.
220. Report Class	M	These are subcategories for Reports	AN	Code	50	Diagnostic Imaging Report Diagnostic Test Report Other Letter Consultant Report	
221. Report Sub-class	NM	These are the subcategories for a the Report Class	AN	Text	50		See Report Sub-Cass suggested valid entries in Table 13.1 corresponding to each Report Class. CMS

DATA ELEMENT	MANDATORY	DEFINITION	DATA TYPE	FORM	LENGTH	CODE SOURCE	BUSINESS RULES
							vendors may use other report sub-class terminology but must maintain consistency with their extract for export purposes.
222. Event Occurred Date/Time	NM	Date and Time the event occurred (e.g. Consultation, Visit, Procedure)	NUM & Delimiter	DATE|TIME YYYYMMDD|HHMM	13		The delimiter is the pipe bar character. Use 24 - hour (Military) clock.
223. Report Date and Time Received	NM	Date and time report was received in the medical practice	NUM & Delimiter	DATE|TIME YYYYMMDD|HHMM	13		The delimiter is the pipe bar character. Use 24 - hour (Military) clock.
224. Report Date and Time Reviewed	NM	Date and time report was reviewed	NUM & Delimiter	DATE|TIME YYYYMMDD|HHMM	13		If the report is not reviewed then this data element is left blank. The delimiter is the pipe bar character. Use 24 - hour (Military) clock.
225. Report Principal Author First Name	NM	Identity of principal author of the report - First Name	AN	Text	50		
226. Report Principal Author Last Name	NM	Identity of principal author of the report - Last Name	AN	Text	50		
227. Report Reviewed By	NM	OHIP Identity of the physician that reviewed the Report	AN	NUM	6		

Table 13.1 – Report Sub-Class

Report Class	Report Sub-class Examples	
Diagnostic Imaging Report	Misc. X-Ray, Mammogram, Chest X-Ray, Abdomen X-Ray, Lumbar Spine X-Ray, Cervical Spine X-Ray, Upper GI Series, ERCP X-Ray, UGI with Small Bowel, Barium Enema, Myelogram, IVP, Hysterosalpingogram, Coronary Angiography, Carotid Angiography, Other Angiography, Misc. CT Scan, CT Scan Head, CT Scan Body, Misc. MRI Scan, MRI Scan Head, MRI Scan Body, Misc. Ultrasound, Ultrasound Abdomen, Ultrasound Pelvis, Ultrasound Obstetrical, Ultrasound Breast, Ultrasound Thyroid, Venous Doppler Ultrasound, Carotid Doppler Ultrasound, Sonohistogram, Echocardiogram, Misc. Nuclear Scan, Bone Scan, Stress Heart Scan (Thallium, Sestamibi, Myoview), Brain Scan, Lung Scan, Liver-Spleen Scan, Bone Densitometry, Retinal Tomograph, Retinal Angiography	
Diagnostic Test Reports	Misc. Diagnostic Test, Pap Test Report, Mantoux Test, ECG, Stress Test (Exercise, Persantine, Dobutamine), Holter Monitor, Loop Recorder, Ambulatory BP Monitoring, Arterial Segmental Pressures (ABI), Pulmonary Function Testing, Bronchoscopy, EEG, EMG, Sleep Study, EGD-oscopy, Sigmoidoscopy, Colonoscopy, Cystoscopy, Urodynamic Testing, Colposcopy, Audiogram	
Other Letters	Letter from Patient, Living Will, Power of Attorney for Health Care, Consent from Patient, Authorization from Patient, Letter from Lawyer, Letter from WSIB, Letter from Insurance Company, Disability Report, Miscellaneous Letter	
Report Sub-class for Consult *Consult Report Sub-class value = Value A + Value B* E.g. On-Call Physician Progress Report	*Consult Report Values A* On-Call Physician, On-Call Nurse, Emergency Physician, Urgent Care/Walk-In Clinic Physician, Hospitalis, Anaesthesiology, Allergy & Immunology, Audiology, Cardiology, Cardiovascular Surgery, Chiropody / Podiatry, Chiropractic, Clinical Biochemistry, Dentistry, Dermatology, Dietitian, Emergency Medicine, Endocrinology, Family Practice, Gastroenterology, General Surgery, Genetics, Geriatrics, Hematology,	*Consult Report Values B* Consultation, Admission History, Operative Report, Discharge Summary, Progress Report, Encounter Report

Report Class	Report Sub-class Examples	
	Infectious Disease, Internal Medicine, Kinesiology, Microbiology, Midwifery, Naturopathy, Neonatology, Nephrology, Neurology, Neurosurgery, Nuclear Medicine, Nursing, Nurse Practitioner, Obstetrics & Gynecology, Occupational Therapy, Oncology / Chemotherapy, Ophthalmology, Optometry, Oral Surgery, Orthopedic Surgery, Osteopathy, Other Therapy, Otolaryngology (ENT), Palliative Care, Pathology, Pediatrics, Pharmacology, Physical Medicine, Physiotherapy, Plastic Surgery, Psychiatry, Psychology, Diagnostic Radiology, Respiratory Technology, Respirology, Rheumatology, Social Work, Speech Therapy, Sports Medicine, Therapeutic Radiology, Thoracic Surgery, Urology, Uro-Gynecology, Vascular Surgery, Other Consultant	

APPENDIX 2 - SUMMARY LINE AND RESIDUAL DATA

The exporting Offering creates a CPP that is analogous to viewing it on a computer screen or hard copy report. The CPP is presented to the physician by filling each area of the CPP (Family History, Problems, etc.) with lines of text. Each line of summary text represents descriptive patient data that the CMS generates. This text is typically what the physician sees when the CPP is displayed or printed. An example of such a line of text in the Past Health category is "Appendectomy 1983". An accumulation of such text lines will be referred to as a "Summary Line" for a CDS Category. E.g. the data used to produce this Summary Line may be simply a text string, or it may be an ICD-9 code and a year. There may be extra related data, for example the institution number of the hospital where the procedure was done, or the name of the anaesthetist, that the Offering doesn't include in the CPP view to avoid clutter. This extra related data may be structured data or free text stored in a text notes field.

When an exporting Offering provides codes in the Summary Line it is recommended that the Summary Line contain the code in brackets followed by the exporting system description applicable to the code. The importing system could decide how to best handle this information.

If an importing system contains sufficient information comprised of structured and Residual Data then the Summary Line will be accessible for reference purposes only.

It will commonly happen that the exported Summary Line will not provide exactly the same meaning within the system that the information has been imported to. This would be manifested in the way the Offering represents the combined structured and/or Residual Data. There may be a different ordering of words, or a different choice of which structured fields need to be displayed. This is quite acceptable, as long as the essential medical content and context of the lines is preserved. The physician should be the final authority to decide if the medical content and context of the combined Residual and Structured Data within the importing system is equivalent to the corresponding Summary Line.

Within each respective section of the Core Data Set, residual data will be captured within four fields. This structure will allow exporting CMS vendors a flexible method to represent existing data that does not fit into any other defined field and allow importing CMS vendors to quickly identify what the residual data represents and its corresponding datatype.

Field Name	Field Description	XML	Notes
Residual Data Element Name	The name of the data field	<name> … </name>	
Residual Data Element Description	A description of the data field	<description> … </description>	
Residual Data Element Type	The primitive XML datatype of the data field	<datatype> … </datatype>	Mandatory if a Residual Data Element Name is provided
Residual Data Element Content	The content of the data element	<content> … </content>	Mandatory if a Residual Data Element Name is provided

All four fields should be grouped in a set and can be repeated multiple times, as a group, within each section as required.

To illustrate an example of how the residual data fields are to be used, assume that a patient has the following Personal History information that needs to be exported (NOTE: This is only an example and not the expected format for validation):

Dislocated Shoulder, May 3, 2000
Using the residual data fields, this data can be represented:

<residual information>
<data element>
<name>**Incident**</name>
<description>**A medical event in a patient's history**</description>
<datatype>**text**</datatype>
<content>**Dislocated Shoulder**</content>
</data element>
<data element>
<name>**Incident Date**</name>
<description>**The date of a medical event in a patient's history**</description>
<datatype>**date**</datatype>
<content>**20000503**</content>
</data element>
</residual information>

APPENDIX 3 – WORKING WITH NAME PART ELEMENTS

As a guide for using the Name Part the following applies: when sharing clients' given name parts, the distinction between first, second, and third given name parts is inferred from the natural order in which they would be displayed and exported [in Canada, that means first given name part first, second given name part second third given name part third, (followed by family name part).]. Canadians may have numerous middle names, which need to be represented in the CDS export. As a result, it is important to consider the 2nd, 3rd and 4th names as 'given names'.

Example:
Name (text): Jane Smith Doe, Brown will be translated into following and provided by export in this order:

Name Part: ***Jane***
Name Part Type: 'Given'
Name Part Qualifier: 'Birth'
Name Purpose: 'Legal'

Name Part: ***Smith*** this is how the *middle name* is communicated/represented
Name Part Type: 'Given'
Name Part Qualifier: 'Birth'
Name Purpose: 'Legal'

Name Part: ***Doe***
Name Part Type: 'Family'
Name Part Qualifier: 'Spouse'
Name Purpose: 'Legal'

Name Part: ***Brown***
Name Part Type: 'Family'
Name Part Qualifier: 'Birth'
Name Purpose: Legal

APPENDIX 4 – README.TXT

ReadMe.txt will, at a minimum, include the following information:

- Contact information of the Physician Group the data is being exported from
- Name of CMS vendor, Offering and version number (if used) the data is being exported from
- Application support contact information of the system the data is being exported from
- Media type used for the export file(s)
- Number of media devices used in the creation of the export file(s)
- Date and Time stamp at time of export
- Information about the export file(s)
- Total byte count of the export file(s)
- Total patients files exported
- Number of errors generated during export
- Patient ID range by media device (in the event of multiple CD-Rs)

Example of ReadMe.txt:

Physician Group	“Fairlaine FHN”
CMS Vendor, Product & Version	“Sparrow”, “Sparrow Hawk, version 1.3.4”
Application Support Contact	“416 623 4444, Customer Support, John Smith”
Media type	“USB II Storage device”
Number of media	“1”
Date and Time stamp	“January 1, 2007, 12:00am
Total byte count of the export file(s)	“10,434,500”
Total patients files extracted	“5,238”
Number of errors	“0”
Patient ID range	“00023 to 12335”

APPENDIX 5 – EXPORT EVENT LOG

The Export Event Log will at a minimum include the following information:

- Patient ID
- CDS Categories and their respective byte counts
- Total byte count for each patient record

Example A of "Export Event Log" file:

Patient ID	CPP	My Clinical Notes	Reports: TEXT	Reports: Images	Appointments	Demo graphics	Total Bytes
ID0000001	1253	123	234	289	25	200	
ID0000002	167	23	34	0	10	250	
ID0000003	237	0	0	0	15	150	

APPENDIX 6 – IMPORT EVENT LOG

The Import Event Log will at a minimum include the following information:

- Patient ID
- Status of Discrete Data Elements imported (e.g. Y/N)
- Status of Summary Line imported (e.g. Y/N)
- Discrete Data Element Errors and short description of error
- Type of file error

Example of "Import Event Log" file:

Patient ID	Discrete Data Elements Import Successful	Summary Line Import Successful	Other Import Categories (i.e. Reports, Images)	Errors
ID0000001	Yes	Yes	Yes	Immunization, Date: invalid date format
ID0000002	Yes	Yes	Yes	
ID0000003	No	No	No	File unreadable
ID0000004	No	Yes	No	Residual Data, Allergies and Adverse Reactions: unreadable Voice file: unreadable

SCHEDULE C
FUTURE REQUIREMENTS

OntarioMD will publish new CMS Specifications from time to time. To continue providing an offering as a Certified Offering under a new Specification, Vendors will be required to meet or exceed the requirements set out in new specifications within prescribed timeframes.

1. MOHLTC General Requirements

There are a number of MOHLTC initiatives that are being considered for future CMS Specifications, these include:

- chronic disease management programs;
- allied health professional reporting; and
- Family Health Team program delivery evaluations.

Other initiatives will be reviewed in the future.

2. Ontario Lab Information System ("OLIS")

OLIS will start to provide secure electronic ordering, processing and reporting of the millions of diagnostic laboratory tests performed annually. This will speed up the testing process for patients and reduce the need for repeat tests.

The implementation of OLIS will change the way a CMS Offering interfaces with commercial laboratories. It is also anticipated that client authentication and registration requirements will change at this time.

3. Client Registration

SSHA runs an identity and access management program known as ONE ID. ONE ID is a series of systems and processes that ensure the right people have access to the right eHealth services. This typically includes a registration process to verify the real-world identity of health care professionals and authorization from the organization providing the eHealth services.

Two key concepts to identity and access management are registration and enrolment. Registration is defined as the documentation of an individual's identity in a directory so that we know them uniquely. Enrolment is defined as the association of a registered individual with an application and any roles and permissions associated with it.

In the future, CMS ASP Vendors may be required to integrate their Offerings with SSHA's IAM secure ONE ID infrastructure directly or through the OntarioMD.ca portal.

