Community Medication Treatment Plan (MTP)

Rev. 1.4 – Trial Implementation

Date: February 17, 2022
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Please verify you have the most recent version of this document. See here for Trial Implementation and Final Text versions and here for Public Comment versions.
Foreword

This is a supplement to the future IHE Pharmacy Technical Framework. Each supplement undergoes a process of public comment and trial implementation before being incorporated into the volumes of the Technical Frameworks.

This supplement is published on February 17, 2022 for trial implementation and may be available for testing at subsequent IHE Connectathons. The supplement may be amended based on the results of testing. Following successful testing it will be incorporated into the future Pharmacy Technical Framework. Comments are invited and may be submitted at Pharmacy Public Comments.

This supplement describes changes to the existing technical framework documents.

“Boxed” instructions like the sample below indicate to the Volume Editor how to integrate the relevant section(s) into the relevant Technical Framework volume.

Amend Section X.X by the following:

Where the amendment adds text, make the added text bold underline. Where the amendment removes text, make the removed text bold strikethrough. When entire new sections are added, introduce with editor’s instructions to “add new text” or similar, which for readability are not bolded or underlined.

General information about IHE can be found at IHE.

Information about the IHE Pharmacy domain can be found at IHE Domains.

Information about the organization of IHE Technical Frameworks and Supplements and the process used to create them can be found at Profiles and IHE Process.

The current versions of the Pharmacy Technical Framework supplements can be found at Pharmacy Technical Framework.
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Introduction to this Supplement

The Community Medication Treatment Plan Profile (MTP) describes the content and format of a medication document generated during the process in which a health care professional (in most cases, but not necessarily always, a medical specialist or a general practitioner) adds a medication to the medication treatment plan of a patient. It does not describe the case where it is the patient himself/herself who adds information about his/her medication: this case is the subject of another profile.

A Medication Treatment Plan Item is an entity describing a medication included in the Medication Treatment Plan of the patient. Such medications can as well be medications that will later be prescribed by e.g., a medical specialist or a general practitioner, as self-medications reported by the patient himself.

The MTP document can contain all medications the patient was supposed to take in the past as well as those that are current and active (i.e., should be taken by the patient). The term “Plan” therefore refers to the fact that the contained information can be used to make an intake plan for the patient. In this case, the plan describes which medications the patient has (or had in case of terminated medications) to take, the amount of each medication and at what time in the day. The plan in itself has no dependency on prescriptions or dispenses, which are related to the logistic process necessary to get the drugs when specific procurement rules apply.

Documents created according to this profile are intended to be used in the context of the “Community Medication Prescription and Dispense” Integration Profile (CMPD). This supplement also references other documents. The reader should have already read and understood these documents:

1. PHARM Common parts document
2. PHARM Community Medication Prescription and Dispense Integration Profile (CMPD)
3. PCC Technical Framework Volume 1
4. PCC Technical Framework Volume 2
5. IT Infrastructure Technical Framework Volume 1
6. IT Infrastructure Technical Framework Volume 2
7. IT Infrastructure Technical Framework Volume 3
8. HL7 and other standards documents referenced in this document
9. IHE Pharmacy White Paper

Medication Treatment Plan Items are very close to Prescription Items: the main difference resides in the position in the global workflow of the two: while a MTP item is more an

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1 The first four documents are located on the IHE Website at [http://ihe.net/Resources/Technical_Frameworks/](http://ihe.net/Resources/Technical_Frameworks/). The ITI Technical Framework can be found at [https://profiles.ihe.net/ITI/TF/index.html](https://profiles.ihe.net/ITI/TF/index.html). The remaining documents can be obtained from their respective publishers.
information ("this medication is part of the medication treatment plan"), a Prescription Item represents an instantiated *prescription* of the same medication. Most of the normative sections of the MTP Profile will therefore be identical to the corresponding ones in the PRE Profile.

**Open Issues and Questions**

Open issues from the PRE Profile:

- Inclusion of non-medication products: shall they be covered by this profile?
- Grouping and linkage of several Medication Treatment Plan Items into groups in order to represent a logical relation between several MTP items (i.e., expression of a layer between the complete Community Medication Treatment Plan and the Medication Treatment Plan Items).

Each MTP Item could belong to one or several groups of MTP Items, each group being part of the Community Medication Treatment Plan. A group may represent a kind of "therapeutic protocol" (e.g., a chemotherapy protocol).

**Closed Issues**

None
IHE Technical Frameworks General Introduction

The IHE Technical Frameworks General Introduction is shared by all of the IHE domain technical frameworks. Each technical framework volume contains links to this document where appropriate.

9 Copyright Licenses

IHE technical documents refer to, and make use of, a number of standards developed and published by several standards development organizations. Please refer to the IHE Technical Frameworks General Introduction, Section 9 - Copyright Licenses for copyright license information for frequently referenced base standards. Information pertaining to the use of IHE International copyrighted materials is also available there.

10 Trademark

IHE® and the IHE logo are trademarks of the Healthcare Information Management Systems Society in the United States and trademarks of IHE Europe in the European Community. Please refer to the IHE Technical Frameworks General Introduction, Section 10 - Trademark for information on their use.
IHE Technical Frameworks General Introduction Appendices

The IHE Technical Framework General Introduction Appendices are components shared by all of the IHE domain technical frameworks. Each technical framework volume contains links to these documents where appropriate.

Update the following appendices to the General Introduction as indicated below. Note that these are not appendices to this domain’s Technical Framework (TF-1, TF-2, TF-3 or TF-4) but rather, they are appendices to the IHE Technical Frameworks General Introduction located here.

**Appendix A – Actors**

Add the following new or modified actors to the IHE Technical Frameworks General Introduction Appendix A:

<table>
<thead>
<tr>
<th>New (or modified) Actor Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No new actors</td>
<td></td>
</tr>
</tbody>
</table>

**Appendix B – Transactions**

Add the following new or modified transactions to the IHE Technical Frameworks General Introduction Appendix B:

<table>
<thead>
<tr>
<th>New (or modified) Transaction Name and Number</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>No new transactions</td>
<td></td>
</tr>
</tbody>
</table>
Add the following new or modified glossary terms to the IHE Technical Frameworks General Introduction Appendix D:

<table>
<thead>
<tr>
<th>New (or modified) Glossary Term</th>
<th>Definition</th>
<th>Synonyms</th>
<th>Acronym/Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medication Treatment Plan (concept)</td>
<td>The concept of “Medication Treatment Plan” of a patient represents the collection of all medications the patient was planned to take in the past, presently or in the future. Technically, the Medication Treatment Plan is the complete set of all Medication Treatment Plan Items of the patient, i.e., not partitioned or grouped by pathology, planner, organization, etc. Each of these single Medication Treatment Plan Item is introduced into the Medication Treatment Plan by publishing an IHE Pharmacy MTP document.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medication Treatment Plan Item</td>
<td>A Medication Treatment Plan Item is a single medication the patient was planned to take in the past or is planned to take presently or in the future, including its name, dosage, frequency of intake, etc. as well as other information such as patient- and fulfillment instructions and substitution handling. A Medication Treatment Plan Item triggers prescriptions, dispenses or medication administrations in order to fulfill the medication treatment planned by the item.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Volume 1 – Profiles

Add the following to Section 1.10

1.10 History of Annual Changes

- In the 2016-2017 cycle of the IHE Pharmacy initiative, the following major changes were introduced to this supplement (please see the list of this year’s change proposals for the complete set of changes at https://drive.google.com/drive/folders/13jNXdHJZig9w2mCbot87xHjU-wf2IFb0):
  - Profile has been renamed from “Medication Treatment Plan” to “Community Medication Treatment Plan”
  - Parent template CCD on section level removed
  - Constraint that section id has to be equal to document id has been removed
  - Title and text elements have been added on section level
  - Reporting of authors into the entry-level refined
  - Substitution permission structure refined and reorganized at “Substitution Permission Content Module” located in PRE Profile
  - Pharm-Namespace “ihe:pharm:medication” changed to “ihe:pharm” (see Medicine Entry Content Module located in PRE Profile)

Important Note: Due to the nature of some of the changes, this profile revision is no longer backward compatible to the former revisions.

- In the 2022 cycle, the supplement was updated based on CP-PHARM-142, CP-PHARM-144, and CP-PHARM-147.

Add the following to Section 2.5

2.5 Dependencies of the Pharmacy Integration Profiles

<table>
<thead>
<tr>
<th>Community Medication Treatment Plan (MTP)</th>
<th>PCC</th>
<th>Content definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>This profile includes Section and Entry Content Modules of the Patient Care Coordination (PCC) domain.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
X Community Medication Treatment Plan (MTP) Profile

The Community Medication Treatment Plan (MTP) is a Content Module Profile describing the content and format of a medication document. Each medication document describes one medication of a patient, i.e., a medication that has been, is or will be taken by the patient.

Depending on the nature of the medication, it can then be prescribed (if dispense requires a medical prescription) and dispensed (if dispense is performed by an entity documenting the dispense process). A Medication Treatment Plan Item can also be used by a healthcare professional to document the fact that the patient is taking some medication. Pharmacists can also use this entity for describing over-the-counter medication before dispensing it.

Documents created according to this profile are intended to be used in the context of the “Community Medication Prescription and Dispense” Integration Profile (CMPD).

The Community Medication Prescription and Dispense workflow starts with the creation of a medication treatment plan when the health care professional decides that the patient needs a medication.

A Community Medication Treatment Plan document is issued by one healthcare professional for one patient, in the context of zero or one administrative encounter (between the patient and the healthcare professional and/or the healthcare institution). A medication treatment plan contains one Medication Treatment Plan Item (“line” on a medication plan). Each line relates to one and only one medication. A medication is generally the outcome of a clinical decision, but can as well be the outcome of a recommendation of a pharmacist (over-the-counter dispense) or the outcome of a decision of the patient (self-medication).

This profile defines the content and format of such a Community Medication Treatment Plan document. It does not handle the situation where it is the patient himself/herself who adds information about his/her medication: this case is the subject of another profile.

For a detailed overview on the whole Pharmacy domain business processes, please refer to the “Common parts” document, which is accompanying this profile.

X.1 MTP Actors, Transactions, and Content Modules

This section defines the actors, transactions, and/or content modules in this profile. General definitions of actors are given in the Technical Frameworks General Introduction Appendix A at http://ihe.net/Technical_Frameworks/.

Figure X.1-1 shows the actors directly involved in the MTP Profile and the direction that the content is exchanged.

A product implementation using this profile must group actors from this profile with actors from a workflow or transport profile to be functional. The grouping of the content module described in this profile to specific actors is described in more detail in the “Required Actor Groupings” section below.
Figure X.1-1: MTP Actor Diagram

Table X.1-1 lists the content module(s) defined in the MTP Profile. To claim support with this profile, an actor shall support all required content modules (labeled “R”) and may support optional content modules (labeled “O”).

Table X.1-1: MTP Profile - Actors and Content Modules

<table>
<thead>
<tr>
<th>Actors</th>
<th>Content Modules</th>
<th>Optionality</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Creator</td>
<td>Community Medication Treatment Plan Content Module 1.3.6.1.4.1.19376.1.9.1.1.6</td>
<td>R</td>
<td>MTP TF-3: 6.3.1.D1</td>
</tr>
<tr>
<td>Content Consumer</td>
<td>Community Medication Treatment Plan Content Module 1.3.6.1.4.1.19376.1.9.1.1.6</td>
<td>R</td>
<td>MTP TF-3: 6.3.1.D1</td>
</tr>
</tbody>
</table>

X.1.1 Actor Descriptions and Actor Profile Requirements

Most requirements are documented in Transactions (Volume 2) and Content Modules (Volume 3). This section documents any additional requirements on profile’s actors.

X.2 MTP Actor Options

Options that may be selected for each actor in this profile, if any, are listed in the Table X.2-1. Dependencies between options when applicable are specified in notes.

Table X.2-1: Community Medication Treatment Plan - Actors and Options

<table>
<thead>
<tr>
<th>Actor</th>
<th>Option Name</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Consumer</td>
<td>View Option (See Note 1)</td>
<td>PCC TF-2: 3.1.1</td>
</tr>
<tr>
<td></td>
<td>Document Import Option (See Note 1)</td>
<td>PCC TF-2: 3.1.2</td>
</tr>
<tr>
<td></td>
<td>Section Import Option (See Note 1)</td>
<td>PCC TF-2: 3.1.3</td>
</tr>
<tr>
<td></td>
<td>Discrete Data Import Option (See Note 1)</td>
<td>PCC TF-2: 3.1.4</td>
</tr>
</tbody>
</table>
### X.3 MTP Required Actor Groupings

An actor from this profile (Column 1) shall implement all of the required transactions and/or content modules in this profile in addition to all of the transactions required for the grouped actor (Column 2).

If this is a content profile, and actors from this profile are grouped with actors from a workflow or transport profile, the Content Bindings reference column references any specifications for mapping data from the content module into data elements from the workflow or transport transactions.

In some cases, required groupings are defined as at least one of an enumerated set of possible actors; this is designated by merging column one into a single cell spanning multiple potential grouped actors. Notes are used to highlight this situation.

Section X.5 describes some optional groupings that may be of interest for security considerations and Section X.6 describes some optional groupings in other related profiles.

Actors from the Pharmacy CMPD Profile embody the Content Creator and Content Consumer sharing function of this profile. A Content Creator or Content Consumer may be grouped with appropriate actors from the XDS, XDM or XDR Profiles to exchange the content described therein. The metadata sent in the document sharing or interchange messages has specific relationships or dependencies (which we call bindings) to the content of the clinical document described in the content profile.

The Patient Care Coordination Technical Framework defines the bindings to use when grouping the Content Creator of this profile with actors from the Pharmacy CMPD Integration Profiles.

<table>
<thead>
<tr>
<th>MTP Actor</th>
<th>Actor to be grouped with</th>
<th>Reference</th>
<th>Content Bindings Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Consumer</td>
<td>ITI XDS.b Document Consumer</td>
<td>ITI TF-1: 10.1</td>
<td>PCC TF-2: 4.1</td>
</tr>
<tr>
<td></td>
<td>ITI XDR Document Recipient</td>
<td>ITI TF-1: 15.1</td>
<td>PCC TF-2: 4.1</td>
</tr>
<tr>
<td></td>
<td>ITI XDM Portable Media Importer</td>
<td>ITI TF-1: 16.1</td>
<td>PCC TF-2: 4.1</td>
</tr>
<tr>
<td>Content Consumer</td>
<td>ITI Consistent Time Client</td>
<td>ITI TF-1: 7.1</td>
<td>--</td>
</tr>
<tr>
<td>Content Creator</td>
<td>none</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note 1: The actor shall support at least one of these options.
X.4 MTP Overview

The MTP describes all medication the patient had to take, is taking or will take in the future, regardless who decided to include each medication in the medication plan.

There is an important difference between the MTP and the treatment card a patient may have: while the first contains all medications (including past medications), the latter contains only the current (active) treatment.

The MTP is also not mandatorily linked to prescriptions, dispenses or medication administrations: it informs that the included medications can be subject of prescriptions, dispenses, pharmaceutical advices or medication administrations. As such, it represents the “head” of a chain of actions “add – prescribe – dispense – advice” - all concerning the same medication treatment plan item. This of course does not prevent the same product to be described in several medication treatment plan items: it enables to link together several actions concerning the same “order”.

The origin of the information “You (patient) have to take this medication” is generally coming from a healthcare provider (physician, pharmacist). The case where the origin is the patient himself, saying “I am taking this product” (e.g., vitamins), is not covered by this profile.

Documents created according to this profile are intended to be used in the context of the “Community Medication Prescription and Dispense” Integration Profile (CMPD).

X.4.1 Concepts

The Community Medication Prescription and Dispense workflow starts with the inclusion of a medication in the medication treatment plan. This action is generally performed by a healthcare professional (physician or pharmacist) but can also be performed by the patient himself.

A Community Medication Treatment Plan document is issued by one ordering person for one patient, in the context of zero (inclusion in the absence of the patient of by the patient himself) or one administrative encounter (between the patient and the ordering person (physician or pharmacist) and/or the healthcare institution / pharmacy). A medication treatment plan contains one medication treatment plan item (line that exists or did exist on a treatment plan). Each line relates to one medication.

The first situation illustrates the inclusion of a new medication in the patient’s treatment plan. A medication treatment plan item is created, a prescription is issued and dispensed in two steps (partial dispense). Then the dosage is changed. After a while the patient runs out of medication and the prescription is renewed and dispensed again. Finally a second dosage change is performed.

The second situation illustrates the inclusion of a new medication in the patient’s treatment plan. No prescription is required for getting it from a pharmacy. A medication treatment plan item is created and dispensed. Then the dosage is changed. Finally the patient goes back to the pharmacy because he ran out of medication.
This profile defines the content and format of such a Community Medication Treatment Plan document.

For a detailed overview on the whole Pharmacy domain business processes, please refer to the “Common parts” document, which is accompanying this profile.

**X.4.2 Use Cases**

**X.4.2.1 Use Case #1: Update of the Medication Treatment Plan**

This use case occurs when a new medication has to be added to the medication treatment plan.

**X.4.2.1.1 Update of the Medication Treatment Plan Use Case Description**

Suffering from a severe flu, a patient is visiting his general practitioner. The patient informs his GP that he is already taking paracetamol three times a day. As it is not efficient enough, the GP complements the treatment with 1 tab of ibuprofen twice a day during 5 days. He makes a prescription for getting a box of 20 from the pharmacy.
In order to document the whole medication, the GP creates two Medication Treatment Plan Items (i.e., two MTP documents) through his prescribing module: one for describing the paracetamol that the patient is already taking since 1 week, and one for describing the ibuprofen medication. Both MTP items describe the corresponding medication as well as the duration (starting one week before for the paracetamol, 5 days at all for the ibuprofen).

The prescription itself (also created through the prescribing module) results in a Prescription Item describing the exact prescribed medication (including brand name, size of box, etc.).

MTP items shall then be assembled and be submitted to the Community Medication Prescription and Dispense system to be validated and introduced into the treatment plan. The same occurs for the PRE item in order to be validated and dispensed.

Refer to the Community Medication Prescription and Dispense Integration Profile (CMPD) for detailed use case information.

**X.4.2.1.2 Update of the Medication Treatment Plan Process Flow**

**Pre-conditions:**

This content module is being used when a healthcare professional decides to describe a new medication treatment in the patient’s medication treatment plan. Note that such description may be made a posteriori for documentation purpose (e.g., when the patient is telling him “some time ago, I took this medication”).

**Main Flow:**

Typical workflow related to a new prescription is the following:

1. The healthcare professional decides that the patient needs a specific medication.
2. The medication is described in the medication treatment plan through a MTP Item;
3. The medication is prescribed through a PRE Item.

Typical workflow related to the documentation of patient’s words is the following:

1. The patient informs his healthcare professional that he is / was taking a specific medication;
2. If the healthcare professional endorses the medication, the medication is taken over by the healthcare professional into the medication treatment plan through a MTP Item (detailed description) or through another entity from an ad-hoc profile.

**Post-conditions:**

Several actions can occur after having submitted the MTP item:

- Prescription of the MTP item: PRE item;
Dispense of the MTP item if it does not require a prescription: DIS item;
Comment or modification of the MTP item: PADV item;
Generation of a treatment card for the patient from the active MTP items (items with a starting date in the past and an ending date in the future).

More detailed scenarios can be found in the IHE Pharmacy White Paper.

**X.5 MTP Security Considerations**

The security considerations for a content module are dependent upon the security provisions defined by the grouped actor(s).

The MTP Integration Profile assumes that a minimum security and privacy environment has been established across all participants. There must exist security policies regarding the use of training, agreements, risk management, business continuity and network security that need to be already in place prior to the implementation of MTP.

The IHE ITI ATNA Integration Profile is required of the actors involved in the IHE transactions specified in this profile to protect node-to-node communication and to produce an audit trail of the PHI related actions when they exchange messages.

In addition, the IHE ITI DSG Integration Profiles can be applied to the actors involved in the transactions specified in this profile to securely identify individuals involved in transactions and verify document integrity and authorizations (DSG).

Interested parties should also read the detailed Security Considerations sections provided for each of the aforementioned profiles in the IHE ITI Technical Framework and its supplements.

The MTP Profile does have a few security considerations of its own.

Pharmacy systems should be thoughtfully designed so that providers are able to review and verify information before it is imported into their Pharmacy system, and that positive user acknowledgements are made before import, and audit trails are recorded when imports occur.

Imported information should be traceable both to the source Pharmacy system, and the receiver that accepted it into the Pharmacy system. XDS Affinity domain policies should support policies and procedures for tracing information flows between Pharmacy systems.

Because the information being transferred is in XML, it will be common that different Pharmacy systems utilize different transformations to render the contents into human readable form. A Content Creator should make available the transforms used by the sending provider to review the documents, and a Content Consumer must support rendering the information as seen by the sending provider, allowing both providers to see what was sent in its original rendered form.

**X.6 MTP Cross Profile Considerations**

Section not applicable.
Appendices to Volume 1

None
Volume 2 – Transactions

470  Section not applicable.
Volume 3 – Content Modules

5 Namespaces and Vocabularies

Add to Section 5 Namespaces and Vocabularies

<table>
<thead>
<tr>
<th>codeSystem</th>
<th>codeSystemName</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.6.1.4.1.19376.1.9</td>
<td>IHE Pharmacy Object Identifiers</td>
<td>This is the root OID for all IHE Pharmacy objects</td>
</tr>
<tr>
<td>1.3.6.1.4.1.19376.1.5.3.4</td>
<td>Namespace OID used for IHE Extensions to CDA Release 2.0</td>
<td></td>
</tr>
</tbody>
</table>

See also the Namespaces and Vocabularies of the IHE PCC Technical Framework (PCC-TF2/Namespaces and Vocabularies).

Add to Section 5.1.1 IHE Format Codes

<table>
<thead>
<tr>
<th>Profile</th>
<th>Format Code</th>
<th>Media Type</th>
<th>Template ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Medication Treatment Plan (MTP)</td>
<td>urn:ihe:pharm:mtp:2015</td>
<td>text/xml</td>
<td>1.3.6.1.4.1.19376.1.9.1.1.6</td>
</tr>
</tbody>
</table>

Add to Section 5.1.2 IHE ActCode Vocabulary

Section not applicable.

Add to Section 5.1.3 IHE RoleCode Vocabulary

Section not applicable.
6 Content Modules

6.3.1 CDA Document Content Modules

Add to Section 6.3.1.D Document Content Modules

6.3.1.D1 Community Medication Treatment Plan (MTP) Document Content Module

Structure of a Community Medication Treatment Plan Document.

6.3.1.D1.1 Format Code

The XDSDocumentEntry format code for this content is urn:ihe:pharm:mtp:2015.

6.3.1.D1.2 Parent Template

This document is an instance of the Medical Document template.

6.3.1.D1.3 Referenced Standards

All standards which are reference in this document are listed below with their common abbreviation, full title, and link to the standard.
Table 6.3.1.D1.3-1: MTP - Referenced Standards

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Title</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDAR2</td>
<td>HL7 CDA Release 2.0</td>
<td>HL7 CDA Release 2.0</td>
</tr>
<tr>
<td>IHE PCC</td>
<td>IHE PCC Medical Documents Specification (1.3.6.1.4.1.19376.1.5.3.1.1.1)</td>
<td>Medical Documents Specification (1.3.6.1.4.1.19376.1.5.3.1.1.1)</td>
</tr>
<tr>
<td>XMLXSL</td>
<td>Associating Style Sheets with XML documents</td>
<td>Associating Style Sheets with XML documents</td>
</tr>
</tbody>
</table>

6.3.1.D1.4 Data Element Requirement Mappings to CDA

This section identifies the mapping of data between referenced standards into the CDA implementation guide.

Table 6.3.1.D1.4-1: MTP - Data Element Requirement Mappings to CDA

<table>
<thead>
<tr>
<th>Clinical Data Element</th>
<th>CDA Release 2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient Information</strong></td>
<td></td>
</tr>
<tr>
<td>Patient Administrative Identifiers</td>
<td>recordTarget/patientRole/id</td>
</tr>
<tr>
<td>Patient Name</td>
<td>recordTarget/patientRole/patient/name</td>
</tr>
<tr>
<td>Patient Gender</td>
<td>recordTarget/patientRole/patient/administrativeGenderCode</td>
</tr>
<tr>
<td>Patient Birth Date</td>
<td>recordTarget/patientRole/patient/birthTime</td>
</tr>
<tr>
<td>Patient Address</td>
<td>recordTarget/patientRole/addr</td>
</tr>
<tr>
<td>Patient Telecom</td>
<td>recordTarget/patientRole/telecom</td>
</tr>
<tr>
<td><strong>HCP Person Information</strong></td>
<td>author</td>
</tr>
<tr>
<td>HCP ID(s)</td>
<td>author/assignedAuthor/id</td>
</tr>
<tr>
<td>HCP Profession</td>
<td>author/functionCode</td>
</tr>
<tr>
<td>HCP Name</td>
<td>author/assignedAuthor/assignedPerson/name</td>
</tr>
<tr>
<td>HCP Telecom</td>
<td>author/assignedAuthor/telecom</td>
</tr>
<tr>
<td>HCP Specialty</td>
<td>author/assignedAuthor/code</td>
</tr>
<tr>
<td><strong>HCP Organization</strong></td>
<td>author/assignedAuthor/representedOrganization</td>
</tr>
<tr>
<td>HCP Organization Name</td>
<td>author/assignedAuthor/representedOrganization/name</td>
</tr>
<tr>
<td>HCP Organization Address</td>
<td>author/assignedAuthor/representedOrganization/addr</td>
</tr>
<tr>
<td>HCP Organization Telecom</td>
<td>author/assignedAuthor/representedOrganization/telecom</td>
</tr>
<tr>
<td><strong>Service Event</strong></td>
<td>documentationOf/serviceEvent</td>
</tr>
<tr>
<td>Date of Service Event</td>
<td>documentationOf/serviceEvent/effectiveTime</td>
</tr>
<tr>
<td>Service Event Code</td>
<td>documentationOf/serviceEvent/code</td>
</tr>
</tbody>
</table>

2 Service Event is optional and may contain service event information of the medical event in which context the inclusion in the medication treatment plan has been taken.
Clinical Data Element | CDA Release 2.0
---|---
Encounter in the healthcare institution\(^3\) | componentOf/encompassingEncounter
ID of the encounter | componentOf/encompassingEncounter/id
Date of Admission/Encounter start date | componentOf/encompassingEncounter/effectiveTime/low
Date of Discharge/Encounter end date | componentOf/encompassingEncounter/effectiveTime/high
Authorization | authorization/consent
Patient contacts | guardian
General Medical Information
Height, Weight | VITAL SIGNS
Allergies and Drug Sensitivities | ALLERGIES, ADVERSE REACTIONS, ALERTS
Active Problems | PROBLEM LIST
Resolved Problems | HISTORY OF PAST ILLNESS
Immunizations | HISTORY OF IMMUNIZATIONS
Pregnancy History | HISTORY OF PREGNANCIES
Medication Treatment Plan | MEDICATION TREATMENT PLAN

6.3.1.D1.5 Community Medication Treatment Plan (MTP) Document Content Module Specification

This section specifies the header, section, and entry content modules which comprise the Community Medication Treatment Plan (MTP) Document Content Module, using the Template ID as the key identifier.

Sections that are used according to the definitions in other specifications are identified with the relevant specification document. Additional constraints on vocabulary value sets, not specifically constrained within the section template, are also identified.

The notion of “context conduction” is highly dependent on the type of information carried by content profiles and its interpretation may be rather diverse and complex. It is therefore recommended not to use contextConductionInd attribute in any element of this profile.

\(^3\) Encounter is optional and shall contain encounter information if applicable.
Table 6.3.1.D.5-1: Community Medication Treatment Plan Document Content Module Specification

<table>
<thead>
<tr>
<th>Template Name</th>
<th>Community Medication Treatment Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Template ID</td>
<td>1.3.6.1.4.1.19376.1.9.1.1.6</td>
</tr>
<tr>
<td>Parent Template General Description</td>
<td>1.3.6.1.4.1.19376.1.5.3.1.1.1 [PCC]</td>
</tr>
<tr>
<td>Description</td>
<td>A document containing one Medication Treatment Plan Item representing one medication included in the global treatment plan of the patient.</td>
</tr>
</tbody>
</table>

**Document Code**

SHALL be 77603-9 LOINC, “Medication treatment plan.extended”

<table>
<thead>
<tr>
<th>Opt and Card</th>
<th>Condition</th>
<th>Header Element or Section Name</th>
<th>Template ID</th>
<th>Specification Document</th>
<th>Vocabulary Constraint</th>
</tr>
</thead>
<tbody>
<tr>
<td>M [1..1]</td>
<td></td>
<td>Patient Information</td>
<td>1.3.6.1.4.1.19376.1.9.1.4.1</td>
<td>PHARM TF-3: 6.3.1.D1.4</td>
<td></td>
</tr>
<tr>
<td>M [1..1]</td>
<td></td>
<td>Healthcare Provider Information</td>
<td>1.3.6.1.4.1.19376.1.9.1.4.2</td>
<td>PHARM TF-3: 6.3.1.D1.4</td>
<td></td>
</tr>
<tr>
<td>R2 [1..1]</td>
<td></td>
<td>Authorizations</td>
<td>1.3.6.1.4.1.19376.1.5.3.1.2.5</td>
<td>PCC TF-2: 6.3.2.7</td>
<td></td>
</tr>
</tbody>
</table>

**Sections**

<table>
<thead>
<tr>
<th>O [0..1]</th>
<th>General Medical Information (Height, Weight)</th>
<th>1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2</th>
<th>PCC TF-2: 6.3.3.4.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>O [0..1]</td>
<td>Allergies and Drug Sensitivities</td>
<td>1.3.6.1.4.1.19376.1.5.3.1.3.13</td>
<td>PCC TF-2: 6.3.3.2.11</td>
</tr>
<tr>
<td>O [0..1]</td>
<td>Active Problems</td>
<td>1.3.6.1.4.1.19376.1.5.3.1.3.6</td>
<td>PCC TF-2: 6.3.3.2.3</td>
</tr>
<tr>
<td>O [0..1]</td>
<td>Resolved Problems</td>
<td>1.3.6.1.4.1.19376.1.5.3.1.3.8</td>
<td>PCC TF-2: 6.3.3.2.5</td>
</tr>
<tr>
<td>O [0..1]</td>
<td>Immunizations</td>
<td>1.3.6.1.4.1.19376.1.5.3.1.3.23</td>
<td>PCC TF-2: 6.3.3.3.5</td>
</tr>
<tr>
<td>O4 [0..1]</td>
<td>Pregnancy History</td>
<td>1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4</td>
<td>PCC TF-2: 6.3.3.2.18</td>
</tr>
<tr>
<td>M [1..1]</td>
<td>Medication Treatment Plan</td>
<td>1.3.6.1.4.1.19376.1.9.1.2.6</td>
<td>PHARM TF-3: 6.3.3.10.S1</td>
</tr>
</tbody>
</table>

Additional explanation:

4 In case the patient is currently pregnant, this element is R and shall contain information about the current pregnancy. It shall not be used to document past pregnancies.
The sections “General Medical Information (Height, Weight)”, “Allergies and Drug Sensitivities”, “Active Problems”, “Resolved Problems”, “Immunizations”, “Pregnancy History” are considered as sections containing medical information of the patient.

Although real-world projects may require some of these information, no stricter constraints as optional (O) could been applied to these sections in the profile due to the large degree of diversity in business requirements and privacy issues among different current.

6.3.1.D1.6 MTP Conformance and Example

CDA Release 2.0 documents that conform to the requirements of this document content module shall indicate their conformance by the inclusion of the 1.3.6.1.4.1.19376.1.9.1.1.6 XML elements in the header of the document.

A CDA Document may conform to more than one template. This content module inherits from the PCC TF Medical Document, 1.3.6.1.4.1.19376.1.5.3.1.1.1, content modules and so must conform to the requirements of those templates as well as this document specification, Community Medication Treatment Plan template, 1.3.6.1.4.1.19376.1.9.1.1.6.

A complete example of the Community Medication Treatment Plan (MTP) Document Content Module is available on the IHE ftp server.

Note that this is an example and is meant to be informative and not normative. This example shows the <templateId (OIDs)> elements for all of the specified templates.

```xml
<ClinicalDocument xmlns='urn:hl7-org:v3'>
  <typeId extension="POCD_HD000040" root="2.16.840.1.113883.1.3"/>
  <templateId root='1.3.6.1.4.1.19376.1.5.3.1.1.1'/>
  <templateId root='1.3.6.1.4.1.19376.1.9.1.1.6'/>
  <id root=' ' extension=' '/>
  <code code='77603-9' displayName='Medication treatment plan.extended' codeSystem='2.16.840.1.113883.6.1' codeSystemName='LOINC'/>  
  <title>Medication Treatment Plan</title>
  <effectiveTime value='20150219012005'/>
  <confidentialityCode code='N' displayName='Normal' codeSystem='2.16.840.1.113883.5.25' codeSystemName='Confidentiality' />
  <languageCode code='en-US' />
  
  <component>
    <structuredBody>
      
      </structuredBody>
    </component>
  </ClinicalDocument>
```

Add to Section 6.3.2 Header Content Modules

6.3.2 CDA Header Content Modules

Section not applicable.
### 6.3.3 CDA Section Content Modules

#### Add to Section 6.3.3.10 Section Content Modules

#### 6.3.3.10.S1 Medication Treatment Plan Section Content Module

**Template ID**

1.3.6.1.4.1.19376.1.9.1.2.6

**Parent Template**

The Medication Treatment Plan Section contains a description of the medication planned for the patient. It includes entries for Medication Treatment Plan Items as described in the Medication Treatment Plan Item Entry Content Module.

<table>
<thead>
<tr>
<th>LOINC Code</th>
<th>Opt</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>77604-7</td>
<td>R</td>
<td>Medication treatment plan.brief</td>
</tr>
</tbody>
</table>

**Entries**

<table>
<thead>
<tr>
<th>Template ID</th>
<th>Opt</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.6.1.4.1.19376.1.9.1.3.7</td>
<td>R</td>
<td>Medication Treatment Plan Item Entry Content Module</td>
</tr>
</tbody>
</table>

```xml
<component>
  <section>
    <templateId root='1.3.6.1.4.1.19376.1.9.1.2.6'/>
    <id root=' ' extension=' '/>
    <code code='77604-7' displayName='Medication treatment plan.brief' codeSystem='2.16.840.1.113883.6.1' codeSystemName='LOINC'/>
    <title>Medication Treatment Plan</title>
    <text>
      Text as described above
    </text>
    <author>
    </author>
  </entry>
  <substanceAdministration classCode='SBADM' moodCode='INT|EVN'>
    <templateId root='1.3.6.1.4.1.19376.1.9.1.3.7'/>
  </substanceAdministration>
</section>
</component>
```

**6.3.3.10.S1.1 Parent Templates**

This section content module has no parent structure. The value for ‘section/code’ SHALL be “77604-7”, “Medication treatment plan.brief”.

**6.3.3.10.S1.2 Medication Treatment Plan Section ID**

```
<id root=' ' extension=' ' />
```
A Medication Treatment Plan identifier SHALL be represented in the section <id> Element. The data type of the ID is II.

6.3.3.10.S1.3 Section title

A Medication Treatment Plan Section title SHOULD be represented in the section <title> Element. According to CDA R2 rules for structured CDA body, “the absence of the Section.title component signifies an unlabeled section” (see HL7 Clinical Document Architecture, Release 2.0, 1.3.1 Recipient Responsibilities).

6.3.3.10.S1.4 Text

A <text> element SHOULD be represented in the section and contain the narrative version of the Medication Treatment Plan Item. This narrative block SHALL present the information to the human reader and represent the Medication Treatment Plan Item information, using the various structures available in the CDA: tables, lists, paragraphs, hyperlinks, etc.

6.3.3.10.S1.5 Medication Treatment Plan Author

In the case where the MTP author or the timestamp of a medication treatment plan is different from the author and timestamp of the Community Medication Treatment Plan-document, the MTP author and timestamp of the medication treatment plan shall be represented by the <author> element of the section.

<table>
<thead>
<tr>
<th>Data element</th>
<th>HL7 V3 Data Type</th>
<th>CDA Body position (relative XPath expression)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTP Author Profession</td>
<td>CE</td>
<td>author/functionCode</td>
</tr>
<tr>
<td>Timestamp of planning</td>
<td>TS</td>
<td>author/time</td>
</tr>
<tr>
<td>MTP Author ID</td>
<td>II</td>
<td>author/assignedAuthor/id</td>
</tr>
<tr>
<td>MTP Author Specialty</td>
<td>CE</td>
<td>author/assignedAuthor/code</td>
</tr>
<tr>
<td>MTP Author Name</td>
<td>PN</td>
<td>author/assignedAuthor/assignedPerson/name</td>
</tr>
<tr>
<td>MTP Author Organization Identifier</td>
<td>II</td>
<td>author/assignedAuthor/representedOrganization/id</td>
</tr>
<tr>
<td>MTP Author Organization Name</td>
<td>ON</td>
<td>author/assignedAuthor/representedOrganization/name</td>
</tr>
<tr>
<td>MTP Author Organization Address</td>
<td>AD</td>
<td>author/assignedAuthor/representedOrganization/address</td>
</tr>
</tbody>
</table>
6.3.4 CDA Entry Content Modules

Add to Section 6.3.4.E Entry Content Modules

6.3.4.E1 Medication Treatment Plan Item Entry Content Module
(1.3.6.1.4.1.19376.1.9.1.3.7)

A Medication Treatment Plan Item belongs to one medication treatment plan and represents one medication. It may be associated with one or more observations. A Medication Treatment Plan Item describes the medicine and dosage information as well as optional other information to the planned item such as patient- and fulfillment instructions and substitution handling.

6.3.4.E1.1 Standards

This part describes the general structure for a Medication Treatment Plan Item. It is based on the following standards:

| HL7V3 NE2009 | HL7 V3 2009 Normative Edition |
| CCD | ASTM/HL7 Continuity of Care Document |
| IHE PCC | Medications Entry (1.3.6.1.4.1.19376.1.5.3.1.4.7) |

6.3.4.E1.2 Parent Template

This entry content module is based on the HL7 CCD template medication activity 2.16.840.1.113883.10.20.1.24 and inherits the structure of the Medication Entry Content Module, 1.3.6.1.4.1.19376.1.5.3.1.4.7.

6.3.4.E1.3 Specification

This section makes use of the medicine and other entry content modules.

This specification relies on the PCC Medication Entry Content Module (1.3.6.1.4.1.19376.1.5.3.1.4.7) specification and only describes additional constraints.

The sections below identify and describe these fields, and indicate the constraints on whether or not they are required to be sent. The fields are listed in the order that they appear in the CDA XML content.
<templateId root='2.16.840.1.113883.10.20.1.24'/>
<templateId root='1.3.6.1.4.1.19376.1.5.3.1.4.7'/>
<templateId root='1.3.6.1.4.1.19376.1.9.1.3.7'/>
<templateId root='1.3.6.1.4.1.19376.1.9.1.3.6'/>
<id root=' ' extension=' '/>
<code code=' ' codeSystem=' ' displayName=' ' codeSystemName=' '/>
<text><reference value='#med-1'/></text>
<statusCode code='completed'/>
<effectiveTime xsi:type='IVL_TS'><low value=' '/><high value=' '/></effectiveTime>
<routeCode code=' ' codeSystem=' ' displayName=' ' codeSystemName=' '/>
<approachSiteCode code=' ' codeSystem=' ' displayName=' ' codeSystemName=' '/>
<doseQuantity value=' ' unit=' '/>
<rateQuantity value=' ' unit=' '/>
<consumable>
<manufacturedProduct classCode='MANU'>
<templateId root='1.3.6.1.4.1.19376.1.5.3.1.4.7.2'/>
<templateId root='2.16.840.1.113883.10.20.1.53'/>
<manufacturedMaterial classCode='MMAT' determinerCode='KIND'>
<!-- Medicine Entry Content Module (1.3.6.1.4.1.19376.1.9.1.3.1) -->
</manufacturedMaterial>
</manufacturedProduct>
</consumable>

<!-- Author(s) in case of usage elsewhere as in a MTP document -->
<author>...</author>
<author>...</author>
<!-- 0..* entries describing the components -->
<entryRelationship typeCode='COMP' >
<sequenceNumber value='' />
</entryRelationship>

<!-- An optional entry relationship that indicates the reason for use -->
<entryRelationship typeCode='RSON' >
<act classCode='ACT' moodCode='EVN'>
<templateId root='1.3.6.1.4.1.19376.1.5.3.1.4.4.1'/>
<id root='' extension='' />
</act>
</entryRelationship>

<!-- Reference to a related prescription activity (supply) -->
<entryRelationship typeCode='REFR' >
<templateId root='1.3.6.1.4.1.19376.1.5.3.1.4.7.3'/>
</entryRelationship>

<!-- Optional instructions for the patient -->
<entryRelationship typeCode='SUBJ' inversionInd='true'>
<act classCode='ACT' moodCode='INT'>
<templateId root='2.16.840.1.113883.10.20.1.49'/>
<templateId root='1.3.6.1.4.1.19376.1.5.3.1.4.3'/>
<code code='PINSTRUCT' codeSystem='1.3.6.1.4.1.19376.1.5.3.2' codeSystemName='IHEActCode' />
</act>
</entryRelationship>

<!-- Optional instructions for Prescriber and/or Dispenser -->
<entryRelationship typeCode='SUBJ' inversionInd='true'>
<act classCode='ACT' moodCode='INT'>
<templateId root='2.16.840.1.113883.10.20.1.43'/>
</act>
</entryRelationship>
6.3.4.E1.3.1 Medication Treatment Plan Item Entry General Specification

The moodCode SHALL be set to INT, except if medications have been reported by the patient or somehow considered administered (instead of having been only planned or prescribed). In that case, moodCode SHALL be set to EVN.

See PCC TF-2, Medication Entry Module (1.3.6.1.4.1.19376.1.5.3.1.4.7) specification.

6.3.4.E1.3.2 Medication Treatment Plan Item Entry TemplateID

A templateId of '1.3.6.1.4.1.19376.1.9.1.3.7' SHALL be present to indicate that this entry is conforming to the Medication Treatment Plan Item Entry Content Module.

See PCC TF-2, Medication Entry Module (1.3.6.1.4.1.19376.1.5.3.1.4.7) specification.

6.3.4.E1.3.3 Medication Treatment Plan Item Entry Additional Template ID

A templateId of '1.3.6.1.4.1.19376.1.9.1.3.7' SHALL be present to indicate that this entry is conforming to the Medication Treatment Plan Item Entry Content Module.

See PCC TF-2, Medication Entry Module (1.3.6.1.4.1.19376.1.5.3.1.4.7) specification.
The `<templateId>` element identifies this `<entry>` as a particular type of medication event, allowing for validation of the content.

The `templateId` must use one of the values in the table below for the root attribute.

<table>
<thead>
<tr>
<th>Root</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.6.1.4.1.19376.1.5.3.1.4.7.1</td>
<td>A &quot;normal&quot; <code>&lt;substanceAdministration&gt;</code> act that may not contain any subordinate <code>&lt;substanceAdministration&gt;</code> acts.</td>
</tr>
<tr>
<td>1.3.6.1.4.1.19376.1.5.3.1.4.8</td>
<td>A <code>&lt;substanceAdministration&gt;</code> act that records tapered dose information in subordinate <code>&lt;substanceAdministration&gt;</code> act.</td>
</tr>
<tr>
<td>1.3.6.1.4.1.19376.1.5.3.1.4.9</td>
<td>A <code>&lt;substanceAdministration&gt;</code> act that records split dose information in subordinate <code>&lt;substanceAdministration&gt;</code> acts.</td>
</tr>
<tr>
<td>1.3.6.1.4.1.19376.1.5.3.1.4.10</td>
<td>A <code>&lt;substanceAdministration&gt;</code> act that records conditional dose information in subordinate <code>&lt;substanceAdministration&gt;</code> acts.</td>
</tr>
<tr>
<td>1.3.6.1.4.1.19376.1.5.3.1.4.11</td>
<td>A <code>&lt;substanceAdministration&gt;</code> act that records combination medication component information in subordinate <code>&lt;substanceAdministration&gt;</code> acts.</td>
</tr>
</tbody>
</table>

See PCC TF-2, Medication Entry Module (1.3.6.1.4.1.19376.1.5.3.1.4.7) specification.

6.3.4.E1.3.4 Medication Treatment Plan Item ID

`<id root='' extension=''/>`

This ID represents the Medication Treatment Plan Item ID and SHALL be present.

See PCC TF-2, Medication Entry Module (1.3.6.1.4.1.19376.1.5.3.1.4.7) specification.

6.3.4.E1.3.5 Code

`<code code='' displayName='' codeSystem='' codeSystemName=''/>

See PCC TF-2, Medication Entry Module (1.3.6.1.4.1.19376.1.5.3.1.4.7) specification.

6.3.4.E1.3.6 Narrative Text

`<text><reference value='' /></text>`

This element SHALL be present. The URI given in the value attribute of the `<reference>` element points to an element in the narrative content that contains the complete text describing the medication included in the plan.

See PCC TF-2, Medication Entry Module (1.3.6.1.4.1.19376.1.5.3.1.4.7) specification.

6.3.4.E1.3.7 Status Code

`<statusCode code='completed'/>`

See PCC TF-2, Medication Entry Module (1.3.6.1.4.1.19376.1.5.3.1.4.7) specification.
Please note that this element does NOT represent the status of the Medication Treatment Plan Item. There is no dedicated data element to record such a status, please refer to the Community Medication Prescription and Dispense (CMPD) Profile for more information.

### 6.3.4.E1.3.8 Dosage Instructions

The Medication Treatment Plan Item SHALL contain dosage instructions according to the specification of the dosage instructions in the Dosage Instructions Content Module (1.3.6.1.4.1.19376.1.9.1.3.6).

**Note:** The following elements part of the Dosage Instructions:

- Medication Treatment Plan Item Entry Additional Template ID
- Effective Time (Duration of Treatment)
- Medication Frequency
- Route of Administration
- Approach Site Code
- Dose Quantity
- Rate Quantity
- Related Components

### 6.3.4.E1.3.9 <Reserved>

### 6.3.4.E1.3.10 Consumable

The `<consumable>` element SHALL be present, and SHALL contain a `<manufacturedProduct>` element.

```xml
<manufacturedProduct" classCode="MANU">
  <templateId root="1.3.6.1.4.1.19376.1.5.3.1.4.7.2"/>
  <templateId root="2.16.840.1.113883.10.20.1.53"/>
  <manufacturedMaterial classCode="MMAT" determinerCode="KIND">
    : <!-- Medicine Entry Content Module (1.3.6.1.4.1.19376.1.9.1.3.1) -->
  </manufacturedMaterial>
</manufacturedProduct>
```

The `<consumable>` element SHALL be present, and SHALL contain a `<manufacturedProduct>` element.
The `<manufacturedProduct>` element SHALL contain a `<manufacturedMaterial>` element. The `<manufacturedMaterial>` element SHALL contain a Medicine Entry, conforming to the Medicine Entry Content Module (1.3.6.1.4.1.19376.1.9.1.3.1).

The `<consumable>` element of a Medication Treatment Plan describes the medication that is included into the plan. As it is a plan and not a prescription, dispense or medication administration, container information SHALL NOT be present except if subsequent prescriptions, dispenses or medication administrations have to be constrained by e.g., the inclusion of the patient in a case study using specific packages and/or lot numbers. In such situations, container information SHALL be present and SHALL be repeated in subsequent prescriptions, dispenses or medication administrations of this Medication Treatment Plan Item.

See PHARM TF-3, Medicine Entry Content Module (1.3.6.1.4.1.19376.1.9.1.3.1) specification.

### 6.3.4.E1.3.11 Medication Treatment Plan Author

`<author>…</author>`

In the case that the Medication Treatment Plan Item is used within a Community Medication Treatment Plan document according to the “Community Medication Treatment Plan” (MTP) Profile this element SHALL NOT be present.

In all other cases (e.g., when used in a “Community Medication List” document according to the PML Profile or in medication sections of other documents as for example Discharge Summaries, etc.) this element SHOULD be present and represent the planner and timestamp of the Medication Treatment Plan Item.

This first author element SHALL be present in case that the “Community Medication Treatment Plan document author” is present (see Section 6.3.4.E1.3.12).

The table below shows the meaning of the data elements of this `<author>` element. It SHOULD be corresponding to the `<author>` element of the Community Medication Treatment Plan document or, if given, the `<author>` element of the Medication Treatment Plan section within the Community Medication Treatment Plan document.

<table>
<thead>
<tr>
<th>Data element</th>
<th>HL7 V3 Data Type</th>
<th>CDA Body position (relative XPath expression)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTP Author Profession</td>
<td>CE</td>
<td><code>author/functionCode</code></td>
</tr>
<tr>
<td>Timestamp of creation</td>
<td>TS</td>
<td><code>author/time</code></td>
</tr>
<tr>
<td>MTP Author ID</td>
<td>II</td>
<td><code>author/assignedAuthor/id</code></td>
</tr>
<tr>
<td>MTP Author Specialty</td>
<td>CE</td>
<td><code>author/assignedAuthor/code</code></td>
</tr>
<tr>
<td>MTP Author Name</td>
<td>PN</td>
<td><code>author/assignedAuthor/assignedPerson/name</code></td>
</tr>
</tbody>
</table>
6.3.4.E1.3.12 Community Medication Treatment Plan document author

In the case that the Medication Treatment Plan Item is used within a Community Medication Treatment Plan document according to the “Community Medication Treatment Plan” (MTP) Profile this element SHALL NOT be present.

If the author of the Community Medication Treatment Plan document is already present in the “Medication Treatment Plan Author” element (see section above) this element SHALL NOT be present.

In all other cases (e.g., when used in a “Community Medication List” document according to the PML Profile or in medication sections of other documents as for example Discharge Summaries, etc.) this element MAY be present and represent the author and timestamp of the Community Medication Treatment Plan document.

The table below shows the meaning of the data elements of this &lt;author&gt; element. It SHALL be corresponding to the &lt;author&gt; element of the Community Medication Treatment Plan document header.

<table>
<thead>
<tr>
<th>Data element</th>
<th>HL7 V3 Data Type</th>
<th>CDA Body position (relative XPath expression)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTP document author Profession</td>
<td>CE</td>
<td>author/functionCode</td>
</tr>
<tr>
<td>Timestamp of document creation</td>
<td>TS</td>
<td>author/time</td>
</tr>
<tr>
<td>MTP document author ID</td>
<td>II</td>
<td>author/assignedAuthor/id</td>
</tr>
<tr>
<td>MTP document author Specialty</td>
<td>CE</td>
<td>author/assignedAuthor/code</td>
</tr>
<tr>
<td>MTP document author Name</td>
<td>PN</td>
<td>author/assignedAuthor/assignedPerson/name</td>
</tr>
<tr>
<td>MTP document author Organization Identifier</td>
<td>II</td>
<td>author/assignedAuthor/representedOrganization/id</td>
</tr>
</tbody>
</table>
### 6.3.4.E1.3.13 Reason

```xml
<entryRelationship typeCode='RSON'>
  <act classCode='ACT' moodCode='EVN'>
    <templateId root='1.3.6.1.4.1.19376.1.5.3.1.4.4.1'/>
    <id root=' ' extension=' '/>
  </act>
</entryRelationship>
```

See PCC TF-2, Medication Entry Module (1.3.6.1.4.1.19376.1.5.3.1.4.7) specification.

### 6.3.4.E1.3.14 Reference to a related prescription activity (supply)

```xml
<entryRelationship typeCode='REFR'>
  <templateId root='1.3.6.1.4.1.19376.1.5.3.1.4.7.3'/>
</entryRelationship>
```

See PCC TF-2, Medication Entry Module (1.3.6.1.4.1.19376.1.5.3.1.4.7) specification.

This element SHALL NOT be present.

### 6.3.4.E1.3.15 Patient Medication Instructions

```xml
<entryRelationship typeCode='SUBJ' inversionInd='true'>
  <act classCode='ACT' moodCode='INT'>
    <templateId root='2.16.840.1.113883.10.20.1.49'/>
    <templateId root='1.3.6.1.4.1.19376.1.5.3.1.4.3'/>
    <code code='PINSTRUCT' codeSystem='1.3.6.1.4.1.19376.1.5.3.2' codeSystemName='IHEActCode'/>
  </act>
</entryRelationship>
```

...
At most one instruction MAY be provided for each `<substanceAdministration>` entry. When present, this entry relationship SHALL contain a **Patient Medication Instructions** (1.3.6.1.4.1.19376.1.5.3.1.4.3) entry.

Patient Medication Instructions (used in a Medication Treatment Plan Item) are comments from “author to patient” and may contain the following information:

- Human readable dosage instructions (e.g., a representation of the structured dosage instructions as narrative text, any special dosage instructions which could not have been represented in structured way, etc.)
- General comments by the author to the patient (e.g., “take with food”, etc.)

### 6.3.4.E1.3.16 Fulfillment Instructions

At most one instruction MAY be provided for each `<substanceAdministration>` entry. When present, this entry relationship SHALL contain a **Fulfillment Instructions** (1.3.6.1.4.1.19376.1.5.3.1.4.3.1) entry.

Fulfillment Instructions (used in a Medication Treatment Plan Item) are comments from “author to prescriber and/or dispenser” and may contain the following information:

- A proposal of a product/brand including information about substitution in case of prescribing Generic/Scientific names (e.g., author adds the generic “Paracetamol” but proposes the product “Adol 500mg Caplet” to be prescribed and/or dispensed because the patient is used to that medicine)
- Information to the preparation of compound medicine (e.g., “20 capsules of phenytoin, 20 ml glycerin, 2ml alcohol, Q.S. Syrup to 200ml”)
- General comments by the author to the prescriber and/or dispenser (e.g., if the patient is very old: “Patient is instructed about the dosing, but please repeat the instruction to ensure that the patient understood how to intake the medicine”)

...
6.3.4.E1.3.17 Amount of units of the consumable to dispense

<entryRelationship typeCode='COMP'>
  <supply classCode='SPLY' moodCode='RQO'>
    ...
  </supply>
</entryRelationship>

This element MAY be present and describes the amount of units to be dispensed. If present, it shall contain a quantity conforming to the Amount of units of the consumable Entry template (1.3.6.1.4.1.19376.1.9.1.3.8). See PHARM TF-3, Amount of units of the consumable Entry Module (1.3.6.1.4.1.19376.1.9.1.3.8) specification.

6.3.4.E1.3.18 Substitution permission

<entryRelationship typeCode='COMP'>
  <act classCode="ACT" moodCode="DEF">
    <templateId root='1.3.6.1.4.1.19376.1.9.1.3.9.1'/>
    ...
  </act>
</entryRelationship>

One or more <entryRelationship> elements, each containing a Substitution Permission Entry, MAY be present and describe the substitution permission. If present, it SHALL contain a Substitution Permission Entry conforming to the Substitution Permission Entry Content Module (1.3.6.1.4.1.19376.1.9.1.3.9.1).

See PHARM TF-3, Substitution Permission Entry Content Module (1.3.6.1.4.1.19376.1.9.1.3.9.1) specification.

6.3.4.E1.3.19 ID of parent container (Community Medication Treatment Plan document)

<reference typeCode='XCRPT'>
  <externalDocument>
    <id root=' ' extension=' '/>
  </externalDocument>
</reference>

In the case that the Medication Treatment Plan Item is used within a Community Medication Treatment Plan document according to the “Community Medication Treatment Plan” (MTP) Profile this element SHALL NOT be present.
In all other cases (e.g., when used in a “Community Medication List” document according to the PML Profile or in medication sections of other documents as for example Discharge Summaries, etc.) this element SHOULD be present and contain the identifier of the Community Medication Treatment Plan document, the Medication Treatment Plan Item initially has been created.

6.3.4.E1.3.20 Precondition Criterion

```xml
<precondition>
  <criterion>
    <text><reference value=' '></text>
  </criterion>
</precondition>
```

In a CDA document, the preconditions for use of the medication are recorded in the <precondition> element. The value attribute of the <reference> element is a URL that points to the CDA narrative describing those preconditions.

This element MAY be present.

See PCC TF-2, Medication Entry Module (1.3.6.1.4.1.19376.1.5.3.1.4.7) specification.

Add to Sections 6.4 and 6.5 Value Sets

6.4 Section not applicable

This heading is not currently used in a CDA document.

6.5 PHARM Value Sets

NA
Appendices to Volume 3

Appendix A – Validating CDA Documents using the Framework

A.1 Validating Documents
For validation of document content modules please refer to PCC TF-2: Appendix B.1.

A.2 Validating Sections
For validation of section content modules please refer to PCC TF-2: Appendix B.2.

A.3 Phases of Validation and Types of Errors
For the phases of validation and types of errors please refer to PCC TF-2: Appendix B.3.
Appendix B – Extensions to CDA Release 2.0

B.1 IHE PHARM Extensions

All Extensions to CDA Release 2.0 created by the IHE PHARM Technical Committee are in the namespace urn:ihe:pharm.

The approach used to create extension elements created for the PHARM Technical Framework is the same as was used for the PCC Technical Framework (see TF-2: Appendix C), the HL7 Care Record Summary (see Appendix E) and the ASTM/HL7 Continuity of Care Document (see Section 7.2).
Volume 3 Namespace Additions

Add the following terms to the IHE Namespace:

- Community Medication Treatment Plan (MTP) Document Content Module
  - 1.3.6.1.4.1.19376.1.9.1.1.6

- Medication Treatment Plan Section Content Module
  - 1.3.6.1.4.1.19376.1.9.1.2.6

- Medication Treatment Plan Item Entry Content Module
  - 1.3.6.1.4.1.19376.1.9.1.3.7
Volume 4 – National Extensions

Add appropriate Country section

1005  Not applicable