



Medical Markup Language (MML) Specification Version 3.0

January, 2003

Producers of MML Version 3.0

(Honorific titles omitted)

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Entrusted by the Ministry of Health, Labour and Welfare (Promotion of sharing information with local medical care services by the Ministry of Health, Labour and Welfare 2002), this specification has been created.

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Notes on the expressions in this document

- Each number before the element names corresponds to the number of each element in the element list.
Example: Free style expression in the progress course information (1.1. mmlPc:FreeExpression)
- Each number written in the form of “an element name (a module name n.n.)” corresponds to the number of each element in the element list.
Example: mmlHi:expiredDate (health insurance module 1.8.)

1. Introduction

The Special Interest Group of the Japan Association for Medical Informatics the “Electronic Medical Record Research Group” [8], has been studying methods for exchanging medical data between different facilities since 1994.

In 1995, the idea of data exchange with attributes was born and was then put into practice with Standard Generalized Markup Language (SGML). This standard was named Medical Markup Language (MML). The group members took part in the Electronic Medical Chart Research Project of the ex-Ministry of Health and Welfare, launched in 1995. During the three year period of their involvement in this research and development, the exchange standard was improved to a practicable level. To handle data that cannot be expressed in MML(eg. images), a method of referring to external files such as DICOM from MML instances was established [2, 3] and, at the same time, work to detail MML to a practical level of implementation was carried out in cooperation with an ex-Ministry of Health and Welfare working group (with Professor Kimura at Hamamatsu University School of Medicine as the leader) to formulate the operating policy for medical information exchange such as how to combine DICOM, MML, HL7, etc.

Along with some practical movements in the implementation of MML, the need for specialized structures for various medical fields became evident, but it was in fact impossible for this group to cover all medical fields. Besides, considering the influence over the entire structure by new designs/changes of partial structures that are expected to occur frequently, it was not efficient, with respect to version control and the like. Therefore, a method to modularize MML with the XML Namespace suggested by W3C in March 1999 and combine modules as necessary was adopted. In this way, it became possible to propose descriptive formats particular to each medical field, and to divide logical structure development work procedures. This specification and relevant data are open/controlled at the MedXML site [1].

2. Version 2.3: Background to the revision

Since MML Version 2.21 was officially announced on November 1, 1999, experiments in full-scale implementation have been conducted, Special Interest Groups (SIGs) in specialized fields have been established, and the development of standards has been carried out. As the implementation advanced, the absence of sufficient information and functions in Version 2.21 was pointed out. This situation led to the release of the new MML Version 2.3. A summary of the revision is provided below.

Revision of the access right definition

The structure of the document access right definition in MML Version 2.21 was reviewed. Specifically, the following elements were added and corrected, making it possible to set up facilities, departments, occupations, and personal IDs that could be referred to in each document.

accessRight

This is the access right element. It is repeated the number of times access rights are set up. At least, it is essential to set up an access right for creators so that they will not be prevented from making a reference. One attribute in the element is “permit” (right of reference). The “permit” attribute can hold values of “none” (no access permissible), “read” (reference permissible), “write” (reference and correction permissible), “delete” (reference and deletion permissible), and “all” (reference, correction, and deletion permissible). The other available attributes are “mmlSc:startDate” (start date) and “mmlSc:endDate” (end date).

The following four elements are subordinate to this element:

mmlSc:facility

To set up access rights in the facility unit.

mmlSc:department

To set up access rights in the medical department unit.

mmlSc:licence

To set up access rights in the occupation unit.

mmlSc:person

To set up access rights in the individual person unit.

Establishment of group ID

Group ID was established in order to make items such as summaries and letters of referral by combining multiple modules. In order to associate different modules, Version 2.21 was equipped with related parent document ID (parentId) tags, used in document revisions to correlate with documents that existed before the revisions were carried out. It was pointed out, however, that when the data was controlled by the module unit during implementation of the MML, searching would have been easier if a group of modules which were completely equivalent and could be linked was controlled with the same document ID. Given this background, it became possible to set up an identical ID (that is, groupId) separately from a document ID for multiple modules that are required to be grouped into a document.

Specifically, following the “uid” (document unique ID) and “parentId” (related parent document ID) elements the “groupId” element was added as a subordinate element to the “docId” element within the MML document header (docInfo). Furthermore, the “groupClass” attribute was added, making it possible to classify document types of module groups (such as letters of referral).

Revision of the health insurance module

Since the MML health insurance module was also used for linking electronic medical chart and clinical systems, it was necessary to add information items with greater detail. As for Version 2.21, personal identification information, such as the name of the person insured, was entered in the patient information module. But if the patient himself/herself was not the person insured, it became necessary to enter information on the insured person; thus, this latter information was added to the health insurance module. Moreover, since the patient's share of bills may differ depending on whether the patient is an inpatient or outpatient, it became possible to differentiate between these two cases. Health insurance class (legal codes and designations), insurer's information (such as the name of place of business), and detailed public insurance information were also added.

Referral module

For letters of referral, the use of the existing clinical summary information module was examined. However, because of the lack of certain kinds of information, such as the purpose of referral, a new referral module was created.

Report information module

This module was added for writing general-purpose reports, not limited solely to radiation-related reports. The module was aimed at radiological tests, physiological tests, and pathologic cytological diagnoses and tests, with a simple structure being selected rather than a detailed structure for each individual test.

The specific structure contains the root element (mmlRp:ReportModule) in the module and the subordinate elements of report header information (test performance date/time, report date/time, report status, report class, report subclass, internal organ, requester information, and performer information) and report body information (chief complaint, test purpose, test diagnosis, test note, external reference, test comment, test comment name, and test free comment).

Test history information module

This module was added to give structure to laboratory test results. Targeted tests are laboratory (specimen) tests, including endocrine load tests and urinary sediments. Bacilli culture tests, histopathological tests, and cytological diagnoses are not targeted. In normal operations, a single module corresponds to a single request slip (or a single test set). For test item codes, it is possible to include both the facility's unique code and JLAC10 code (Japanese Society of Laboratory Medicine).

The specific structure contains the root element (mmlLb:TestModule) in the module and the subordinate elements of test history header information (mmlLb:information) and laboratory test result information (mmlLb:laboTest), the latter being repeated by the specimen unit. The test history header information includes the request ID, sampling date/time, registration date/time, report date/time, report status, set name, requesting facility, requesting medical department, requesting ward, test requester, test performing facility, test performer, report comment, report comment name, and report free comment. On the other hand, the laboratory test result information includes specimen information (specimen material, specimen comment, specimen comment name, and specimen free comment) and item information (item name, facility's unique code, facility's unique code system name, analyzed item code, identification code, material code, measurement method code, result identification code, value, "numerical" value, upper limit value, lower limit value, normal range "in characters", abnormal value flag, unit, external reference information, external reference, item comment, item comment name, and item free comment). The item information is repeated only the same number of times as the number of items.

Addition of tables

Due to the revision and addition of the aforementioned modules and correction of the access right definition, the following tables were added:

MML0031	Insurance class (type of insurance)
MML0032	Pay ratio type (payment type code)
MML0033	Medical role
MML0034	Access approval classification
MML0035	Facility access right definition
MML0036	Personal access right definition

3. Version 3.0: Background to the revision

3. 1. Goal for the development of MML Version 3.0

MML (Medical Markup Language) Version 3.0 was developed as a medical information exchange standard so that medical information documents described in MML could be exchanged via HL7 messages without any disagreement between senders and receivers, which means that both senders and receivers shall have the same context in communication. Version 3.0 also achieved seamless integration of two cases; when a medical information document is independently present as a persistent information object and when a medical information document is exchanged via HL7 messages.

The development of MML Version 3.0 had two main objectives as follows:

- (1) To provide MML Version 3.0 that is based on the first ANSI-accredited standard in HL7 Version 3, the HL7 Version 3 Standard: Clinical Document Architecture Framework Release 1.0 (HL7 CDA) [11] with extended functions.
- (2) While preserving the medical information description ability provided by the previous MML Version 2.3, to minimize the transition costs for existing MML Version 2.3 users to new MML Version 3.0.

With the newly developed MML Version 3.0, it became possible to carry medical information documents described in MML Version 3.0 via the messages of not only HL7 Version 3.0 but also HL7 Version 2. Since the HL7 CDA follows the HL7 Reference Information Model (RIM), the feature of the RIM, an effect to resolve inconsistency between the senders and receivers of messages, in other words, in order for both to have the same context in communication, was succeeded to the HL7 CDA and also to MML Version 3.0 that is based on the HL7 CDA.

The interoperability of the information between medical information documents on which legal obligation may be imposed and messages as a medium of communication between different systems is again another effect of the HL7 CDA and was also succeeded to MML Version 3.0.

3. 2. MML Version 3.0 development policy

In order to maintain upward compatibility with the HL7 CDA, the extensible markup method of the HL7 CDA (refer to HL7 CDA sections 3.2.2.6, 5.3.3, and 5.3.4) is used for reference in the development of MML Version 3.0. Based on this method, modules are re-defined and rules are created as follows:

- (1) Redefinition of modules used in MML Version 2.3 for MML Version 3.0
- (2) Integration rule of the “MML header” with the HL7 CDA Header
- (3) Integration rule of the “MML content modules” with the HL7 CDA Body
- (4) Restriction in the “MML header” and “MML content modules”

MML Version 3.0 is based on MML Specification Version 2.3 Type C, including the correction from Type C to Type B.

4. Intellectual property

All of the copyrights in this specification belong to the MedXML Consortium Non-Profit Organization. Thus, all uses of the specification shall comply with the policies of the MedXML Consortium Non-Profit Organization.

Policy of the MedXML Consortium Non-Profit Organization in relation to products created

In principle, a product that is created by this Consortium shall be made public on the Internet and treated as being in the public domain. Thus, both consortium members and non-members can make use of such products for commercial or academic activities. While using such products, however, the user shall be obligated to report to the Consortium and to clearly indicate that the product of the Consortium is being used in a product, written work, or for other purposes in compliance with copyrights and preferences.

5. Reference documents

- [1] MedXML Consortium: <http://www.medxml.net/>
- [2] Hiroyuki Yoshihara, Kazuhiko Ohe, Katsuhiro Ohashi, Ryuichi Yamamoto, Shunji Yamazaki, Yasuyuki Hirose, Kunio Matsui, Teruyoshi Hishiki, Yoshinori Yamashita, Kazushi Minagawa, Hiroshi Koyama: Studies on the standardization of exchange procedures of medical information, 1997., <http://www.miyazaki-med.ac.jp/medinfo/SGmeeting/document/mml9702/techcore.html>
- [3] Hiroyuki Yoshihara, Kazuhiko Ohe, Katsuhiro Ohashi, Ryuichi Yamamoto, Shunji Yamazaki, Yasuyuki Hirose, Kunio Matsui, Teruyoshi Hishiki, Yoshinori Yamashita, Kazushi Minagawa: Studies on the standardization of exchange procedures of medical information, http://www.miyazaki-med.ac.jp/medinfo/SGmeeting/document/mml9702/techcore_E.html
- [4] MML/DTD library: <http://www.medxml.net/mml/>
- [5] Extensible Markup Language (XML) 1.0 W3C Recommendation 10-February-1998, <http://www.w3.org/TR/1998/REC-xml-19980210>
- [6] Namespaces in XML World Wide Web Consortium 14-January-1999, <http://www.w3.org/TR/1999/REC-xml-names-19990114/>
- [7] Date elements and interchange formats - Information interchange - Representation of dates and times, <http://www.iso.ch/market/e/8601.pdf>
brief overview of the ISO 8601 standard <http://www.cl.cam.ac.uk/~mgk25/iso-time.html>
- [8] Seagaia Meeting home page: <http://www.seagaia.org/>
- [9] Kenji Araki, Katsuhiro Ohashi, Shunji Yamazaki, Yasuyuki Hirose, Yoshinori Yamashita, Ryuichi Yamamoto, Kazushi Minagawa, Norihiro Sakamoto, and Hiroyuki Yoshihara: Medical Markup Language (MML) for XML-based Hospital Information Interchange, Journal of Medical Systems; Vol.24, No3, 2000
- [10] Kenji Araki, Katsuhiro Ohashi, Shunji Yamazaki, Yasuyuki Hirose, Yoshinori Yamashita, Ryuichi Yamamoto, Kazushi Minagawa, Norihiro Sakamoto, and Hiroyuki Yoshihara: Medical Markup Language (MML) Version 2.21 for XML-based Hospital Information Interchange, Journal of Medical Systems; Vol.20(2): 79-85, 2000
- [11] HL7 Version 3 Standard: Clinical Document Architecture Framework Release 1.0, 2000
- [12] HL7 Modeling & Methodology Committee FHI7 Version3 Message Development Framework, V3.3, Dec 1999
- [13] ANSI/HL7 Standard version 2.4, The Global Healthcare Messaging Standard, Oct 2000

6. Overview

6.1. Clinical Document Architecture

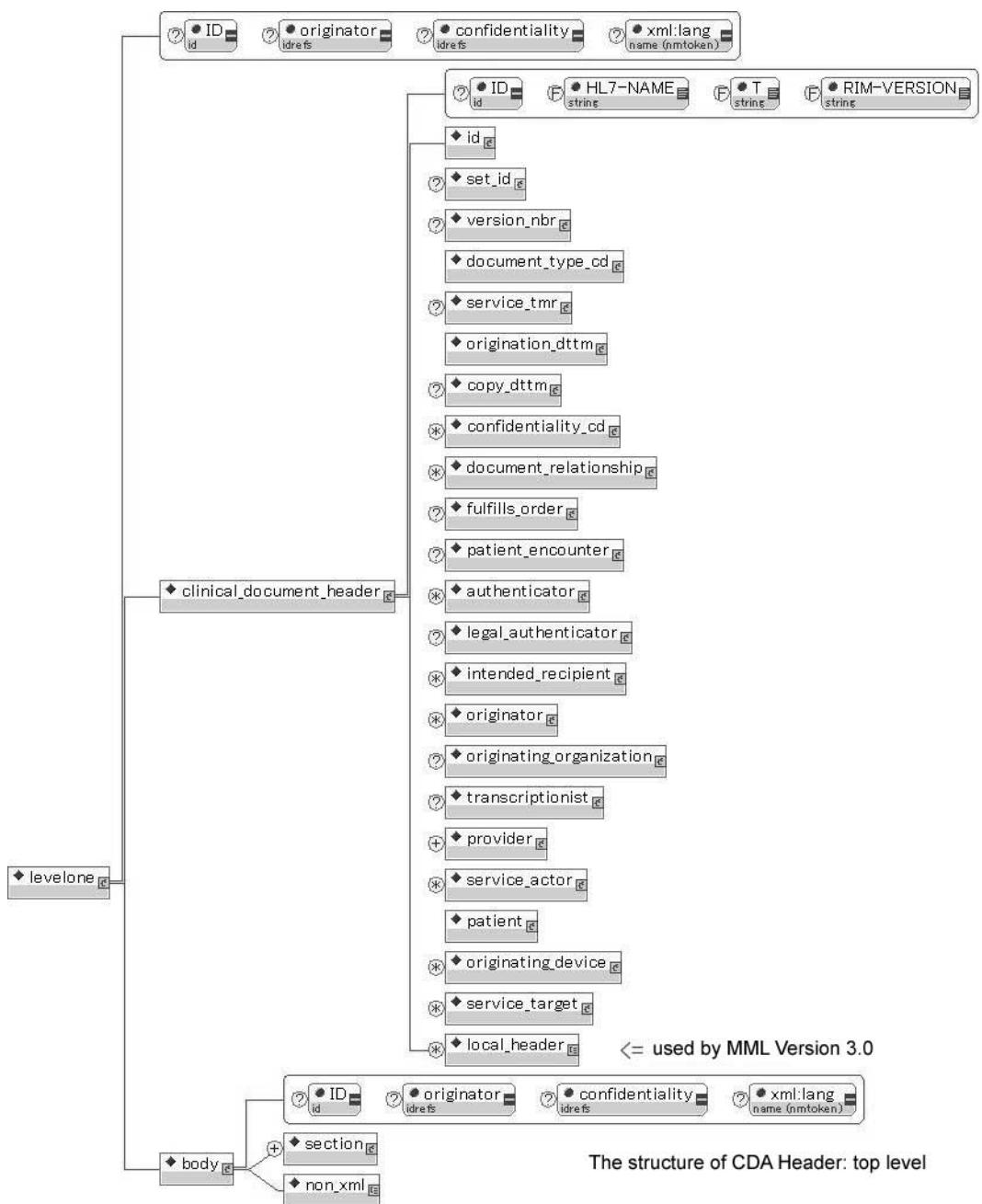
The HL7 Version 3 Standard: Clinical Document Architecture Framework Release 1.0 (referred to as HL7 CDA hereafter) is a standard that defines the semantics of condition and the structure of “clinical documents” when exchanged via HL7 messages; it is a standard written in a set of XML (eXtensible Markup Language) documents. The HL7 CDA document contains the root element, “levelone”, and the subordinate elements that are comprised of the “clinical_document_header” called “CDA Header” and the “body” called “CDA Level One Body”. The “CDA Header” is derived from HL7 Reference Information Model (RIM) Version 0.98. Therefore, the messaging system is developed, referring to the same Reference Information Model (RIM) and based on the HL7 message creation method, HL7 V3 Message Development Framework (MDF) [12]. Consequently, messages are exchanged without any disagreement between the senders and receivers of messages; in other words, it is expected that both shall have the same context in communication. It is important here to keep in mind that the version of the RIM - named HL7 V3 RIM - can change. The existing ANSI-accredited standard HL7 CDA Release 1.0 employs Rim Version 0.98. When the version of the RIM employed by the HL7 CDA or the version of the HL7 CDA changes in future, a revised version of this standard shall be issued for parts affected by such changes.

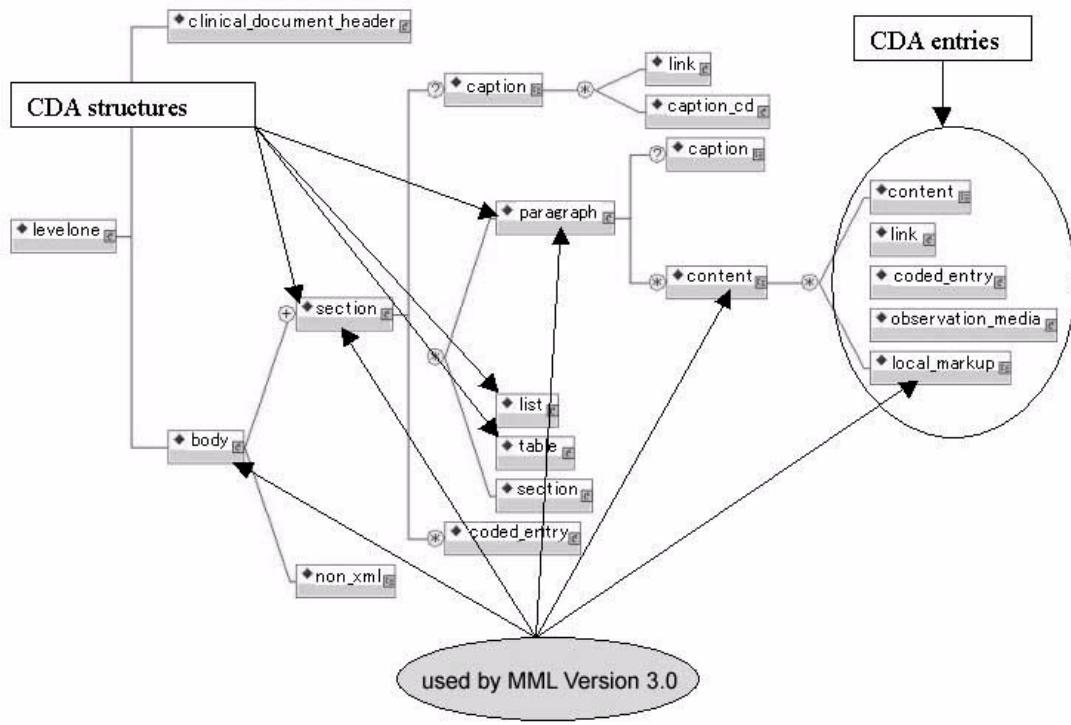
The “CDA Header” includes elements to hold document information, diagnostic information, and information on the person engaged in medical care, and the target and targeted person of a medical service. Thus, the “CDA Header” specifies and classifies the document to be exchanged and provides diagnostic information and information on the person engaged in medical care, and the target and targeted person of a medical service. The document information includes elements such as `<id>` and `<document_type_cd>` used for identifying documents, elements such as `<origination_dttm>` used as time and date stamps for documents, and elements such as `<provider>` used for specifying more than one health care providers. As information on the target of a medical service, the `<patient>` element is included.

The “CDA Level One Body” includes a medical document. This means there is necessarily one `<body>` within `<levelone>` and that the structures (CDA Body structures) and entries (CDA body entries) are provided to hold the contents of XML which make up the medical document. The CDA Body structures include elements such as `<section>` and `<paragraph>` while the entries into which characteristic data can be input include elements such as `<content>` and `<local_markup>`.

The `<section>` element is a container which can have a nested structure and which may contain every kind of container. It is possible to have multiple `<paragraph>`s in the `<section>`, to have `<content>`s in the `<paragraph>` and `<local_markup>`s in the `<content>`.

For further information on the standard, please refer to the specification of the “Clinical Document Architecture Framework Release 1.0”. The illustrations below show the structure of the CDA Header: top level defined by the HL7 CDA and the structure of the CDA Level One Body.





Structure of the CDA Level One Body

6. 2. Role of the HL7 CDA in MML Version 3.0

6. 2. 1. On the basis of the HL7 CDA

In MML Version 3.0, the MML Version 2.3 specification is revised so that MML can use the HL7 CDA. MML Version 3.0 instances can be called HL7 CDA-based MML documents. Since the HL7 CDA documents can be applied to the information exchange method suggested by HL7, to exchange data between medical information applications via messages, it is possible to exchange an HL7 CDA-based MML document according to the message exchange rules of HL7. Also, it is possible to seamlessly integrate two different cases, when the HL7 CDA-based MML document exists independently as a persistent information object and when the document is exchanged according to the HL7 message exchange rules. This specification mentions only items of the HL7 CDA necessary to satisfy these. Items not mentioned in the specification comply with the specification of the HL7 CDA.

Values used in this specification are, unless otherwise clearly specified, case sensitive strings, i.e. strings which differentiate between upper and lower case characters.

6. 2. 2. Sending an HL7 CDA-based MML document via HL7 Version 2.x messages

From the viewpoint of HL7 Version 2.x [13], an HL7 CDA-based MML document is a multimedia object and is exchanged as a package in MIME (Multipurpose Internet Mail Exchange: RFC2046) format and encoded as an encapsulated data type (encapsulated data type : ED). The HL7 CDA-based MML document is integrated into an OBX (Observation Segment) in the message which is endeavoring to exchange the document. The package in MIME format is encoded in the OBX as an encapsulated data type of HL7 Version 2.x. Set the value of OBX 2 (Field 00570 Value Type) to “ED”. Set the data type components in OBX 5 as follows:

- ◆ Set the value of the second component (type of data) to “multipart”.
- ◆ Set the value of the third component (data subtype) to “x-hl7-cda-level-one”.

- ◆ Set the value of the forth component (encoding) to “A”.
- ◆ Set the value of the fifth component (data) to the package itself in the MIME format. All entities in the MIME package should be encoded Base64. It is necessary to set the content type of the first MIME entity to “application/x-hl7-cda-level-one+xml” so that it includes the HL7 CDA-based MML document itself.

The following is an example of an HL7 CDA-based MML document in the MDM (Medical document management, event T02) message.¹

```

MSH| ...
EVN| ...
PID| ...
PV1| ...
TXA| ...
OBX|1|ED|11492-6^History and Physical^LN|||^
^multipart^x-hl7-cda-level-one^A^
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary="HL7-CDA-boundary"
Content-Transfer-Encoding: Base64
--HL7-CDA-boundary
Content-Type: application/x-hl7-cda-level-one+xml
... Base64-encoded CDA based MML document ...
--HL7-CDA-boundary

```

6. 2. 3. Sending an HL7 CDA-based MML document via HL7 Version 3 messages

It is expected that an MML document which is based on the HL7 CDA (the HL7 Version 3 Standard: Clinical Document Architecture Framework Release 1.0) shall be exchanged via the HL7 Version 3 message that is endeavoring to exchange the document. Currently, there is no officially accredited standard (such as a standard accredited by ANSI) related to HL7 Version 3 other than the HL7 CDA and drafts are repeatedly revised.

Therefore, the explanation in this chapter are based upon the reference information model RIM Version 0.98², current at the time of the creation of the HL7 CDA. It is possible that the manner in which messages are written will change due to content changes such as the HL7 Version 3 RIM and Data Types.

When changes are made to the version of the RIM to which the HL7 CDA refers, the explanation contained within this chapter will, itself, be revised.

From the viewpoint of HL7 Version 3.0, an HL7 CDA-based MML document is a multimedia object and is exchanged as a package in MIME format and encoded as an encoded data type (encoded data type: ED).

According to the reference information model RIM Version 0.98 on which the HL7 CDA is based, the Service.txt RIM attribute includes the MIME package which is encoded as the encoded data type. Set the data type components as follows:

- ◆ Set the value of ED.media_descriptor to “multipart/x-hl7-cda-level-one”.
- ◆ Set the value of ED.data to the MIME package itself. It is necessary to set the content type of the first MIME entity to “application/x-hl7-cda-level-one+xml” so that it includes the HL7 CDA-based MML document itself.

An example is presented below.

1. Note: source:HL7 CDA
2. Note: the version of the RIM referred to as of October, 2002.is Version 1.16.

Sending an HL7 CDA-based MML document via an HL7 Version 3 message.¹

```
<someMessage>
  <Service.service_cd V="11522-0"
    S="2.16.840.1.113883.6.1" DN=" Radiology report " />
  <Service.txt MT="multipart/x-hl7-cda-level-one">
    MIME-Version: 1.0
    Content-Type: multipart/mixed; boundary="HL7-CDA-boundary"
    Content-Transfer-Encoding: Base64
    --HL7-CDA-boundary
    Content-Type: application/x-hl7-cda-level-one+xml

    ... Base64-encoded CDA based MML document ...

    --HL7-CDA-boundary
  </Service.txt>
</someMessage>
```

1. Note: source: HL7 CDA. The correct expression is established as a result of HL7 Version 3 Data Types, Release 1 DTD ballot.

7. Basic policy

In order to maintain upward compatibility with the HL7 CDA, the extensible markup method of the HL7 CDA is used for reference in MML Version 3.0 (refer to HL7 CDA sections 3.2.2.6, 5.3.3, and 5.3.4).

7.1. Redefined modules used in MML Version 2.3 for MML Version 3.0

The structure of MML Version 2.3 was analyzed, separated into the following categories, and redefined so that the contents defined in MML can be described in HL7 CDA LevelOne.

For explanatory purposes, the 16 modules below are classified into 3 categories; names for each category are defined. These modules are called “MML modules”.

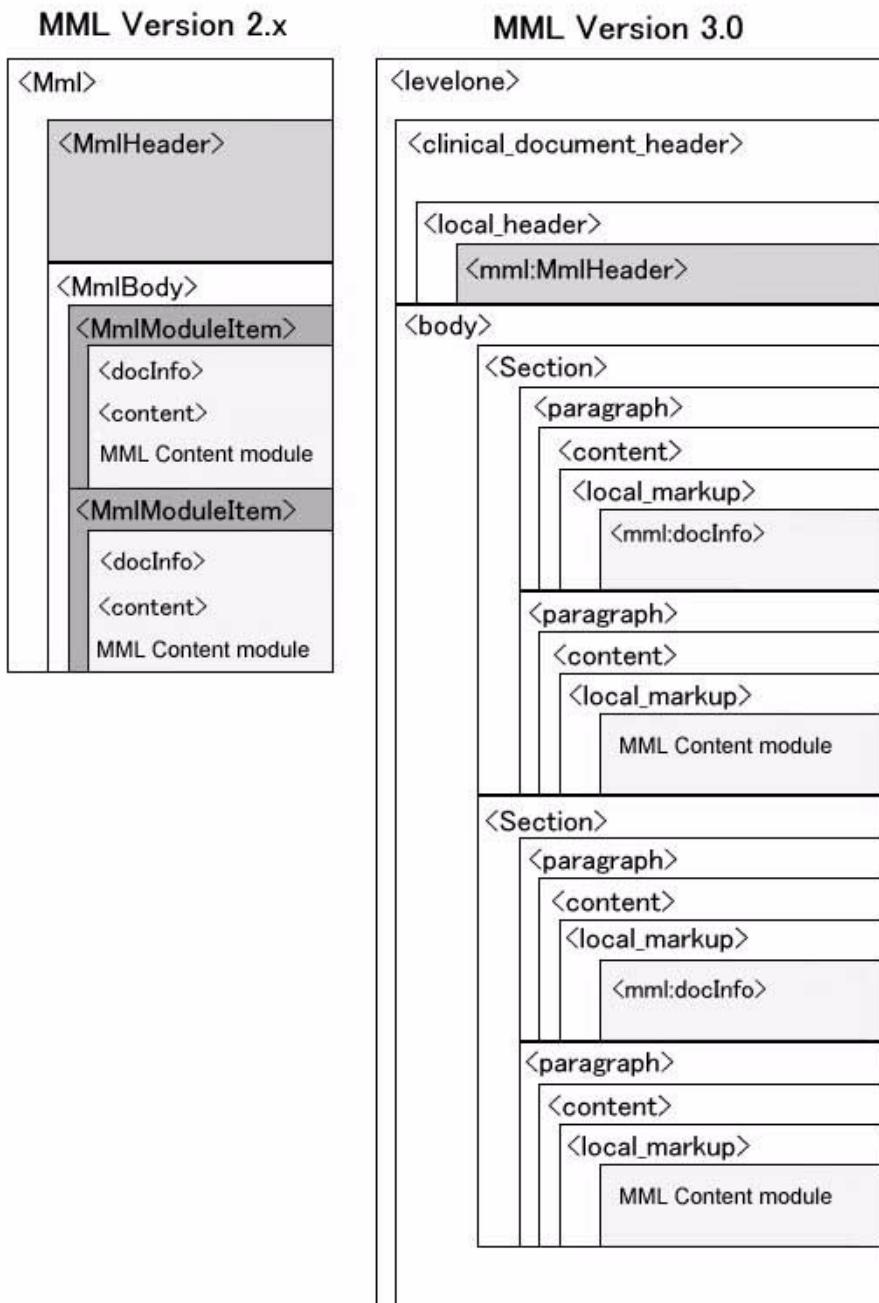
The same prefixes are used for each module (such as “mml:”) in order to retain the same namespace as used in MML Version 2.3.

- ◆ List of MML modules
 - MML header module: mml:MmlHeader
 - MML document information module: mml:docInfo
 - MML content modules:
 - mmlPi:PatientModule
 - mmlHi:HealthInsuranceModule
 - mmlRd:RegisterdDiagnosisModule
 - mmlLs:LifestyleModule
 - mmlBc:BaseClinicModule
 - mmlFc:FirstClinicModule
 - mmlPc:ProgressCourseModule
 - mmlSg:SurgeryModule
 - mmlSm:SummaryModule
 - mmlLb:TestModule
 - mmlRp:ReportModule
 - mmlRe:ReferralModule
 - claim:ClaimModule
 - claimA:ClaimAmoutModule

The structures of the 16 modules above are integrated into the <local_header> area subordinate to the <clinical_document_header> in the CDA Header of the HL7 CDA and the <local_markup> area in the HL7 CDA Body.

7.2. Contrast between the structures of MML Version 2.x and those of MML Version 3.0

The difference between the structures of MML Version 2.x and MML Version 3.0 is shown below.



(As the MmlHeader and docInfo were in the default namespace in MML Version 2.3, they were written without prefixes. In MML Version 3.0, the prefix “mml:” is used explicitly.)

In the illustration above, the contents of the <MmlHeader> and <MmlModuleItem> used in MML V2.x are embedded in the appropriate spaces of the HL7 CDA documents.

7. 2. 1. Integration rule of the “MMLHeader” with the “HL7 CDAHeader”

In the HL7 CDA specification, the following HL7 CDA Header tags are required elements. Therefore, it is necessary to assign values for each tag.

- ◆ <id>
- ◆ <document_type_cd>
- ◆ <origination_dttm>
- ◆ <provider>
- ◆ <patient>

Considering the case when an HL7 CDA-based MML V3 document is converted to the MML Version 2.3 structure, it was decided to put the MML header <mml:MmlHeader> within <local_header> to maintain backward compatibility.

It is necessary to assign attribute values to the following attributes of the <local_header> tag. This is one of the regulations of MML content.

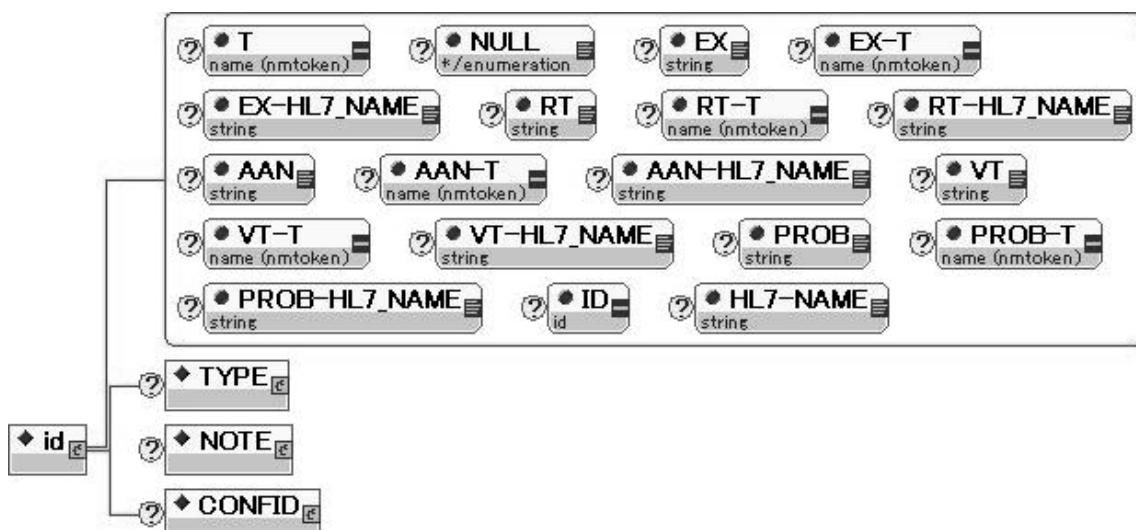
- It is necessary to assign the value as the “MML” string to the “render” attribute.
- It is necessary to assign the value as the “mmlheader” string to the “descriptor” attribute.
- Attributes defined in the HL7 CDA other than the two attributes above should not be used in MML Version 3.0.

As for optional tags, it is possible to use these in MML Version 3.0 based on the meanings of each tag defined in the HL7 CDA.

Information on how to set up each required tag in MML Version 3.0 is presented below.

7. 2. 1. 1. <id>

The structure of the <id> is presented below.



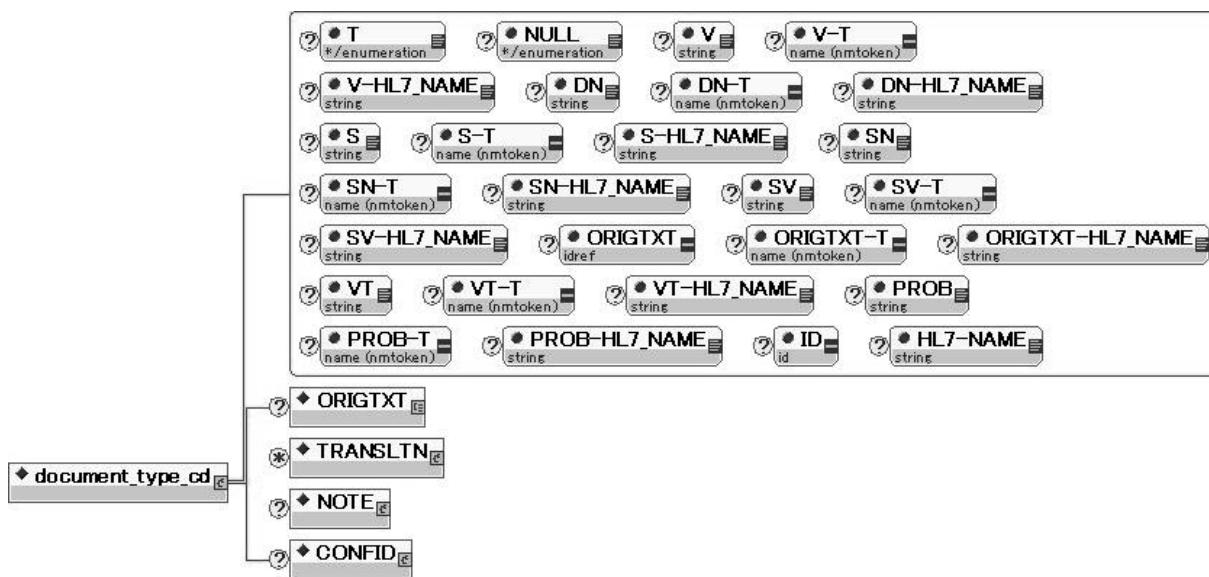
It is necessary to include the following attributes in MML Version 3.0.

- ◆ EX (Extension); document ID (which should be a globally unique number in the RT and AAN.)
- ◆ RT (Root); OID of the facility or affiliation (RT should be the OID.)
- ◆ AAN(Assigning Authority Name); name of the facility that creates the document.

Other attributes may be added as required.

7.2.1.2. <document_type_cd>

The structure of the <document_type_cd> is given below.



It is necessary to include the following attributes in MML Version 3.0.

- ◆ V; document type ID

In MML Version 3.0, the value “0300” is a fixed value for indicating the “MML 3.0” document type. (Different values may be used in future versions, when a new document type, appropriate to each version, is added.)

- ◆ S; OID of the codeSystem (In MML Version 3.0, this should be the OID of MML.)

The OID of MML is “1.2.392.114319.1.1”.

The OID consists of the following UIDs (Unique Identifiers).

“1” identifies ISO.

“2” identifies ANSI Member Body.

“392” identifies the country code of a specific Member Body (JAPAN for ANSI).

“114319” identifies MedXML Consortium (provided by ANSI)

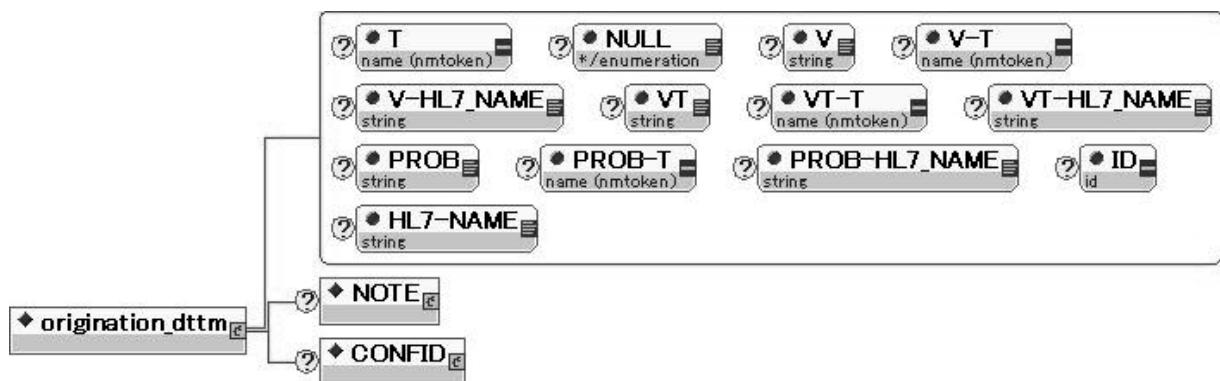
“1.1” signifies that it is reserved in MML.

- ◆ DN (displayName); the value is fixed as the “MML Document” string.

Other attributes may be added as required.

7.2.1.3. <origination_dttm>

The structure of the <origination_dttm> is given below.

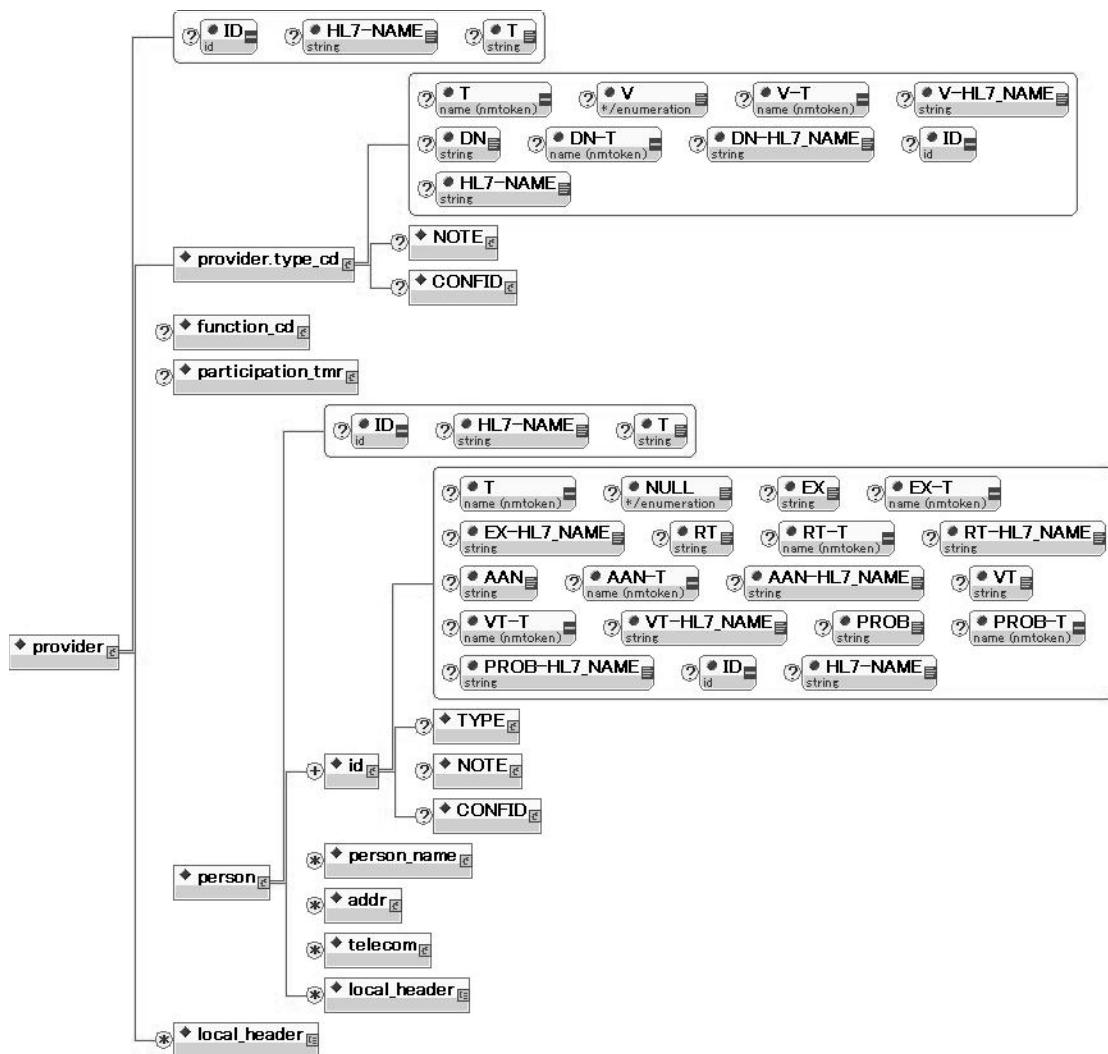


It is necessary to include the following attributes in MML Version 3.0.

- ◆ V; date and time

7.2.1.4. <provider>

The structure of the <provider> is given below.



In MML Version 3.0, it is necessary to include the following attributes in the <provider> element.

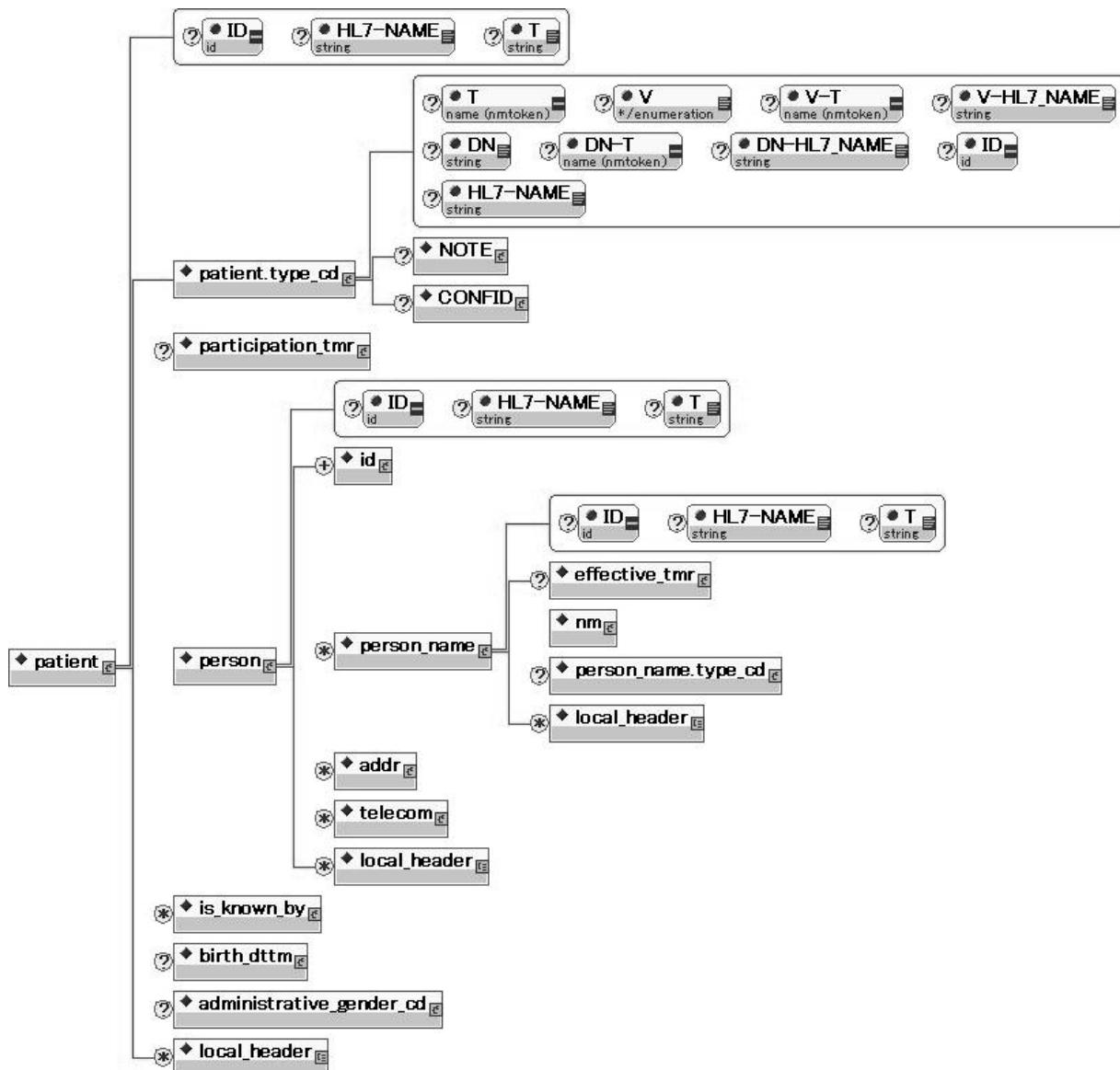
- ◆ <provider.type_cd>
 - <provider.type_cd> is required in MML Version 3.0. For the values, refer to Table 16 of “3.2.2.4.6 Healthcare providers” in Clinical Document Architecture Framework Release 1.0.
- ◆ <person>
 - In MML Version 3.0, the <id> element of the <person> is required.
 - The <id> element requires the EX and RT attributes.

The EX attribute is an identifier which specifies persons of the facility assigned in the RT attribute.

The RT attributes must use the OIDs designated for each medical institution or OIDs which are applied to and approved by the MedXML Consortium Non-Profit Organization.

7.2.1.5. <patient>

The structure of the <patient> is given below.



It is necessary to include the following attributes in MML Version 3.0.

- ◆ <patient.type_cd>; the value is fixed as the “MML” string.
- ◆ <person>
 - The <id>element requires the EX and RT attributes.

The EX attribute is a patient identifier.

The RT attribute is the OID of the institution.

The RT attributes must use the OIDs designated for each medical institution or OIDs which are applied to and approved by the MedXMLConsortium Non-Profit Organization.

Other attributes may be added as required.

Example:

```
<patient>
  <patient.type_cd V="PAT" />
  <person>
    <id EX="12345" RT="1.2.392.114319.1.5.1.1.1.1.1" />
    <person_name>
      <nmm>
        <GIV V="ichiro" />
        <FAM V="yamada" />
      </nmm>
      <person_name.type_cd V="L" S="2.16.840.1.113883.5.200" />
    </person_name>
  </person>
  <birth_dttm V="1952-09-22" />
  <administrative_gender_cd V="M" S="2.16.840.1.113883.5.1" />
</patient>
```

7. 2. 2. Integration rule of the “MML content modules” with the “HL7 CDA Body”

- ◆ One “MML content module” is necessarily present in a <section> as a <paragraph>.
- ◆ As document information of the content module, “MML document information” should be present in the same <section>.
- ◆ In each <section>, there is one <paragraph> of the “MML document information” and one <paragraph> of the “MML content module”.
- ◆ It is necessary to describe the following attributes of the <local_markup> tag. (This is an MML content regulation.)
 - It is necessary to assign the value as the “MML” string to the “render” attribute.
 - It is necessary to assign the values as the names of the MML content modules to the “descriptor” attribute.

The names of the MML content modules should be the same as the root tag names of each content.

For example, the name of the mmlPi:PatientModule content module is PatientModule.

- The attributes of the <local_markup> other than the two above may not be used in MML Version 3.0.

7. 2. 3. Restriction in the “MML header” and “MML content modules”

- ◆ Information particular to each medical application must be described in the XML Namespace.
- ◆ XHTML is employed as the presentation data format (format including data for display). But it is difficult and unnecessary to implement all presentation tags, and so the tags necessary for implementation in MML are specified. (Refer to “7. 4. 7XHTML”.)
- ◆ The formats for date, time, dateTime, and timePeriod must conform to the ISO 8601 [7] specification.
- ◆ It is recommended that the prefixes described in the “Version control of modules and namespace declaration” section be used for prefixes of the XML Namespace in MML. During installation of an application, it is necessary for the application to perform according to the rules of the XML Namespace.

7. 3. Version control of modules and namespace declaration

The version of a module is specified in the numbers at the end of a namespace declaration.

For example, if the namespace declaration of test history information is

```
xmlns:mmlLb="http://www.medxml.net/MML/ContentModule/test/1.0"
```

, the version of this test history information module is 1.0

In MML, the document data format is divided into parts as modules. So, one MML instance can be generated by combining multiple modules, the creation dates and creators of which may be different. Therefore, it is necessary to control not only the entire format version of an MML instance but also the versions of modules used in the instance.

The rules of the version of an entire instance as a CDA document, which is the levelone instance, comply with those of the HL7 CDA.

The chart below shows the summary of the modules and namespace declaration used in MML Version 3.0.

Structure module of MmlHeader and docInfo	xmlns:mml = "http://www.medxml.net/MML"
Patient information module	xmlns:mmlPi ="http://www.medxml.net/MML/ContentModule/PatientInfo/1.0"
Health insurance module	xmlns:mmlHi ="http://www.medxml.net/MML/ContentModule/HealthInsurance/1.1"
Diagnosis record information module	xmlns:mmlRd ="http://www.medxml.net/MML/ContentModule/RegisteredDiagnosis/1.0"
Lifestyle information module	xmlns:mmlLs ="http://www.medxml.net/MML/ContentModule/Lifestyle/1.0"
Basic clinical information module	xmlns:mmlBc ="http://www.medxml.net/MML/ContentModule/BaseClinic/1.0"
Initial-consultation specific information module	xmlns:mmlFcl ="http://www.medxml.net/MML/ContentModule/FirstClinic/1.0"
Progress course information module	xmlns:mmlPc ="http://www.medxml.net/MML/ContentModule/ProgressCourse/1.0"
Surgery record information module	xmlns:mmlSg ="http://www.medxml.net/MML/ContentModule/Surgery/1.0"
Clinical summary information module	xmlns:mmlSm ="http://www.medxml.net/MML/ContentModule/Summary/1.0"
Test history information module	xmlns:mmlLb="http://www.medxml.net/MML/ContentModule/test/1.0"
Report information module	xmlns:mmlRp="http://www.medxml.net/MML/ContentModule/report/1.0"
Referral module	xmlns:mmlRe="http://www.medxml.net/MML/ContentModule/Referral/1.0"

This document explains the MML specification assuming that readers have a general knowledge of XML. Refer to the reference documents [5, 6, 7] for details of XML.

7.4. Definitions in MML

7.4.1. Type and definition of time in MML

In this specification, it is necessary to conform to the definition of the HL7 CDA, when describing time within elements.

In MML modules, however, it is allowed to use the time definition in the previous MML Version 2.3 as they are, according to the granularity and nature of the information.

- (1) start (an attribute of the scopePeriod in the MML header)

This is the start date of the period, covered semantically, by an entire MML instance. If <paragraph>s are repeated multiple times, all <paragraph>s should be included.

- (2) end (an attribute of the scopePeriod in the MML header)

This is the end date of the period, covered semantically, by an entire MML instance. If <paragraph>s are repeated multiple times, all <paragraph>s should be included.

- (3) confirmDate (an element of the docInfo module)

This is the date when description of one <paragraph> is confirmed. Usually, it is equivalent to the confirmed date of the electronic storage of a medical record. During operation, it is preferable that the confirmed date corresponds to the document description date. But it is important to note that the date does not necessarily correspond to the event date. If an event from a few days ago is written today, enter the today's date for the confirmDate. In MML, it is impossible to specify the exact event date, unless the content of a document is analyzed. In some cases, event dates and times may be written explicitly as elements in documents, but in other cases, the date can only be estimated from a given context. This is the most practical way of managing medical records.

- (4) start (an attribute of the confirmDate in the docInfo module)

If the description of a <paragraph> shows information across multiple dates (e.g. summary), enter the start date of the period covered by the description. Note scopePeriod in (2) above is the period covered by an entire MML document and that, in contrast, this represents the period of one <paragraph>.

- (5) end (an attribute of the confirmDate in the docInfo module)

As stated above, if the description of a <paragraph> shows information across multiple dates, enter the end date of the period covered by the description.

- (6) mmlHi:startDate (Refer to the health insurance module 1.7.)

This is the issue date of a health insurance policy. From the medical point of view, it makes no sense to include this date in (2), (3), (5) and (6) above and, thus, this date is not included there.

- (7) mmlHi:expiredDate (Refer to the health insurance module 1.8.)

This is the expiration date of a health insurance policy. From the medical point of view, it makes no sense to include this date in (2), (3), (5) and (6) above and, thus, this date is not included there.

- (8) mmlRd:startDate (Refer to the diagnosis record information module 1.4.)

This is the date on which a disease first became evident. From the medical point of view, it makes no sense to include this date in (2), (3), (5) and (6) above and, thus, this date is not included there.

- (9) mmlRd:endDate (diagnosis record information 1.5.)

This is the date by which a disease was no longer evident. From the medical point of view, it makes no sense to include this date in (2), (3), (5) and (6) above and, thus this date is not included there.

- (10) mmlRd:firstEncounterDate (Refer to the diagnosis record information module 1.7.)

This is the first visit day of a disease. The start date refers to the date when the disease first became evident, and in contrast, the first visit day refers to the day on which medical care first took place. From the medical point of view, it makes no sense to include this date in (2), (3), (5) and (6) above and, thus, this date is not included there.

- (11) mmlSg:date (Refer to the surgery record information module 1.1.1.1.)

This is the surgery date (event date) and not the document description date. Note that both dates do not necessarily match.

- (12) mmlSm:start (an attribute of the clinical summary information module 1.1. mmlSm:serviceHistory)

Start date of a summary period

- (13) mmlSm:end (an attribute of the clinical summary information module 1.1. mmlSm:serviceHistory)

End date of a summary period

7. 4. 2. Granularity of elements

The problem of the element granularity occurs in many records. For example, whether the given name and the family name are grouped as a single element or should be subdivided into two separate elements. For correct conversion, it is ideal that the granularity of the local database information should correspond to that of MML, but in practice this is difficult. To minimize mismatching in the element granularity when converting the data from the local database to the MML instance, MML has been designed to have a different element granularity for particular elements. The following elements are available for this function:

- (1) Full address (1.1. mmlAd:full) or separated address (1.2. mmlAd:prefecture, 1.3. mmlAd:city, 1.4. mmlAd:town, 1.5. mmlAd:homeNumber) in the address expression format
- (2) Full name (5.4. mmlNm:fullname) or separated name (5.1. mmlNm:family, 5.2. mmlNm:given, 5.3. mmlNm:middle) in the name expression format
- (3) Full disease name (1.1. mmlRd:diagnosis) or separated disease names (1.2. mmlRd:diagnosisContents) in the diagnosis record information
- (4) Free style expression(1.3.1. mlFcl:freeNotes) or time and event expressions (1.3.2. mmlFcl:pastHistoryItem) in the initial-consultation-specific information.
- (5) Free style expression (1.1. mmlPc:FreeExpression) or structured expression (1.2. mmlPc:structuredExpression) in the progress course information
- (6) Free style expression (1.2.1.2.1. mmlPc:freeNotes) or time and event expressions (1.2.1.2.2. mmlPc:subjectiveItem) in the progress course information–subjective information
- (7) Full expression of a series of surgery procedures(1.1.3.1.1. mmlSg:operation) or separated elements expression (1.1.3.1.2. mmlSg:operationElement) in the surgery record information

While conversion to an MML instance is successful, conversion from an MML instance to a local database greatly depends on the granularity of the information in the local database. If there is a mismatch in the granularity, care must be taken in order to prevent data loss. When the granularity of the information in MML is not detailed (not subdivided), it is relatively difficult to achieve correct conversion. When the granularity in MML is detailed (subdivided), a method of transferring data with tags is also available to prevent data loss.

7. 4. 3. Granularity of documents

Only one MML module can be described in a single <paragraph>. Therefore, one module is considered to be one document. However, the granularity of documents should be defined for each document type.

- (1) Patient information

Patient information is cumulative. In most cases, only the latest information is significant. Therefore, multiple meaningful patient information documents seldom appear simultaneously and the granularity of the document is not a matter of concern.

(2) Health insurance information

A combination of available health insurance and public insurance is considered to be one document. For details, refer to the explanation of the element.

(3) Diagnosis record information

One disease is considered to be a single document. Complications of or sequela to the main disease is written to another document. When the description of a disease name is divided into the main disease part and the modifier, the total parts are considered as one document. For details, refer to the explanation of the element.

(4) Lifestyle information

As with patient information, multiple meaningful lifestyle information documents seldom appear simultaneously and the granularity of the document is not a matter of concern.

(5) Basic clinical information

This is the same as patient information.

(6) Initial-consultation-specific information

Information acquired at one first visit (hospitalization) is considered to be a single document. The information may be acquired in stages and divided into several instances. The information acquired at multiple first visits (hospitalization) must not be described in a single document.

(7) Progress course information

This document is equivalent to a progress note; a single description is considered to be a single document. Therefore, not more than one creator exists. Generally, the description date does not cover several dates.

(8) Surgery record information

A series of information items from entry to and exit from the operation room are considered to be a single document. When a patient exits from an operation room once and returns again to the operation room for surgery within a short period of time, such information should be described in two documents. In contrast, if a surgeon, department, or operation method has changed during surgery, such information should be considered as a single document.

(9) Clinical summary information

A summary of the applicable period defined by users is considered to be a single document. For a discharge summary, one hospitalization is considered to be a single document. If a patient has been treated by multiple departments during hospitalization along with a change of the patient's department, whether the summary is divided or compiled into a single document is defined by users.

7.4.4. Linking documents

Linking of documents should comply with the specification of the HL7 CDA.

7.4.4.1. Link of documents using the parentId

One unique ID (uid) is assigned to a single <paragraph>. The “uid” should be “UUID”. The “uid” is a required element and the MML processor must affix a “uid” number when it generates an MML instance. It is strongly recommended that the MML processor should somehow store the “uid” locally, when it receives an MML instance.

In MML, specifying the document with the related parent document ID (parentId) allows linking of documents.

The following usage is available for specification with parent IDs:

(1) Correction of document (Refer to table MML0008, oldEdition)

If you want to correct or update a generated document, specify the “uid” of the previous document. It is not necessary to physically delete the previous document, but it is preferable that the previous document is invisible in the user interface.

- (2) Associating an order with its result (Refer to table MML0008, order)
Specifying one order document from multiple result documents (usually the progress course information module is used for both documents) allows grouping of test results.
- (3) Associating query with its response(Refer to table MML0008, consult)
The same function as the threading control of e-mails is available.
- (4) Change of diagnoses (Refer to table MML0008, originalDiagnosis)
Time series changes of diagnoses may be expressed. Diagnosis end (creation of a new diagnosis with the same disease as a previous diagnosis, the outcome of which is “end”), change (creation of a new diagnosis with a different disease name from a previous diagnosis), division (creation of multiple new diagnoses with different disease names from a previous diagnosis), and merge (creation of a new diagnosis from multiple previous diagnoses) may be indicated.
- (5) Applicable health insurance for diagnosis (table MML0008 healthInsurance)
Applicable health insurance for diagnosis may be specified when required by medical accounting.

Note: It is desirable that the MML processor receiving MML instances can search applicable documents with related parent document IDs of MML instances received. However, if there is no guarantee that the receiving MML processor can make a search, the sending MML processor should specify the parent document IDs of only those documents which have already been sent.

7.4.4.2. Linking documents using the groupId

Group ID (1.2.1.1.3.3. groupId) is used in order to make items such as summaries and letters of referral by combining multiple modules. When data is controlled by the module unit, searching is easier if a group of modules which are completely equivalent and could be linked is controlled with the same document IDs. It is possible to set up an identical ID (that is, groupId) separately from a document ID for multiple modules that are required to be grouped into a single document.

Specifically, following the “uid” (document unique ID) and “parentId” (related parent document ID) elements the groupId element is added as a subordinate element to the “docId” element within the MML document header (docInfo). Furthermore, the “groupClass” attribute is added, making it possible to classify document types of module groups (such as letters of referral).

7. 4. 5. Data type in MML modules

Data types of MML Version 3.0 comply with those of the HL7 CDA but in MML modules the following types are used.

String	character string
integer	integer number
decimal	decimal number
boolean	True/false value. Use true or false value
Date	date Format : CCYY-MM-DD Example: 1999-09-01
Time	time Format : hh:mm:ss Example: 12:54:30
dateTime	date and time Format : CCYY-MM-DDThh:mm:ss Example: 1999-09-01T12:54:30
timePeriod	Format: PnYnMnDTnHnMnS Example: P65Y (65 years old) or Format: PnW Example: P12W (12 weeks after birth)

The date, time, dateTime, and timePeriod formats should adopt the ISO 8601 [7] specification, especially the complete representation format. In addition, the date, time, and dateTime formats should adopt the extended format. The timePeriod format should adopt the basic format. The range of omissions varies in individual elements. Refer to the explanation of each element for information on the formats of individual elements and attributes.

7. 4. 6. Access rights and encryption

In MML Version 3.0 access rights and encryption comply with the HL7 CDA.

But in the MML header module, it is possible to use the regulations of access rights and encryption defined in MML Version 2.3.

7. 4. 7. XHTML

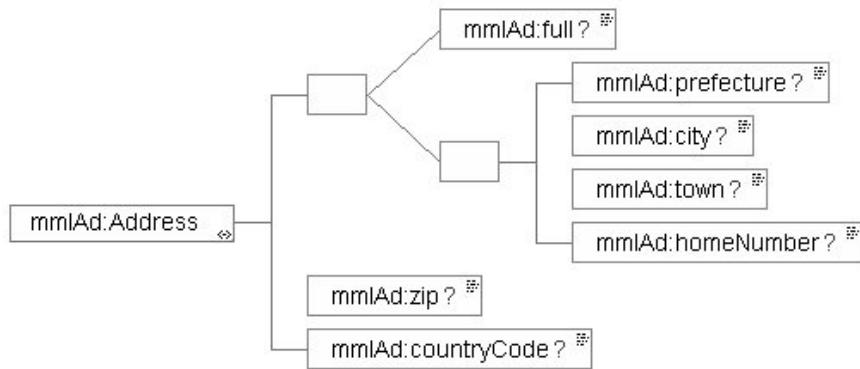
In MML Version 3.0 it is defined that blocklevel elements and text elements in XHTML can be used for some elements in the string data type. It is difficult to implement all blocklevel and text elements defined in XHTML and so it is decided that in the XHTML elements “br”, “font”, “i”, “b”, and “u” may be used in MML Version 3.0.

But it is recommended that XHTML should be strictly complied with in MML Version 3.0. Therefore, it is desirable to minimize the use of the “font” element and “u” element. Other blocklevel elements and text elements of XHTML can be added as required during implementation. In the DTDs of MML Version 3.0 only DTDs that admit the elements above are provided for reference.

8. MML common formats

8. 1. Address expression format

Element structure



Element list

	Element	Attribute	Data type	Occurrence	Table
1.	<code>mmlAd:Address</code>				
		<code>mmlAd:repCode</code>	string	#REQUIRED	optional
		<code>mmlAd:addressClass</code>	string	#IMPLIED	MML0002
		<code>mmlAd:tableId</code>	string	#IMPLIED	
1.1.	<code>mmlAd:full</code>		string	?	
1.2.	<code>mmlAd:prefecture</code>		string	?	
1.3.	<code>mmlAd:city</code>		string	?	
1.4.	<code>mmlAd:town</code>		string	?	
1.5.	<code>mmlAd:homeNumber</code>		string	?	
1.6.	<code>mmlAd:zip</code>		string	?	
1.7.	<code>mmlAd:countryCode</code>		string	?	

Occurrence; blank: 1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances

#REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

1.mmlAd:Address (Address expression format)

Description: common format for indicating addresses. Select the full address expression or subdivided address expression using 4 elements (from 1.2. to 1.5.).

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlAd:repCode	string	#REQUIRED	optional	Expression method
mmlAd:addressClass	string	#IMPLIED	MML0002	Address type code
mmlAd:tableId	string	#IMPLIED	@	Table name specifying the expression method above

Example: business address expressed alphabetically

```
<mmlAd:Address mmlAd:repCode = "A" mmlAd:addressClass = "business" mmlAd:tableId =
"MMLO025">
```

1.1.mmlAd:full

Description: full address

Data type: string

Omission: allowed

1.2.mmlAd:prefecture

Description: prefecture

Data type: string

Omission: allowed

1.3.mmlAd:city

Description: city, ward, etc.

Data type: string

Omission: allowed

1.4.mmlAd:town

Description: town or village

Data type: string

Omission: allowed

1.5.mmlAd:homeNumber

Description: remaining address items such as house number, street name, apartment name, room number, etc.

Data type: string

Omission: allowed

1.6.mmlAd:zip

Description: zip code

Data type: string

Omission: allowed

1.7.mmlAd:countryCode

Description: country code. ISO 3166 A3 code is used.

Data type: string

Omission: allowed

mmlAd:Address (Address expression format), sample instance

For a full address

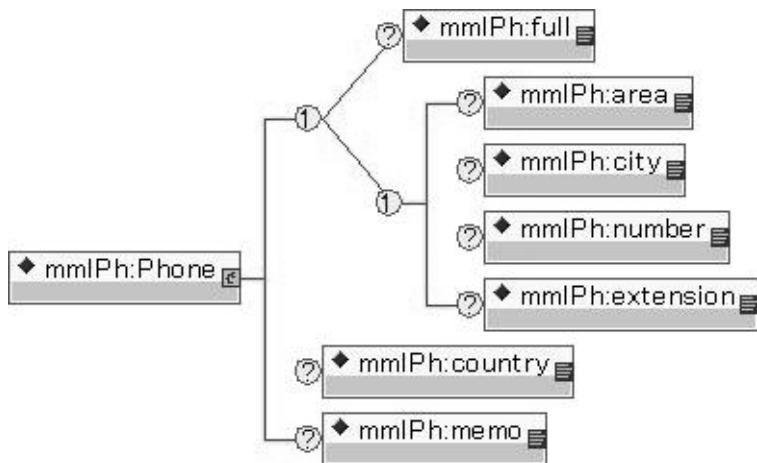
```
<mmlAd:Address mmlAd:repCode = "A" mmlAd:addressClass = "business" mmlAd:tableId =
"MMLO025">
  <mmlAd:full>5200 Kihara, Kiyotake-cho, Miyazaki-gun, Miyazaki-prefecture</
  mmlAd:full>
  <mmlAd:zip>889-1692</mmlAd:zip>
  <mmlAd:countryCode>JPN</mmlAd:countryCode>
</mmlAd:Address>
```

For a separated address

```
<mmlAd:Address mmlAd:repCode = "A" mmlAd:addressClass = "business" mmlAd:tableId =
"MMLO025">
  <mmlAd:prefecture>Miyazaki</mmlAd:prefecture>
  <mmlAd:city>Miyazaki</mmlAd:city>
  <mmlAd:town>Kiyotake</mmlAd:town>
  <mmlAd:homeNumber>5200 Kihara</mmlAd:homeNumber>
  <mmlAd:zip>889-1692</mmlAd:zip>
  <mmlAd:countryCode>JPN</mmlAd:countryCode>
</mmlAd:Address>
```

8. 2. Telephone number format

Element structure



Element list

Element	Attribute	Data type	Occurrence	Table
2. mmlPh:Phone				
	mmlPh:telEquipType	string	#IMPLIED	MML0003
2.1. mmlPh:area		string	?	
2.2. mmlPh:city		string	?	
2.3. mmlPh:number		string	?	
2.4. mmlPh:extension		string	?	
2.5. mmlPh:full		string	?	
2.6. mmlPh:country		string	?	
2.7. mmlPh:memo		string	?	

Occurrence: blank:1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances

#REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

2.mmlPh:Phone (Telephone number format)

Description: common format for indicating telephone numbers. Select the separated telephone number expression (from 2.1. to 2.4.) or full telephone number expression (2.5.).

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlPh:telEquipType	string	#IMPLIED	MML0003	Equipment type code

2.1.mmlPh:area

Description: area code

Data type: string

Omission: allowed

2.2.mmlPh:city

Description: local number

Data type: string

Omission: allowed

2.3.mmlPh:number

Description: individual number

Data type: string

Omission: allowed

2.4.mmlPh:extension

Description: extension

Data type: string

Omission: allowed

2.5. mmlPh:full

Description: full telephone number

Data type: string

Omission: allowed

2.6.mmlPh:country

Description: country code

Data type: string

Omission: allowed

2.7.mmlPh:memo

Description: describe the time range of calls, etc.

Data type: string

Omission: allowed

mmlPh:Phone (Telephone number format), sample instance

For a separated telephone number

```
<mmlPh:Phone mmlPh:telEquipType = "PH">
  <mmlPh:area>0985</mmlPh:area>
  <mmlPh:city>85</mmlPh:city>
  <mmlPh:number>1500</mmlPh:number>
  <mmlPh:extension>2067</mmlPh:extension>
  <mmlPh:country>81</mmlPh:country>
  <mmlPh:memo>daytime</mmlPh:memo>
</mmlPh:Phone>
```

For a full telephone number

```
<mmlPh:Phone mmlPh:telEquipType = "PH">
  <mmlPh:full>0985-85-1500(2067)</mmlPh:full>
  <mmlPh:country>81</mmlPh:country>
  <mmlPh:memo>daytime</mmlPh:memo>
</mmlPh:Phone>
```

8. 3. ID format

Element list

Element	Attribute	Data type	Occurrence	Table
3. mmlCm:Id		string		
	mmlCm:type	string	#REQUIRED	optional
	mmlCm:tableId	string	#REQUIRED	
	mmlCm:checkDigit	integer	#IMPLIED	
	mmlCm:checkDigitSchema	string	#IMPLIED	MML0001

Occurrence; blank:1appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances
 #REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

3.mmlCm:Id (ID format)

Description: common format for indicating IDs

Data type: string

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlCm:type	string	#REQUIRED	optional	ID type code
mmlCm:tableId	string	#REQUIRED		Table name specifying the ID type code above. In case that the personal ID is unique to a facility, it is possible to enter the facility ID.
mmlCm:checkDigit	integer	#IMPLIED		Check digit
mmlCm:checkDigitSchema	string	#IMPLIED	MML0001	Check digit scheme

Note 1: In principle, the mmlCm:type uses table MML0024 for personal IDs, table MML0027 for facility IDs and table MML0029 for the medical department IDs. The table name used is written in the mmlCm:tableId.

Note 2: Only if the personal ID is unique to a facility, it is possible to enter the facility ID in the mmlCm:tableId and make up a personal ID with the combination of the facility ID and facility unique personal ID.

mmlCm:Id (ID format), sample instance

For a personal ID
<mmlCm:Id mmlCm:type = "facility" mmlCm:checkDigitSchema = "M10" mmlCm:checkDigit = "5"
mmlCm:tableId = "MML0024">12345</mmlCm:Id>

For a personal IDwith the combination of a facility ID and facility unique personal ID
<mmlCm:Id mmlCm:type = "facility" mmlCm:checkDigitSchema = "M10" mmlCm:checkDigit = "5"
mmlCm:tableId = "JPN452015100001">12345</mmlCm:Id>

For a facility ID
<mmlCm:Id mmlCm:type = "insurance" mmlCm:tableId = " MML0027">12345</mmlCm:Id>

For a medical department ID
<mmlCm:Id mmlCm:type = "medical" mmlCm:tableId = "MML0029">16</mmlCm:Id>

8. 4. External reference format

Element list

Element	Attribute	Data type	Occurrence	Table
4. mmlCm:extRef				
	mmlCm:contentType	string	#IMPLIED	
	mmlCm:medicalRole	string	#IMPLIED	
	mmlCm:title	string	#IMPLIED	
	mmlCm:href	string	#REQUIRED	

Occurrence; blank: 1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances
#REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

4.mmlCm:extRef (External reference format)

Description: common format for indicating external references

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlCm:contentType	string	#IMPLIED		Type code of external reference information
mmlCm:medicalRole	string	#IMPLIED		Detail type of external reference information
mmlCm:title	string	#IMPLIED		Title
mmlCm:href	string	#REQUIRED		Location of external reference information

It is strongly recommended that data such as a specimen test result, prescription and image should be stored in a data file independently from MML instances and be externally referred to from MML for the following reasons;
(1) Standards such as HL7 or DICOM are available. (2) The binary data format is efficient for data exchange.
(3) These data are often managed as independent data files. The method of inserting these data into MML instances has not been reviewed sufficiently and the external data reference method is adopted in this specification.

The external reference format follows the description format below.

mmlCm:contentType

The contentType is in compliance with the Content-Type of MIME (RFC 2045, 2046, 2047). In addition to “TEXT/PLAIN”, content types such as “IMAGE/DICOM”, “APPLICATION/HL72.3-HL7ER2.3”, etc. are defined in the MERIT-9 (MEdical Record, Image, Text, - Information eXchange). For details, refer to the CONTENT-TYPE of MERIT-9.

Similarly, images in multiple formats such as “IMAGE/ JPEG”, “IMAGE/ GIF”, “IMAGE/TIFF”, etc. can be externally referenced.

mmlCm:medicalRole

If external reference files are classified in a user-installed application, files are organized efficiently and reference is made easier. Therefore, medicalRole specifies types for classification of all external files expected in MML. Table MML0033 is used.

mmlCm:title

Enter a short character string that specifically describes the content of an individual external reference file. This can be used as follows:

Example:

- Prescription at time of discharge
- Chest X-ray after pleural cavity drainage
- Chest CT scan immediately after chemical treatment
- Vital sign table (August, 1999)
- Coronary angiography sketch
- Literature for similar cases

mmlCm:href

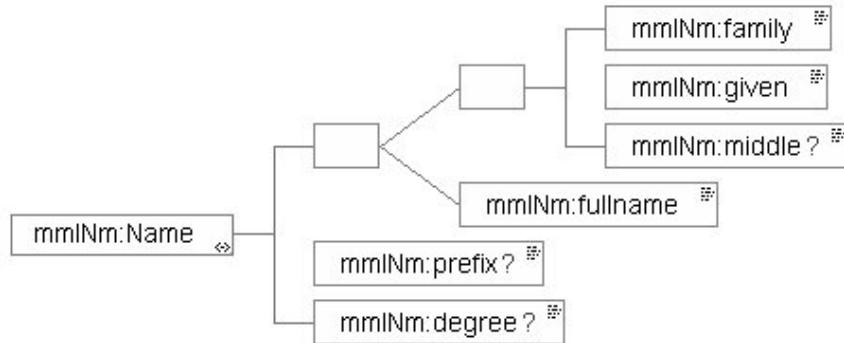
Description of relative “uri”s from an MML instance. Since an external reference file is expected to be attached to MML instances in transmission, absolute “uri”s are not used. File names and directory settings are defined by users.

mmlCm:extRef (External reference format), sample instance

```
<mml:extRefs>
  <mmlCm:extRef
    mmlCm:contentType = "APPLICATION/HL72.3-HL7ER2.3"
    mmlCm:medicalRole = "prescription"
    mmlCm:title = "Prescription on discharge"
    mmlCm:href = "patient1234/prescription831.HL7"/>
</mml:extRefs>
```

8. 5. Name expression format

Element structure



Element list

	Element	Attribute	Data type	Occurrence	Table
5.	<code>mmlNm:Name</code>				
		<code>mmlNm:repCode</code>	string	#REQUIRED	optional
		<code>mmlNm:tableId</code>	string	#IMPLIED	
5.1.	<code>mmlNm:family</code>		string		
5.2.	<code>mmlNm:given</code>		string		
5.3.	<code>mmlNm:middle</code>		string	?	
5.4.	<code>mmlNm:fullname</code>		string		
5.5.	<code>mmlNm:prefix</code>		string	?	
5.6.	<code>mmlNm:degree</code>		string	?	

Occurrence: blank:1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances
#REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

5.mmlNm:Name (Name expression format)

Description: common format for indicating names. Select the separated name expression using 3 elements (from 5.1. to 5.3.) or full name expression (5.4.).

Attribute:

Attribute name	Data type	Omission	Table	Remarks
<code>mmlNm:repCode</code>	string	#REQUIRED	optional	Expression method
<code>mmlNm:tableId</code>	string	#IMPLIED	@	Table name specifying the expression method

5.1.mmlNm:family

Description: family name

Data type: string

Omission: refer to above.

5.2.mmlNm:given

Description: given name

Data type: string

Omission: refer to above.

5.3.mmlNm:middle

Description: middle name

Data type: string

Omission: allowed

5.4.mmlNm:fullname

Description: full name

Data type: string

Omission: refer to above.

5.5.mmlNm:prefix

Description: title, prefix, etc.

Data type: string

Omission: allowed

5.6.mmlNm:degree

Description: academic degree

Data type: string

Omission: allowed

mmlNm:Name (Name expression format), sample instance

For a name separated into family name and given name

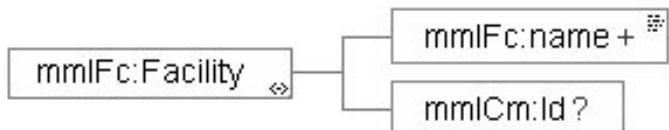
```
<mmlNm:Name mmlNm:repCode = "A" mmlNm:tableId = "MML0025">
  <mmlNm:family>Araki</mmlNm:family>
  <mmlNm:given>Kenji</mmlNm:given>
  <mmlNm:degree>M.D.</mmlNm:degree>
</mmlNm:Name>
```

For a full name

```
<mmlNm:Name mmlNm:repCode = "A" mmlNm:tableId = "MML0025">
  <mmlNm:fullname>Araki Kenji</mmlNm:fullname>
  <mmlNm:degree>M.D.</mmlNm:degree>
</mmlNm:Name>
```

8. 6. Facility information format

Element structure



Element list

Element	Attribute	Data type	Occurrence	Table
6. mmlFc:Facility				
6.1. mmlFc:name	mmlFc:repCode	string	+	#REQUIRED optional
	mmlFc:tableId	string	#IMPLIED	
6.2. mmlCm:Id		string	?	

Occurrence; blank:1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances
#REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

6.mmlFc:Facility (Facility information format)

Description: common format for indicating facilities

6.1.mmlFc:name

Description: facility name

Data type: string

Omission: not allowed

Repetition: allowed. If multiple expression methods are available, the element should be repeated.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlFc:repCode	string	#REQUIRED	optional	Expression method
mmlFc:tableId	string	#IMPLIED		Table name specifying the expression method

6.2.mmlCm:Id

Description: facility ID. Refer to the MML common format (ID format) for the structure.

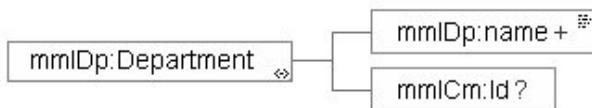
Omission: allowed

mmlFc:Facility (Facility information format), sample instance

```
<mmlFc:Facility>
  <mmlFc:name mmlFc:repCode = "A" mmlFc:tableId = "MML0025">
    New Millenium Medical College Hospital
  </mmlFc:name>
  <mmlCm:Id mmlCm:type = "insurance" mmlCm:checkDigitSchema = "MD10"
    mmlCm:checkDigit = "5" mmlCm:tableId = "MML0027">12345</mmlCm:Id>
</mmlFc:Facility>
```

8. 7. Medical department information format

Element structure



Element list

Element	Attribute	Data type	Occurrence	Table
7. mmlDp:Department				
7.1. mmlDp:name		string	+	
	mmlDp:repCode	string	#REQUIRED	optional
	mmlDp:tableId	string	#IMPLIED	
7.2. mmlCm:Id		string	?	

Occurrence: blank:1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances
#REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

7.mmlDp:Department (Medical department information format)

Description: common format for indicating medical departments

7.1.mmlDp:name

Description: medical department name

Data type: string

Omission: not allowed

Repetition: allowed. If multiple expression methods are available, the element should be repeated.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlDp:repCode	string	#REQUIRED	optional	Expression method
mmlDp:tableId	string	#IMPLIED		Table name specifying the expression method

7.2.mmlCm:Id

Description: medical department ID. Refer to the MML common format (ID format) for the structure.

Omission: allowed

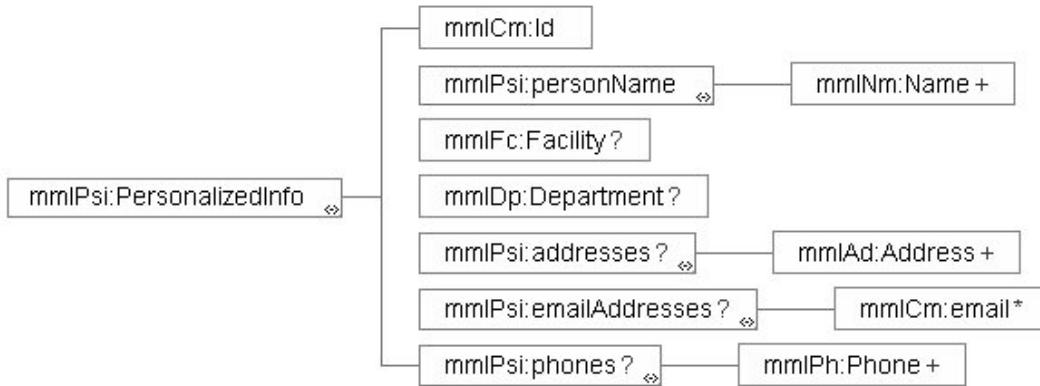
mmlDp:Department (Medical department information format), sample instance

```
<mmlDp:Department  
    <mmlDp:name mmlDp:repCode = "A" mmlDp:tableId = "MML0025">  
        Cardiovascular@Surgery  
    </mmlDp:name>  
    <mmlCm:Id mmlCm:type = "medical"@ mmlCm:tableId = "MML0029">16</mmlCm:Id>  
</mmlDp:Department>
```

Note: The medical department code of table MML0029 is used in the medical department ID.

8.8. Personal information format

Element structure



Element list

Element	Attribute	Data type	Occurrence	Table
8. mmlPsi:PersonalizedInfo				
8.1. mmlCm:Id		string		
8.2. mmlPsi:personName				
8.2.1. mmlNm:Name			+	
8.3. mmlFc:Facility			?	
8.4. mmlDp:Department			?	
8.5. mmlPsi:addresses			?	
8.5.1. mmlAd:address			+	
8.6. mmlPsi:emailAddresses			?	
8.6.1. mmlCm:email		string	*	
8.7. mmlPsi:phones			?	
8.7.1. mmlPh:Phone			+	

Occurrence; blank:1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances

#REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

8.mmlPsi:PersonalizedInfo (Personal information format)

Description: common format for indicating personal information

8.1.mmlCm:Id

Description: personal ID. Refer to the MML common format (ID format) for the structure.

Omission: not allowed

8.2.mmlPsi:personName

Description: parent element for the input of name information.

Omission: not allowed

8.2.1.mmlNm:Name

Description: name. Refer to the MML common format (Name expression format) for the structure.

Omission: not allowed

Repetition: allowed. If multiple expression methods are available, the element should be repeated.

8.3.mmlFc:Facility

Description: facility information. Refer to the MML common format (Facility information format) for the structure.

Omission: allowed

8.4.mmlDp:Department

Description: medical department information. Refer to the MML common format (Medical department information format) for the structure.

Omission: allowed

8.5.mmlPsi:addresses

Description: parent element for the input of address information.

Omission: allowed

8.5.1.mmlAd:address

Description: address. Refer to the MML common format (Address expression format) for the structure.

Omission: not allowed

Repetition: allowed. If multiple addresses or multiple expression methods are available, the element should be repeated.

8.6.mmlPsi:emailAddresses

Description: parent element for the input of e-mail addresses described below.

Omission: allowed

8.6.1.mmlCm:email

Description: e-mail address

Data type: string

Omission: allowed

Repetition: allowed. If multiple e-mail addresses are available, the element should be repeated.

Example:

```
<mmlPsi:emailAddresses>
  <mmlCm:email>araki@post.medxml.net</mmlCm:email>
</mmlPsi:emailAddresses>
```

8.7.mmlPsi:phones

Description: parent element for the input of telephone numbers described below.

Omission: allowed

8.7.1.mmlPh:Phone

Description: telephone number. Refer to the MML common format (Telephone number format) for the structure.

Omission: not allowed

Repetition: allowed. If multiple telephone numbers are available, the element should be repeated.

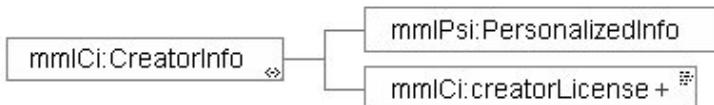
mmlPsi:PersonalizedInfo (Personal information format), sample instance

```
<mmlPsi:PersonalizedInfo>
  <mmlCm:Id mmlCm:type = "facility" mmlCm:checkDigitSchema = "M10"
    mmlCm:checkDigit = "5" mmlCm:tableId = "MML0024">12345</mmlCm:Id>
    <mmlPsi:personName>
      mmlNm:Name mmlNm:repCode = "A" mmlNm:tableId = "MML0025">
        <mmlNm:family>Araki</mmlNm:family>
        <mmlNm:given>Kenji</mmlNm:given>
        <mmlNm:degree>M.D.</mmlNm:degree>
      </mmlNm:Name>
    </mmlPsi:personName>
    <mmlFc:Facility>
      <mmlFc:name mmlFc:repCode = "A" mmlFc:tableId = "MML0025">
        New Millenium Medical College Hospital
      </mmlFc:name>
      <mmlCm:Id mmlCm:type = "insurance"
        mmlCm:tableId = "MML0027">12345</mmlCm:Id>
    </mmlFc:Facility>
    <mmlDp:Department>
      <mmlDp:name mmlDp:repCode = "A" mmlDp:tableId = "MML0025">
        Cardiovascular Surgery
      </mmlDp:name>
      <mmlCm:Id mmlCm:type = "medical" mmlCm:tableId = "MML0029">16</mmlCm:Id>
    </mmlDp:Department>
  </mmlPsi:PersonalizedInfo>
```

```
<mmlPsi:addresses>
  <mmlAd:Address mmlAd:repCode = "A" mmlAd:addressClass = "business"
    mmlAd:tableId = "MML0025">
    <mmlAd:full>
      5200 Kihara, Kiyotake-cho, Miyazaki-gun, Miyazaki-prefecture
    </mmlAd:full>
    <mmlAd:zip>889-1692</mmlAd:zip>
    <mmlAd:countryCode>JPN</mmlAd:countryCode>
  </mmlAd:Address>
</mmlPsi:addresses>
<mmlPsi:emailAddresses>
  <mmlCm:email>araki@post.medxml.net</mmlCm:email>
</mmlPsi:emailAddresses>
<mmlPsi:phones>
  <mmlPh:Phone mmlPh:telEquipType = "PH">
    <mmlPh:area>0985</mmlPh:area>
    <mmlPh:city>85</mmlPh:city>
    <mmlPh:number>1500</mmlPh:number>
    <mmlPh:extension>2067</mmlPh:extension>
    <mmlPh:country>81</mmlPh:country>
    <mmlPh:memo>daytime</mmlPh:memo>
  </mmlPh:Phone>
</mmlPsi:phones>
</mmlPsi:PersonalizedInfo>
```

8. 9. Creator information format

Element structure



Element list

Element	Attribute	Data type	Occurrence	Table
9. mmlCi:CreatorInfo				
9.1. mmlPsi:PersonalizedInfo				
9.2. mmlCi:creatorLicense	mmlCi:tableId	string	+	optional
			#IMPLIED	

Occurrence: blank: 1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances
#REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

9.mmlCi:CreatorInfo (Creator information format)

Description: common format for indicating creators

9.1.mmlPsi:PersonalizedInfo

Description: personal information of a creator. Refer to the MML common format (Personal information format) for the structure.

Omission: not allowed

9.2.mmlCi:creatorLicense

Description: license of a creator

Data type: string. Enter the value of table specified in the attribute.

Omission: not allowed

Repetition: allowed. If a creator has multiple licenses, the element should be repeated.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlCi:tableId	string	#IMPLIED		Table name specifying licenses of creators

Example:

```
<mmlCi:creatorLicense mmlCi:tableId = "MML0026">doctor</mmlCi:creatorLicense>
```

9. Details of MmlHeader format

MmlHeader

All tags in the MmlHeader belong to the namespace of xmlns:mml = " http://www.medxml.net/MML". (It is assumed here to use xmlns="<http://www.medxml.net/MML>" as default.)

MmlHeader

Description: header information

mmlCi:CreatorInfo

Description: identification information of creators. Refer to the MML common format (Creator information format) for the structure.

Omission: not allowed

masterId

Description: patient master ID.

Omission: not allowed

mmlCm:Id

Description: refer to the MML common format (ID format) for the structure.

Omission: not allowed

toc

Description: table of contents. Checking the “toc” in a header allows the system to recognize what data is contained without reviewing the “body” of the HL7 CDA.

Omission: not allowed

tocItem

Description: all DTDs used in this MML document are listed.

Data type: string

Omission: not allowed

Repetition: allowed. The element should be repeated the number of times of used DTD types.

scopePeriod

Description: period covered by entire MML documents

Omission: allowed

Attribute:

Attribute name	Data type	Omission	Table	Remarks
start	date	#IMPLIED		Start date
end	date	#IMPLIED		End date
hasOtherInfo	boolean	#IMPLIED		If there is information before/after the specified period. true: Yes, false: No

isExtract	boolean	#IMPLIED		Whether or not information is extracted. true: Yes, false: No
extractPolicy	string	#IMPLIED	MML0004	Policy of extraction

For the period covered by the entire MML indicated by “start” and “end”, the value of “hasOtherInfo” should be “true” if patient’s clinical information extends beyond the period. If all patient information held by the sending facility within the period is described in an MML instance, the value of “isExtract” should be “false”; if any extraction is carried out, the value should be “true”. Furthermore, in the latter case, the extraction policy should be given in “extractPolicy”. This is to clarify whether all or partial patient information is received at the reception side of the MML instance. If it is assumed that all information is received despite the fact that only partial information is received, a serious mistake in medical treatment may occur.

encryptInfo

Description: encryption information such as electronic signature. The description method is not specified in particular. Refer to the “Access rights and encryption” section in the basic policy.

Data type: string

Omission: allowed

10. Details of docInfo structure

10.1.1. docInfo

Description: individual document header information

Omission: usually not allowed, with few exceptions. Omission is allowed only when there is no query specifying modules or no modules are applicable to a given query.

Attribute: it is necessary to set up attributes so that the type and version of the module used will become obvious only with the reference of the document header.

Attribute name	Data type	Omission	Table	Remarks
contentModuleType	string	#IMPLIED	MML0005	Document type code
moduleVersion	uri	#IMPLIED		The URIs of DTDs of used modules are described.

10.1.2. securityLevel

Description: types of access rights. The access rights selected at the time of creation of an MML instance by the MML instance creator should be entered. The actual access control is subject to the application (and its manager) receiving the instance.

Omission: not allowed

10.1.3. accessRight

Description: access right

Omission: not allowed

Repetition: allowed. The element should be repeated the number of times access rights are set up. At least, it is essential to set up an access right for creators so that they will not be rejected from making a reference.

If multiple accessRight elements exist, the accessRight elements are mutually under the “OR” condition. When more than two subordinate elements of a facility, medical department, occupation, or person exist to a single accessRight element, the condition is “AND”. If nothing meets this “AND” condition, the access right is not accepted.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
permit	string	#REQUIRED	MML0034	Rights of reference none: no access permissible read: reference permissible write: reference and correction permissible delete: reference and deletion permissible all: reference, correction, and deletion permissible
startDate	date	#IMPLIED		Start date of an access right
endDate	date	#IMPLIED		End date of an access right

In order to specify explicitly that no reference is permissible, set none for the permit attribute.

Answers to a deletion request for deletion-permissible documents are not specifically defined in MML. When it is important to keep the correction history of a medical record, it is an assumable way during implementation to keep the document invisible to normal accesses rather than carrying out physical deletion.

10.1.3.1 mmlSc:facility

Description: facility. Set up access rights in the facility unit.

Omission: allowed

10.1.3.2 mmlSc:facilityName

Description: facility name

Data type: string

Omission: not allowed

Repetition: allowed. The element should be repeated the same number of times as the number of facilities for which access rights are set.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlSc:facilityCode	string	#REQUIRED	MML0035	Facility access right definition
mmlSc:tableId	string	#IMPLIED		Table name used for the facility access right definition. Enter MML0035.
mmlSc:facilityId	string	#IMPLIED		Facility code
mmlSc:facilityIdType	string	#IMPLIED	MML0027	Facility code master name

Meanings of each value in the facility access right definition are as follows:

- all All accessing facilities are permissible.
- creator The same facilities as those of creators are permissible.
- experience Facilities that have the experience of medical cares to a described person (patient) are permissible.
The method of selecting a facility that has the experience of medical cares is subject to each application.
- individual Facilities with facility IDs that are individually specified are permissible.
Permissible facilities are specified in the mmlSc:facilityId and mmlSc:facilityIdType.

10.1.3.3 mmlSc:department

Description: medical department

Omission: allowed

10.1.3.4 mmlSc:departmentName

Description: medical department name

Omission: not allowed

Repetition: allowed. The element should be repeated the same number of times as the number of departments for which access rights are set.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlSc:departmentCode	string	#REQUIRED	MML0028	Medical department code
mmlSc:tableId	string	#IMPLIED		Table name of the medical department code. Enter MML0028.

10.1.3.5 mmlSc:licence

Description: occupation

Omission: allowed

10.1.3.6 mmlSc:licenceName

Description: occupation name

Omission: not allowed

Repetition: allowed. The element should be repeated the same number of times as the number of occupations for which access rights are set.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlSc:licenceCode	string	#REQUIRED	MML0026	Occupation code
mmlSc:tableId	string	#IMPLIED		Table name of the occupation code. Enter MML0026.

10.1.3.7 mmlSc:person

Description: person

Omission: allowed

10.1.3.8 mmlSc:personName

Description: person's name

Data type: string

Omission: not allowed

Repetition: allowed. The element should be repeated the same number of times as the number of people for which access rights are set.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlSc:personCode	string	#REQUIRED	MML0036	Personal access right definition
mmlSc:tableId	string	#IMPLIED		Table name used for the personal access right definition. Enter MML0036.
mmlSc:personId	string	#IMPLIED		Personal ID
mmlSc:personIdType	string	#IMPLIED		Personal ID master name

Meanings of each value in the personal access right definition are as follows:

all	All accessing people are permissible.
creator	Creators are permissible.
patient	Described persons (patients) themselves are permissible.
individual	Persons with personal IDs that are individually specified are permissible. Permissible persons are specified in the mmlSc:personId and mmlSc:personIdType.

Example: Description of 1.2.1.1.1.securityLevel (type of access right)

Case to set up an access right of reference, correction, and deletion from October 1, 2001 to December 31, 2001 for doctors at the internal medicine department, Miyazaki Medical College Hospital.

```
<securityLevel>
    <accessRight
        permit="all"
        startDate="2001-10-01"
        endDate="2001-12-31">

        <mmlSc:facility>
            <mmlSc:facilityName
                mmlSc:facilityCode="individual"
                mmlSc:tableId="MML0035"
                mmlSc:facilityId="JPN453010100003"
                mmlSc:facilityIdType="JMARI">
                Miyazaki Medical College Hospital
            </mmlSc:facilityName>
        </mmlSc:facility>

        <mmlSc:department>
            <mmlSc:departmentName
                mmlSc:departmentCode="01"
                mmlSc:tableId="MML0028"/>
        </mmlSc:department>

        <mmlSc:licence>
            <mmlSc:licenceName
                mmlSc:licenceCode="doctor"
                mmlSc:tableId="MML0026"/>
        </mmlSc:licence>
    </accessRight>
</securityLevel>
```

Case to set up an open-ended access right of all for the creator's facility and an access right of reference from October 1, 2001 to December 31, 2001 for a patient Taro Kanja.

```
<securityLevel>
    <accessRight
        permit="all">

        <mmlSc:facility>
```

```

<mmlSc:facilityName
    mmlSc:facilityCode="creator"
    mmlSc:tableId="MML0035">
    Creator's facility
</mmlSc:facilityName>
</mmlSc:facility>
</accessRight>

<accessRight
    permit="read"
    startDate="2001-10-01"
    endDate="2001-12-31">

    <mmlSc:person>
        <mmlSc:personName
            mmlSc:personCode="patient"
            mmlSc:tableId="MML0036"
            mmlSc:personId="4500001234"
            mmlSc:personIdType="dolphinUserId_2001-10-03">
            Taro Kanja
        </mmlSc:personName>
    </mmlSc:person>
</accessRight>
</securityLevel>

```

10.1.3.9 title

Description: document title

Data type: string

Omission: not allowed

Attribute:

Attribute name	Data type	Omission	Table	Remarks
generationPurpose	string	#IMPLIED	MML0007	Document type in detail

10.1.3.10 docId

Description: document ID information

Omission: not allowed

10.1.3.11 uid

Description: document unique ID. The format of unique numbers should be UUID. (UUID is a format that includes hyphens.) It is strongly recommended that the MML processor should somehow locally store the uid when it receives an MML instance.

Data type: string

Omission: not allowed

Example:

```
<uid>0aae5960-667c-11d3-9751-00105a6792e7</uid>
```

10.1.3.12 parentId

Description: related parent document ID. For usage, refer to the “Link of documents” section in the basic policy.

Data type: string

Omission: allowed

Repetition: allowed. If multiple parent documents are available, the element should be repeated.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
relation	string	#IMPLIED	MML0008	Document relation type

Example: When a document is a revised document(new edition) of a parent document

```
<parentId relation = "oldEdition">0aae5960-667c-11d3-9751-00105a6792e8</parentId>
```

10.1.3.13 groupId

Description: group ID. For usage, refer to the “Link of documents using the groupId” section in the basic policy.

Data type: string

Omission: allowed

Repetition: allowed. If a document belongs to multiple groups, the element should be repeated.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
groupClass	string	#IMPLIED	MML0007	Module group type

10.1.3.14 confirmDate

Description: date and time when the electronic storage of a medical chart is confirmed

Data type: dateTime Format: CCYY-MM-DDThh:mm:ss

Omission: not allowed

Attribute: When time series information is one document, specify the start/end dates and times in the following attributes. Note that scopePeriod (1.1.4.) represents the period covered by an entire MML document and that in contrast, this represents the period of one <paragraph>.

Attribute name	Data type	Omission	Table	Remarks
start	dateTime	#IMPLIED		Start date and time for time series information
end	dateTime	#IMPLIED		End date and time for time series information
firstConfirmDate	dateTime	#IMPLIED		The first confirmed date when a correction has been made.
eventDate	dateTime	#IMPLIED		Date and time of a described medical event

10.1.3.15 mmlCi:CreatorInfo

Description: creator information of individual document. Refer to the MML common format (Creator information format) for the structure.

Omission: not allowed

10.1.3.16 extRefs

Description: list of all external link information described in the content. The list of external reference files can be obtained without analyzing the content.

Omission: not allowed

10.1.3.17 mmlCm:extRef

Description: external link information. Refer to the MML common format (External reference format) for the structure.

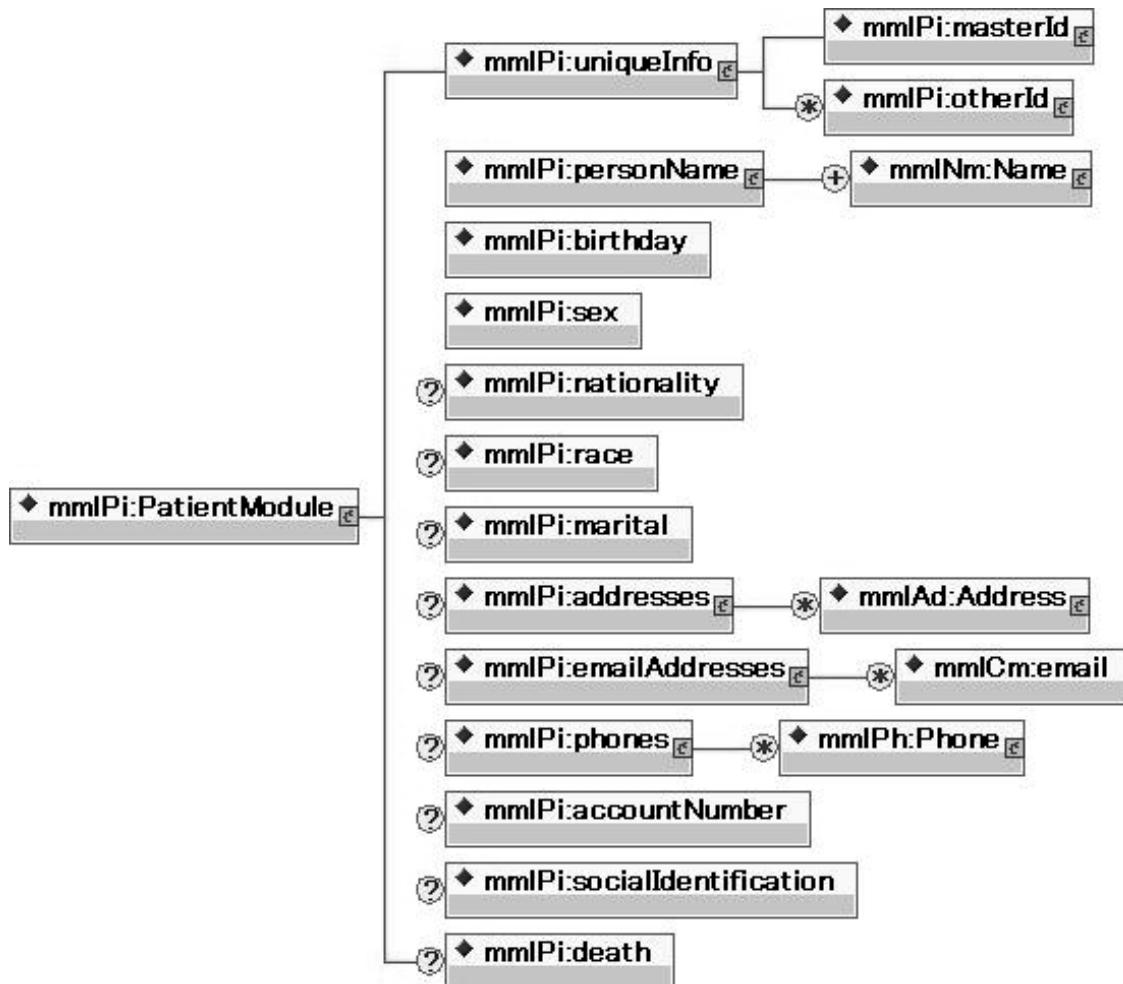
Omission: allowed

Repetition: allowed. The element should be repeated the same number of times as the number of external link information.

11. Details of MML content modules

11. 1. Patient information module

Element structure



Namespace declaration

Namespace declaration of this module is as follows.

```
xmlns:mmlPi= "http://www.medxml.net/MML/ContentModule/PatientInfo/1.0"
```

Element list

Elements	Attribute	Datatypes	Occurrence	Table id
1. mmlPi:PatientModule				
1.1. mmlPi:uniqueInfo				
1.1.1. mmlPi:masterId				
1.1.1.1. mmlCm:Id		string		
1.1.2. mmlPi:otherId	mmlPi:type	string	*	#REQUIRED MML0009
1.1.2.1. mmlCm:Id		string		
1.2. mmlPi:personName				
1.2.1. mmlNm:Name			+	
1.3. mmlPi:birthday		date		
1.4. mmlPi:sex		string		MML0010
1.5. mmlPi:nationality		string	?	
	mmlPi:subtype	string		#IMPLIED
1.6. mmlPi:race		string	?	
	mmlPi:raceCode	string		#IMPLIED
	mmlPi:raceCodeId	string		#IMPLIED
1.7. mmlPi:marital		string	?	MML0011
1.8. mmlPi:addresses			?	
1.8.1. mmlAd:Address			*	
1.9. mmlPi:emailAddresses			?	
1.9.1. mmlCm:email		string	*	
1.10. mmlPi:phones			?	
1.10.1. mmlPh:Phone			*	
1.11. mmlPi:accountNumber		string	?	
1.12. mmlPi:socialIdentification		string	?	
1.13. mmlPi:death		boolean	?	
	mmlPi:date	date/dateTime		#IMPLIED

Occurrence; blank: 1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances
 #REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

1.mmlPi:PatientModule

Description: patient information

1.1.mmlPi:uniqueInfo

Description: ID information

Omission: not allowed

1.1.1.mmlPi:masterId

Description: master ID. This must be identical to the masterId of an MmlHeader.

Omission: not allowed

1.1.1.1.mmlCm:Id

Description: refer to the MML common format (ID format) for the structure.

Omission: not allowed

1.1.2.mmlPi:otherId

Description: other IDs. IDs of a representative, emergency contact person, etc. are described.

Omission: allowed

Repetition: allowed. The element should be repeated if multiple other IDs are available.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlPi:type	string	#REQUIRED	MML0009	Other ID Type

1.1.2.1.mmlCm:Id

Description: refer to the MML common format (ID format) for the structure.

Omission: not allowed

1.2.mmlPi:personName

Description: name information

Omission: not allowed

1.2.1.mmlNm:Name

Description: refer to the MML common format (Name expression format) for the structure.

Omission: not allowed

Repetition: allowed. If multiple expression methods are available, the element should be repeated.

1.3.mmlPi:birthday

Description: birth date/year

Data type: date Format: CCYY-MM-DD

Omission: not allowed

Example:

```
<mmlPi:birthday>1958-10-21</mmlPi:birthday>
```

1.4.mmlPi:sex

Description: Sex. Use table MML0010.

Data type: string

Omission: not allowed

1.5.mmlPi:nationality

Description: nationality code. ISO 3166 A3 code is used. Enter JPN for Japan.

Data type: string

Omission: allowed

Attribute:

Attribute name	Data type	Omission	Remarks
mmlPi:subtype	string	#IMPLIED	Second nationality code. Use ISO 3166 A3 code.

Example: the first nationality is Japan and the second nationality is the USA.

```
<mmlPi:nationality mmlPi:subtype = "USA">JPN</mmlPi:nationality>
```

1.6.mmlPi:race

Description: race, ethnic group

Data type: string

Omission: allowed

Attribute:

Attribute name	Data type	Omission	Remarks
mmlPi:raceCode	string	#IMPLIED	race code
mmlPi:raceCodeId	string	#IMPLIED	Enter the name of a used table

1.7.mmlPi:marital

Description: marital status. Use table MML0011.

Data type: string

Omission: allowed

1.8.mmlPi:addresses

Description: parent element for the input of addresses described below.

Omission: allowed

1.8.1.mmlAd:Address

Description: address. Refer to the MML common format (Address expression format) for the structure.

Omission: allowed

Repetition: allowed. If multiple addresses or multiple expression methods are available, the element should be repeated.

1.9.mmlPi:emailAddresses

Description: parent element for the input of e-mail addresses described below.

Omission: allowed

1.9.1.mmlCm:email

Description: e-mail address

Data type: string

Omission: allowed

Repetition: allowed. If multiple e-mail addresses are available, the element should be repeated.

1.10.mmlPi:phones

Description: parent element for the input of telephone numbers described below.

Omission: allowed

1.10.1.mmlPh:Phone

Description: telephone number. Refer to the MML common format (Telephone number format) for the structure.

Omission: not allowed

Repetition: allowed. If multiple telephone numbers are available, the element should be repeated.

1.11.mmlPi:accountNumber

Description: account number

Data type: string

Omission: allowed

1.12.mmlPi:socialIdentification

Description: social security number

Data type: string

Omission: allowed

1.13.mmlPi:death

Description: death flag. true: death, false: alive

Data type: boolean

Omission: allowed

Attribute:

Attribute name	Data type	Omission	Remarks
mmlPi:date	date/dateTime	#IMPLIED	Date and time of death. The data type should be either date or dateTime.

Example: died on September 1,1999

```
<mmlPi:death mmlPi:date= "1999-09-01 ">true</mmlPi:death>
```

Example: died at 6:15 on September 1, 1999

```
<mmlPi:death mmlPi:date= "1999-09-01T06:15 ">true</mmlPi:death>
```

11. 2. Health insurance information (Japanese version) module

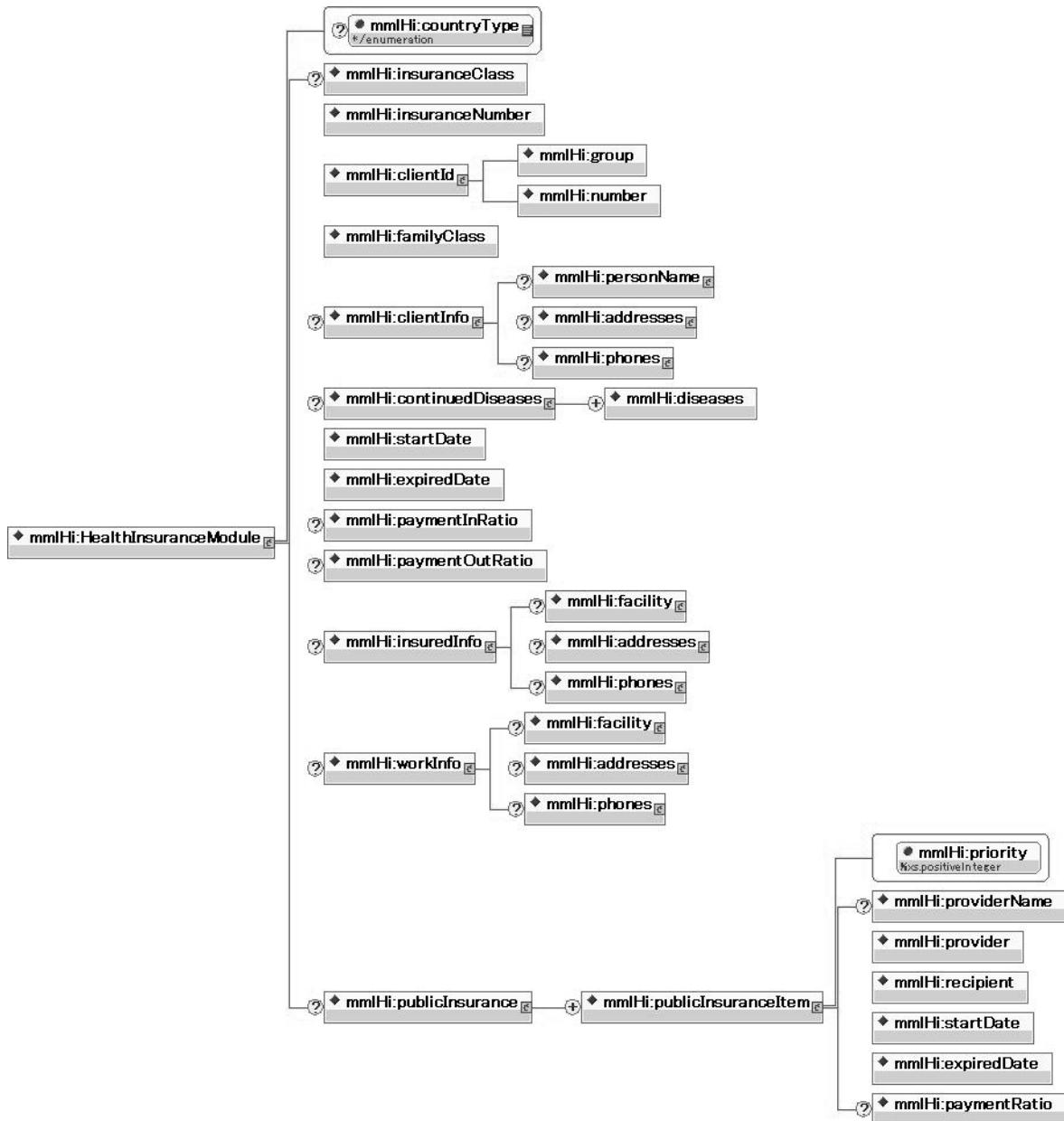
Version 1.1

Namespace declaration

Namespace declaration of this module is as follows.

```
xmlns:mmlHi="http://www.medxml.net/MML/ContentModule/HealthInsurance/1.1"
```

Element structure



Element list

	Element	Attribute	Data type	Occurrence	Table
1	mmlHi:HealthInsuranceModule				
		mmlHi:countryType	string	#IMPLIED	
1.1.	mmlHi:insuranceClass		string	?	
		mmlHi:ClassCode	string	#REQUIRED	
		mmlHi:tableId	string	#REQUIRED	MML0031
1.2.	mmlHi:insuranceNumber		string		
1.3.	mmlHi:clientId				
1.3.1.	mmlHi:group		string		
1.3.2.	mmlHi:number		string		
1.4.	mmlHi:familyClass		boolean		
1.5.	mmlHi:clientInfo			?	
1.5.1.	mmlHi:personName			?	
1.5.1.1.	mmlNm:Name			*	
1.5.2.	mmlHi:addresses			?	
1.5.2.1.	mmlAd:Address			*	
1.5.3.	mmlHi:phones			?	
1.5.3.1.	mmlPh:Phone			*	
1.6.	mmlHi:continuedDiseases			?	
1.6.1.	mmlHi:diseases		string	+	
1.7.	mmlHi:startDate		date		
1.8.	mmlHi:expiredDate		date		
1.9.	mmlHi:paymentInRatio		decimal	?	
1.10.	mmlHi:paymentOutRatio		decimal	?	
1.11.	mmlHi:insuredInfo			?	
1.11.1.	mmlHi:facility			?	
1.11.1.1.	mmlFc:Facility			?	
1.11.2.	mmlHi:addresses			?	
1.11.2.1.	mmlAd:Address			*	
1.11.3.	mmlHi:phones			?	
1.11.3.1.	mmlPh:Phone			*	

1.12.	mmlHi:workInfo		?
1.12.1.	mmlHi:facility		?
1.12.1.1.	mmlFc:Facility		?
1.12.2.	mmlHi:addresses		?
1.12.2.1.	mmlAd:Address		*
1.12.3.	mmlHi:phones		?
1.12.3.1.	mmlPh:Phone		*
1.13.	mmlHi:publicInsurance		?
1.13.1.	mmlHi:publicInsuranceItem		+
		mmlHi:priority	string #REQUIRED
1.13.1.1.	mmlHi:providerName	string	?
1.13.1.2.	mmlHi:provider	string	
1.13.1.3.	mmlHi:recipient	string	
1.13.1.4.	mmlHi:startDate	date	
1.13.1.5.	mmlHi:expiredDate	date	
1.13.1.6.	mmlHi:paymentRatio	decimal	?
		mmlHi:RatioType	string #REQUIRED MML0032

Occurrence: blank: 1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances
 #REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

1.mmlHi:HealthInsuranceModule

Description: combination of available health insurance and public insurance.

Omission: not allowed

Repetition: allowed. If multiple combinations are available, <paragraph> should be repeated.

For example, if the following 3 insurance types are used;

1. National health insurance only
2. National health insurance and public insurance (tuberculosis)
3. Continued social insurance

3 items of information should be described separately by repeating the <paragraph> 3 times.

Attribute: the following attribute is provided to indicate that this module is unique to Japan.

Attribute name	Data type	Omission	Remarks
MmlHi:countryType	string	#IMPLIED	Country type. Enter JPN for Japan.

Example:

```
<mmlHi:HealthInsuranceModule mmlHi:countryType = "JPN">
```

1.1.mmlHi:insuranceClass

Description: health insurance class. In principle, table MML0031 is used, but in case there is a need of expanding the table specifically to users due to local public insurance, etc. use another table and enter the name of the new table.

Data type: string

Omission: allowed

Attribute:

Attribute name	Data type	Omission	Table
mmlHi:ClassCode	string	#REQUIRED	
mmlHi:tableId	string	#REQUIRED	MML0031

Example:

```
<mmlHi:insuranceClass mmlHi:ClassCode= "00" mmlHi:tableId= "MML0031 ">national health  
insurance</mmlHi:insuranceClass>
```

1.2.mmlHi:insuranceNumber

Description: health insurance number

Data type: string

Omission: not allowed

Example:

```
<mmlHi:insuranceNumber>8001</mmlHi:insuranceNumber>
```

1.3.mmlHi:clientId

Description: information of an insured person

Omission: not allowed

1.3.1.mmlHi:group

Description: insured person symbol

Data type: string

Omission: not allowed

1.3.2.mmlHi:number

Description: insured person number

Data type: string

Omission: not allowed

Example:

```
<mmlHi:clientId>  
  <mmlHi:group>MSMHS</mmlHi:group>  
  <mmlHi:number>421</mmlHi:number>  
</mmlHi:clientId>
```

1.4.mmlHi:familyClass

Description: indication of an insured person or family member. true: insured person, false: family

Data type: boolean

Omission: not allowed

Example: a case of an insured person

```
<mmlHi:familyClass>true</mmlHi:familyClass>
```

Example: a case of a family member

```
<mmlHi:familyClass>false</mmlHi:familyClass>
```

1.5.mmlHi:clientInfo

Description: information of an insured person

Omission: allowed

1.5.1.mmlHi:personName

Description: parent element for the input of insured person's names described below.

Omission: allowed

1.5.1.1.mmlNm:Name

Description: name. Refer to the MML common format (Name expression format) for the structure.

Omission: allowed

Repetition: allowed. If multiple expression methods are available, the element should be repeated.

1.5.2. mmlHi:addresses

Description: parent element for the input of insured person's addresses described below.

Omission: allowed

1.5.2.1.mmlAd:Address

Description: address. Refer to the MML common format (Address expression format) for the structure.

Omission: allowed

Repetition: allowed. If multiple addresses or multiple expression methods are available, the element should be repeated.

1.5.3.mmlHi:phones

Description: parent element for the input of insured person's telephone numbers described below.

Omission: allowed

1.5.3.1.mmlPh:Phone

Description: telephone number. Refer to the MML common format (Telephone number format) for the structure.

Omission: allowed

Repetition: allowed. If multiple telephone numbers are available, the element should be repeated.

1.6.mmlHi:continuedDiseases

Description: continued disease information

Omission: allowed

1.6.1.mmlHi:diseases

Description: name of an applicable continued disease

Data type: string

Omission: not allowed

Repetition: allowed. If multiple continued diseases are available, the element should be repeated.

Example: Diabetes mellitus and hypertension

```
<mmlHi:continuedDiseases>
  <mmlHi:diseases>diabetes mellitus</mmlHi:diseases>
  <mmlHi:diseases>hypertension</mmlHi:diseases>
</mmlHi:continuedDiseases>
```

1.7.mmlHi:startDate

Description: start date (issue date)

Data type: date Format: CCYY-MM-DD

Omission: not allowed

Example:

```
<mmlHi:startDate>1995-04-01</mmlHi:startDate>
```

1.8.mmlHi:expiredDate

Description: expiration date

Data type: date Format: CCYY-MM-DD

Omission: not allowed

Example:

```
<mmlHi:expiredDate>1999-09-30</mmlHi:expiredDate>
```

1.9.mmlHi:paymentInRatio

Description: insured person's payment ratio for an inpatient care. 0 [.0] [0] - 1 [.0] [0] (Example: "0.3" for 30 % payment)

Data type: decimal

Omission: allowed

Example: 20 % of payment ratio

```
<mmlHi:paymentInRatio>0.2</mmlHi:paymentInRatio>
```

1.10.mmlHi:paymentOutRatio

Description: insured person's payment ratio for an outpatient care. 0 [.0] [0] - 1 [.0] [0] (Example: "0.3" for 30 % payment)

Data type: decimal

Omission: allowed

Example: 20 % of payment ratio

```
<mmlHi:paymentOutRatio>0.2</mmlHi:paymentOutRatio>
```

1.11.mmlHi:insuredInfo

Description: insurer's information

Omission: allowed

1.11.1.mmlHi:facility

Description: parent element for the input of insurer's information described below.

Omission: allowed

1.11.1.1.mmlFc:Facility

Description: facility information. Refer to the MML common format (Facility information format) for the structure.

Omission: allowed

1.11.2. mmlHi:addresses

Description: parent element for the input of insurer's addresses described below.

Omission: allowed

1.11.2.1.mmlAd:Address

Description: address. Refer to the MML common format (Address expression format) for the structure.

Omission: allowed

Repetition: allowed. If multiple addresses or multiple expression methods are available, the element should be repeated.

1.11.3.mmlHi:phones

Description: parent element for the input of insurer's telephone numbers described below.

Omission: allowed

1.11.3.1.mmlPh:Phone

Description: telephone number. Refer to the MML common format (Telephone number format) for the structure.

Omission: allowed

Repetition: allowed. If multiple telephone numbers are available, the element should be repeated.

1.12.mmlHi:workInfo

Description: place of business information of an insured person.

Omission: allowed

1.12.1.mmlHi:facility

Description: parent element for the input of place of business information described below.

Omission: allowed

1.12.1.1.mmlFc:Facility

Description: facility information. Refer to the MML common format (Facility information format) for the structure.

Omission: allowed

1.12.2.mmlHi:addresses

Description: parent element for the input of addresses of place of business described below.

Omission: allowed

1.12.2.1.mmlAd:Address

Description: address. Refer to the MML common format (Address expression format) for the structure.

Omission: allowed

Repetition: allowed. If multiple addresses or multiple expression methods are available, the element should be repeated.

1.12.3.mmlHi:phones

Description: parent element for the input of telephone numbers of place of business described below.

Omission: allowed

1.12.3.1.mmlPh:Phone

Description: telephone number. Refer to the MML common format (Telephone number format) for the structure.

Omission: allowed

Repetition: allowed. If multiple telephone numbers are available, the element should be repeated.

1.13.mmlHi:publicInsurance

Description: medical information covered by public insurance

Omission: allowed

1.13.1.mmlHi:publicInsuranceItem

Description: public insurance item

Omission: not allowed

Repetition: allowed. If multiple types of public insurance are available, the element should be repeated.

Attribute:

Attribute name	Data type	Omission	Remarks
mmlHi:priority	string	#REQUIRED	Priority of multiple public insurances Enter integers starting from 1

Example:

```
<mmlHi:publicInsuranceItem mmlHi:priority = "1">
```

1.13.1.1.mmlHi:providerName

Description: public insurance name

Data type: string

Omission: allowed

1.13.1.2.mmlHi:provider

Description: provider number

Data type: string

Omission: not allowed

1.13.1.3.mmlHi:recipient

Description: recipient number

Data type: string

Omission: not allowed

1.13.1.4.mmlHi:startDate

Description: start date

Data type: date

Omission: not allowed

1.13.1.5.mmlHi:expireDate

Description: expiration date

Data type: date

Omission: not allowed

1.13.1.6.mmlHi:paymentRatio

Description: payment ratio or amount

Data type: decimal

Omission: allowed

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlHi:ratioType	String	#REQUIRED	MML0032	Payment amount or ratio is described.

Example:

```
In case payment type is "fixed" and that the amount is 10,000 yen,  
<mmlHi:paymentRatio mmlHi:ratioType= "fix ">10000</ mmlHi:paymentRatio>
```

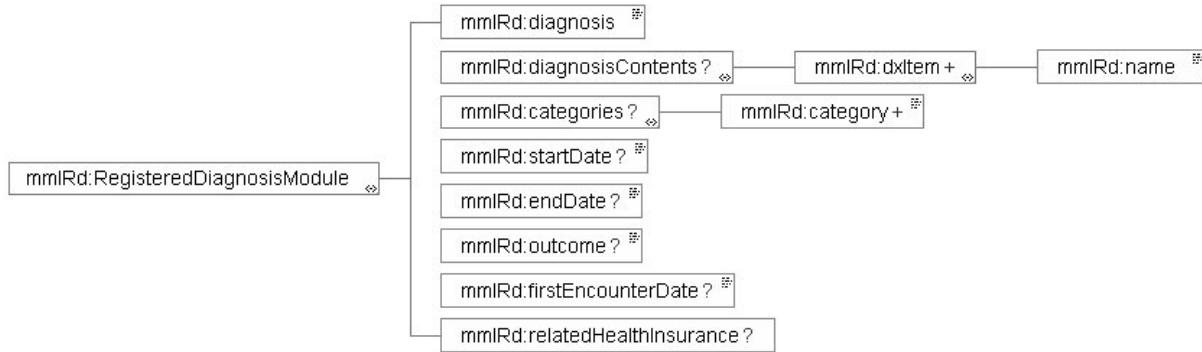
```
In case payment type is "ratio" and that the ratio is 5 %,  
<mmlHi:paymentRatio mmlHi:ratioType= "ratio ">0.05</ mmlHi:paymentRatio>
```

Example:

```
<mmlHi:publicInsurance>
  <mmlHi:publicInsuranceItem mmlHi:priority = "1">
    <mmlHi:providerName>public insurance</mmlHi:providerName>
    <mmlHi:provider>15450034</mmlHi:provider>
    <mmlHi:recipient>0009043</mmlHi:recipient>
    <mmlHi:startDate>1997-09-30</mmlHi:startDate>
    <mmlHi:expiredDate>1999-09-30</mmlHi:expiredDate>
    <mmlHi:paymentRatio mmlHi:RatioType=ÓfixÓ>10000</mmlHi:paymentRatio>
  </mmlHi:publicInsuranceItem>
</mmlHi:publicInsurance>
```

11. 3. Diagnosis record information module

Element structure



Namespace declaration

Namespace declaration of this module is as follows.

```
xmlns:mmlRd="http://www.medxml.net/MML/ContentModule/RegisteredDiagnosis/1.0"
```

Element list

Element	Attribute	Data type	Occurrence	Table
1. mmlRd:RegisteredDiagnosisModule				
1.1. mmlRd:diagnosis		string		
	mmlRd:code	string	#IMPLIED	
	mmlRd:system	string	#IMPLIED	
1.2. mmlRd:diagnosisContents			?	
1.2.1. mmlRd:dxItem			+	
1.2.2. mmlRd:name		string		
	mmlRd:code	string	#IMPLIED	
	mmlRd:system	string	#IMPLIED	
1.3. mmlRd:categories			?	
1.3.1. mmlRd:category		string	+	optional
	mmlRd:tableId	string	#REQUIRED	
1.4. mmlRd:startDate		date	?	
1.5. mmlRd:endDate		date	?	
1.6. mmlRd:outcome		string	?	MML0016
1.7. mmlRd:firstEncounterDate		date	?	
1.8. mmlRd:relatedHealthInsurance			?	
	mmlRd:uid	string	#IMPLIED	

Occurrence; blank: 1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances
 #REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

1.mmlRd:RegisteredDiagnosisModule

Description: diagnosis record information. Enter only one disease name in one module. If there are multiple diseases, <paragraph> should be repeated. Select either to enter a full disease name including modifiers (1.1.) or enter a name divided into a main disease part and modifiers (1.2.).

1.1.mmlRd:diagnosis

Description: disease name. A full name including modifiers is stored.

Data type: string

Omission: not allowed

Attribute:

Attribute name	Data type	Omission	Remarks
mmlRd:code	string	#IMPLIED	Disease code
mmlRd:system	string	#IMPLIED	Disease code system name

Example: a case of colon carcinoid (ICD10 code: C189-.006)

```
<mmlRd:diagnosis mmlRd:code = "C189-.006" mmlRd:system = "ICD10">colon carcinoid</mmlRd:diagnosis>
```

1.2.mmlRd:diagnosisContents

Description: a disease name divided into the main disease and modifiers is stored. Select either one of the above or this method.

Omission: allowed

1.2.1.mmlRd:dxItem

Description: element for repetition

Omission: not allowed

Repetition: allowed. The element should be repeated the same number of times as the number of elements.

1.2.2.mmlRd:name

Description: disease element name

Data type: string

Omission: not allowed

Attribute:

Attribute name	Data type	Omission	Remarks
mmlRd:code	string	#IMPLIED	Disease code
mmlRd:system	string	#IMPLIED	Disease code system name

Example: a case that paroxysmal atrial fibrillation is described, separated into paroxysmal and atrial fibrillation.

```
<mmlRd:diagnosisContents>
    <mmlRd:dxItem>
        <mmlRd:name mmlRd:code = "I48--.004" mmlRd:system = "ICD10">
            atrial fibrillation
        </mmlRd:name>
    </mmlRd:dxItem>
    <mmlRd:dxItem>
        <mmlRd:name>paroxysmal</mmlRd:name>
    </mmlRd:dxItem>
</mmlRd:diagnosisContents>
```

1.3.mmlRd:categories

Description: category of diagnosis

Omission: allowed

1.3.1.mmlRd:category

Description: category name. Use tables from MML0012 to MML0015. Specific operation methods of each category is defined by users.

Data type: string

Omission: not allowed

Repetition: allowed. If multiple categories are available, the element should be repeated.

Attribute:

Attribute name	Data type	Omission	Remarks
mmlRd:tableId	string	#REQUIRED	Category type code

Example:when the diagnosis is a main diagnosis, academic diagnosis, pathological diagnosis and confirmed diagnosis

```
<mmlRd:categories>
  <mmlRd:category mmlRd:tableId = "MML0012">mainDiagnosis</mmlRd:category>
  <mmlRd:category mmlRd:tableId = "MML0013">academicDiagnosis</mmlRd:category>
  <mmlRd:category mmlRd:tableId = "MML0014">pathologicalDiagnosis</mmlRd:category>
  <mmlRd:category mmlRd:tableId = "MML0015">confirmedDiagnosis</mmlRd:category>
</mmlRd:categories>
```

1.4.mmlRd:startDate

Description: start date of a disease

Data type: date Format: CCYY-MM-DD

Omission: allowed

1.5.mmlRd:endDate

Description: end date of a disease

Data type: date Format: CCYY-MM-DD

Omission: allowed

1.6.mmlRd:outcome

Description: outcome. Use table MML0016.

Data type: string

Omission: allowed

1.7.mmlRd:firstEncounterDate

Description: first visit date

Data type: date Format: CCYY-MM-DD

Omission: allowed

1.8.mmlRd:relatedHealthInsurance

Description: related health insurance information. This is an empty tag. Enter the document uid of related health insurance information in the attribute. This element is used only when the mmlRd:RegisteredDiagnosisModule is used in the mmlSg:SurgeryModule or mmlSm:SummaryModule. When the mmlRd:RegisteredDiagnosisModule is used as a single MML content, enter the document uid of related health insurance information in the parentId (docInfo module).

Omission: allowed

Attribute:

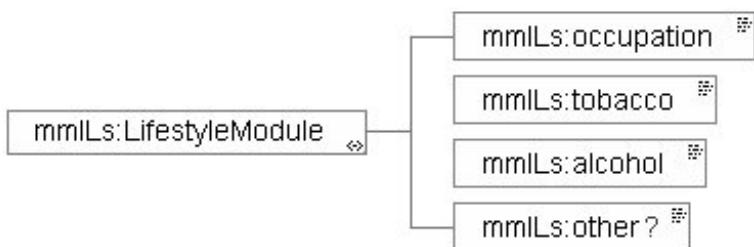
Attribute name	Data type	Omission	Remarks
mmlRd:uid	string	#IMPLIED	Enter the uid of the mmlHi:HealthInsuranceModule of the health insurance related to a disease.

Example:

```
<mmlRd:relatedHealthInsurance mmlRd:uid = "0aae5960-667c-11d3-9751-00105a6792e8" />
```

11. 4. Lifestyle information module

Element structure



Namespace declaration

Namespace declaration of this module is as follows.

```
xmlns:mmlLs="http://www.medxml.net/MML/ContentModule/Lifestyle/1.0"
```

Element list

Element	Attribute	Data type	Occurrence	Table
1. mmlLs:LifestyleModule				
1.1. mmlLs:occupation		string		
1.2. mmlLs:tobacco		string		
1.3. mmlLs:alcohol		string		
1.4. mmlLs:other@		string	?	

Occurrence; blank: 1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances

#REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

1.mmlLs:LifestyleModule

Description: lifestyle information

1.1.mmlLs:occupation

Description: occupation

Data type: string

Omission: not allowed

Document layout: use of XHTML is allowed.

1.2.mmlLs:tobacco

Description: history of tobacco use

Data type: string

Omission: not allowed

Document layout: use of XHTML is allowed.

1.3.mmlLs:alcohol

Description: history of alcohol use

Data type: string

Omission: not allowed

Document layout: use of XHTML is allowed.

1.4.mmlLs:other

Description: other lifestyles. Religion, sports history, etc.

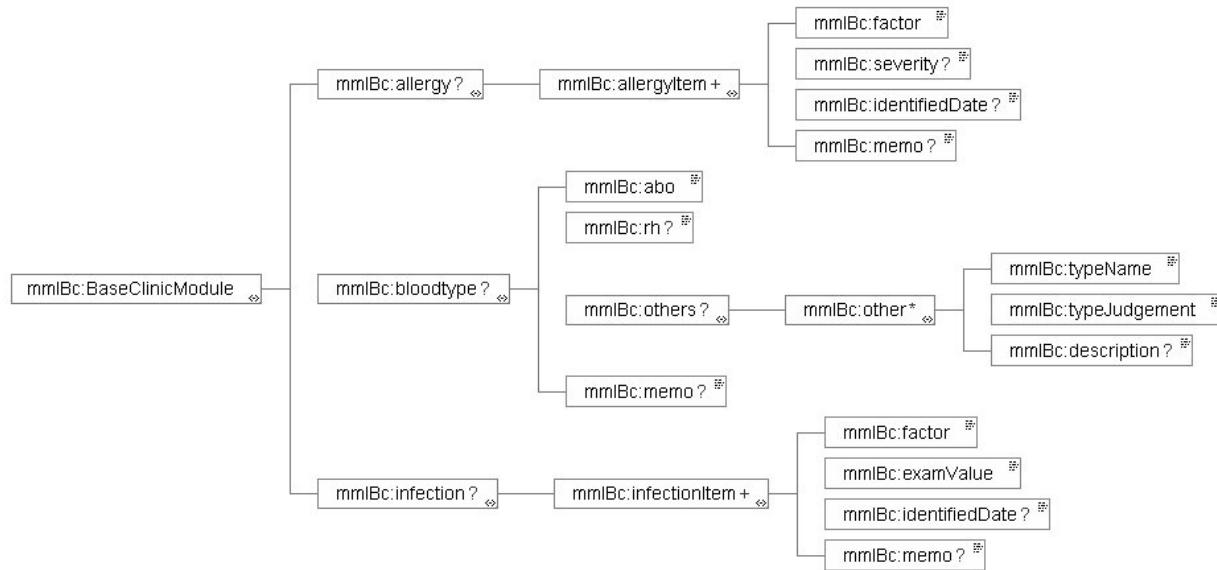
Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

11. 5. Basic clinical information module

Element structure



Namespace declaration

Namespace declaration of this module is as follows.

```
xmlns:mmlBc="http://www.medxml.net/MML/ContentModule/BaseClinic/1.0"
```

Element list

Element	Attribute	Data type	Occurrence	Table
1. mmlBc:BaseClinicModule				
1.1. mmlBc:allergy			?	
1.1.1. mmlBc:allergyItem			+	
1.1.1.1. mmlBc:factor		string		
1.1.1.2. mmlBc:severity		string	?	MML0017
1.1.1.3. mmlBc:identifiedDate		string	?	
1.1.1.4. mmlBc:memo		string	?	
1.2. mmlBc:bloodtype			?	
1.2.1. mmlBc:abo		string		MML0018
1.2.2. mmlBc:rh		string	?	MML0019
1.2.3. mmlBc:others			?	
1.2.3.1. mmlBc:other			*	
1.2.3.1.1. mmlBc:typeName		string		
1.2.3.1.2. mmlBc:typeJudgement		string		
1.2.3.1.3. mmlBc:description		string	?	
1.2.4. mmlBc:memo		string	?	
1.3. mmlBc:infection			?	
1.3.1. mmlBc:infectionItem			+	
1.3.1.1. mmlBc:factor		string		
1.3.1.2. mmlBc:examValue		string		
1.3.1.3. mmlBc:identifiedDate		string	?	
1.3.1.4. mmlBc:memo		string	?	

Occurrence; blank: 1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances
 #REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

1.mmlBc:BaseClinicModule

Description: basic clinical information

1.1.mmlBc:allergy

Description: allergy information

Omission: allowed

1.1.1.mmlBc:allergyItem

Description: element for repetition

Omission: not allowed

Repetition: allowed. If there are multiple allergy items, the element should be repeated.

1.1.1.1.mmlBc:factor

Description: cause of allergy

Data type: string

Omission: not allowed

1.1.1.2.mmlBc:severity

Description: severity of allergic response. Use table MML0017.

Data type: string

Omission: allowed

1.1.1.3.mmlBc:identifiedDate

Description: identified date of allergy. The description method is not specified in particular. Expressions such as "childhood" or "approx. 20 years ago" may be acceptable.

Data type: string

Omission: allowed

1.1.1.4.mmlBc:memo

Description: allergy memo. Enter information not provided in the elements above such as special remarks or comments.

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

Example: the patient has been slightly allergic to crabs for approx. 20 years, but not allergic to shrimps.

```
<mmlBc:allergyItem>
  <mmlBc:factor>crab</mmlBc:factor>
  <mmlBc:severity>mild</mmlBc:severity>
  <mmlBc:identifiedDate>since almost 20 years ago</mmlBc:identifiedDate>
  <mmlBc:memo>no reaction to shrimp</mmlBc:memo>
</mmlBc:allergyItem>
```

Example: a case that there are no special remarks relating to allergy.

```
<mmlBc:allergyItem>
  <mmlBc:factor>nothing</mmlBc:factor>
  <mmlBc:memo>non-contributory </mmlBc:memo>
</mmlBc:allergyItem>
```

1.2.mmlBc:bloodtype

Description: blood type information

Omission: allowed

1.2.1.mmlBc:abo

Description: ABO blood type. Use table MML0018.

Data type: string

Omission: not allowed

1.2.2.mmlBc:rh

Description: Rho (D) blood type. Use table MML0019.

Data type: string

Omission: allowed

1.2.3.mmlBc:others

Description: other blood type information

Omission: allowed

1.2.3.1.mmlBc:other

Description: other blood type

Omission: allowed

Repetition: allowed. If multiple other blood types are available, the element should be repeated.

1.2.3.1.1.mmlBc:typeName

Description: blood type name

Data type: string

Omission: not allowed

1.2.3.1.2.mmlBc:typeJudgement

Description: method of blood typing

Data type: string

Omission: not allowed

1.2.3.1.3.mmlBc:description

Description: note on blood type

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

Example:

```
<mmlBc:other>
  <mmlBc:typeName>MNS blood type</mmlBc:typeName>
  <mmlBc:typeJudgement>MN</mmlBc:typeJudgement>
  <mmlBc:description>examination at 2 years ago </mmlBc:description>
</mmlBc:other>
```

1.2.4.mmlBc:memo

Description: memo

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

1.3.mmlBc:infection

Description: infection information

Omission: allowed

1.3.1.mmlBc:infectionItem

Description: element for repetition

Omission: not allowed

Repetition: allowed. If there are multiple factors of infection, the element should be repeated.

1.3.1.1.mmlBc:factor

Description: infection factor name

Data type: string

Omission: not allowed

1.3.1.2.mmlBc:examValue

Description: test result of infection factor

Data type: string

Omission: not allowed

1.3.1.3.mmlBc:identifiedDate

Description: Identified date of infection factor. The description method is not specified in particular.

Data type: string

Omission: allowed

1.3.1.4.mmlBc:memo

Description: memo for infection factor

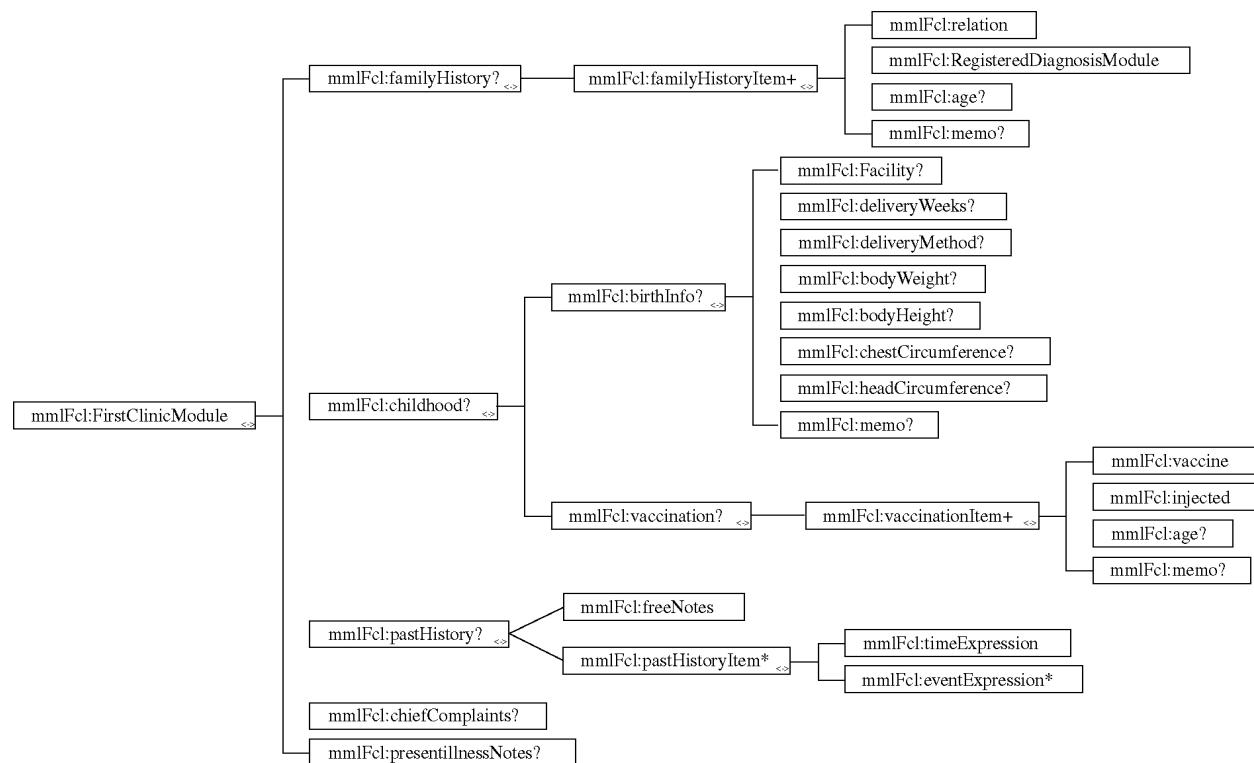
Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

11. 6. Initial-consultation-specific information module

Element structure



Namespace declaration

Namespace declaration of this module is as follows.

```
xmlns:mmlFcl="http://www.medxml.net/MML/ContentModule/FirstClinic/1.0"
```

Element list

Element	Attribute	Data type	Occurrence	Table
1. mmfcl:FirstClinicModule				
1.1. mmlfcl:familyHistory			?	
1.1.1. mmlfcl:familyHistoryItem			+	
1.1.1.1. mmlfcl:relation		string		MML0020
1.1.1.2. mmlrd:RegisteredDiagnosisModule				
1.1.1.3. mmlfcl:age		timePeriod	?	
1.1.1.4. mmlfcl:memo		string	?	
1.2. mmlfcl:childhood			?	
1.2.1. mmlfcl:birthInfo			?	
1.2.1.1. mmlfc:Facility			?	
1.2.1.2. mmlfcl:deliveryWeeks		timePeriod	?	
1.2.1.3. mmlfcl:deliveryMethod		string	?	
1.2.1.4. mmlfcl:bodyWeight		decimal	?	
	mmlfcl:unit	string	#REQUIRED	
1.2.1.5. mmlfcl:bodyHeight		decimal	?	
	mmlfcl:unit	string	#REQUIRED	
1.2.1.6. mmlfcl:chestCircumference		decimal	?	
	mmlfcl:unit	string	#REQUIRED	
1.2.1.7. mmlfcl:headCircumference		decimal	?	
	mmlfcl:unit	string	#REQUIRED	
1.2.1.8. mmlfcl:memo		string	?	
1.2.2. mmlfcl:vaccination			?	
1.2.2.1. mmlfcl:vaccinationItem			+	
1.2.2.1.1. mmlfcl:vaccine		string		
1.2.2.1.2. mmlfcl:injected		boolean		
1.2.2.1.3. mmlfcl:age		timePeriod	?	
1.2.2.1.4. mmlfcl:memo		string	?	
1.3. mmlfcl:pastHistory			?	
1.3.1. mmlfcl:freeNotes		string		
1.3.2. mmlfcl:pastHistoryItem			*	
1.3.2.1. mmlfcl:timeExpression		string		
1.3.2.2. mmlfcl:eventExpression		string	*	
1.4. mmlfcl:chiefComplaints		string	?	
1.5. mmlfcl:presentIllnessNotes		string	?	

Occurrence; blank: 1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances

#REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

1.mmlFcl:FirstClinicModule

Description: initial-consultation-specific information

1.1.mmlFcl:familyHistory

Description: family history information

Omission: allowed

1.1.1.mmlFcl:familyHistoryItem

Description: element for repetition

Omission: not allowed

Repetition: allowed. If there are multiple family members to be described, the element should be repeated.
Furthermore, if a family member has multiple diseases, the element should also be repeated.

1.1.1.1.mmlFcl:relation

Description: relation code. Use table MML0020.

Data type: string

Omission: not allowed

Example: mother-in-law (If the relation is "in-law", put "InLaw" at the end.)

```
<mmlFcl:relation>motherInLaw</mmlFcl:relation>
```

1.1.1.2.mmlRd:RegisteredDiagnosisModule

Description: diagnosis information. Refer to the MML module (Diagnosis record information) for the structure.

Omission: not allowed

Example: died of gastric cancer on August 25,1989

```
<mmlRd:RegisteredDiagnosisModule>
  <mmlRd:diagnosis mmlRd:code = "C169-.007"
    mmlRd:system = "ICD10">gastric cancer</mmlRd:diagnosis>
  <mmlRd:endDate>1989-08-25</mmlRd:endDate>
  <mmlRd:outcome>died</mmlRd:outcome>
</mmlRd:RegisteredDiagnosisModule>
```

1.1.1.3.mmlFcl:age

Description: age of a family member at disease onset

Data type: timePeriod Format: PnYnMnDTnHnMnS
Normally PnY is acceptable except for infant.

Omission: allowed

Example: at the age of 40

```
<mmlFcl:age>P40Y</mmlFcl:age>
```

Example: 1 year and 3 months after birth

```
<mmlFcl:age>P1Y3M</mmlFcl:age>
```

Example: 3 months after birth

```
<mmlFcl:age>P3M</mmlFcl:age>
```

1.1.1.4.mmlFcl:memo

Description: memo

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

1.2.mmlFcl:childhood

Description: childhood information

Omission: allowed

1.2.1.mmlFcl:birthInfo

Description: birth information

Omission: allowed

1.2.1.1.mmlFc:Facility

Description: birth facility. Refer to the MML common format (Facility information format) for the structure.

Omission: allowed

1.2.1.2.mmlFcl:deliveryWeeks

Description: delivery weeks

Data type: timePeriod Format: PnW

Omission: allowed

Example: 40 weeks

```
<mmlFcl:deliveryWeeks>P40W</mmlFcl:deliveryWeeks>
```

1.2.1.3.mmlFcl:deliveryMethod

Description: delivery method. The description method is not specified in particular.

Data type: string

Omission: allowed

Example: Cesarean section

```
<mmlFcl:deliveryMethod>cesarean section</mmlFcl:deliveryMethod>
```

1.2.1.4.mmlFcl:bodyWeight

Description: body weight at birth

Data type: decimal

Omission: allowed

Attribute:

Attribute name	Data type	Omission	Remarks
mmlFcl:unit	string	#REQUIRED	Unit: g or kg

Example: 3,270 gram

```
<mmlFcl:bodyWeight mmlFcl:unit = "g">3270</mmlFcl:bodyWeight>
```

1.2.1.5.mmlFcl:bodyHeight

Description: body height at birth

Data type: decimal

Omission: allowed

Attribute:

Attribute name	Data type	Omission	Remarks
mmlFcl:unit	string	#REQUIRED	Unit: cm or m

1.2.1.6.mmlFcl:chestCircumference

Description: chest circumference at birth

Data type: decimal

Omission: allowed

Attribute:

Attribute name	Data type	Omission	Remarks
mmlFcl:unit	string	#REQUIRED	Unit: cm

1.2.1.7.mmlFcl:headCircumference

Description: head circumference at birth

Data type: decimal

Omission: allowed

Attribute:

Attribute name	Data type	Omission	Remarks
mmlFcl:unit	string	#REQUIRED	Unit: cm

1.2.1.8.mmlFcl:memo

Description: memo at birth

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

1.2.2.mmlFcl:vaccination

Description: vaccination information

Omission: allowed

1.2.2.1.mmlFcl:vaccinationItem

Description: element for repetition

Omission: not allowed

Repetition: allowed. If multiple vaccination records are available, the element should be repeated.

1.2.2.1.1.mmlFcl:vaccine

Description: vaccine name

Data type: string

Omission: not allowed

1.2.2.1.2.mmlFcl:injected

Description: vaccination status. true: Vaccinated, false: Not vaccinated

Data type: boolean

Omission: not allowed

1.2.2.1.3.mmlFcl:age

Description: vaccination age

Data type: timePeriod Format: PnYnMnDTnHnMnS

Normally, PnYnM is acceptable.

Omission: allowed

1.2.2.1.4.mmlFcl:memo

Description: memo at vaccination

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

Example: polio injection twice; at 6 months and 1 year and 6 months old.

```
<mmlFcl:vaccination>
  <mmlFcl:vaccinationItem>
    <mmlFcl:vaccine>polio</mmlFcl:vaccine>
    <mmlFcl:injected>true</mmlFcl:injected>
    <mmlFcl:age>P6M</mmlFcl:age>
    <mmlFcl:memo>first administration</mmlFcl:memo>
  </mmlFcl:vaccinationItem>
  <mmlFcl:vaccinationItem>
    <mmlFcl:vaccine>polio</mmlFcl:vaccine>
    <mmlFcl:injected>true</mmlFcl:injected>
    <mmlFcl:age>P1Y6M</mmlFcl:age>
    <mmlFcl:memo>second administration</mmlFcl:memo>
  </mmlFcl:vaccinationItem>
</mmlFcl:vaccination>
```

1.3.mmlFcl:pastHistory

Description: past history information. Select either the free style expression (mmlFcl:freeNotes) or time and event expressions (mmlFcl:timeExpression and mmlFcl:eventExpression).

Omission: allowed

1.3.1.mmlFcl:freeNotes

Description: free style expression

Data type: string

Omission: not allowed

Document layout: use of XHTML is allowed.

1.3.2.mmlFcl:pastHistoryItem

Description: element for repetition

Omission: allowed

Repetition: allowed. If multiple past history items are available, the element should be repeated.

1.3.2.1.mmlFcl:timeExpression

Description: time expression. The expression format is not defined in particular.

Data type: string

Omission: not allowed

1.3.2.2.mmlFcl:eventExpression

Description: corresponding event expression to time expression.

Data type: string

Omission: allowed

Repetition: allowed. If there are multiple event expressions for one time expression, the element should be repeated.

Document layout: use of XHTML is allowed.

Example: for past history information in the free style expression

```
<mmlFcl:pastHistory>
  <mmlFcl:freeNotes>
    Appendectomy (6 years old), hypertension (5 years ago)
  </mmlFcl:freeNotes>
</mmlFcl:pastHistory>
```

Example: for past history information in the time and event expressions

```
<mmlFcl:pastHistory>
  <mmlFcl:pastHistoryItem>
    <mmlFcl:timeExpression>6 years old</mmlFcl:timeExpression>
    <mmlFcl:eventExpression>appendectomy</mmlFcl:eventExpression>
  </mmlFcl:pastHistoryItem>
  <mmlFcl:pastHistoryItem>
    <mmlFcl:timeExpression>5 years ago (1994)</mmlFcl:timeExpression>
    <mmlFcl:eventExpression>hypertension</mmlFcl:eventExpression>
  </mmlFcl:pastHistoryItem>
</mmlFcl:pastHistory>
```

1.4.mmlFcl:chiefComplaints

Description: chief complaint

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

1.5.mmlFcl:presentIllnessNotes

Description: present illness in free style expression

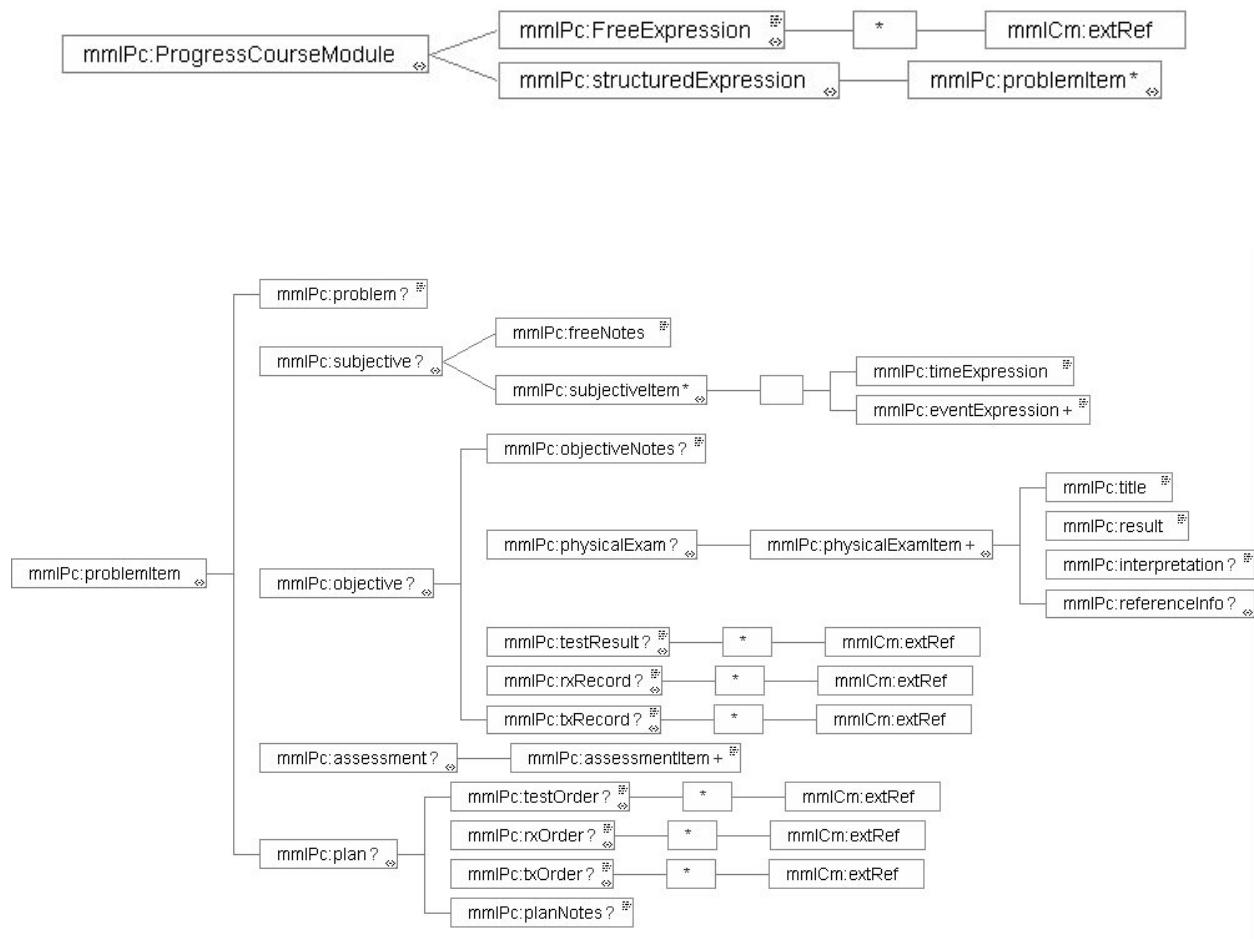
Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

11. 7. Progress course information module

Element structure



Namespace declaration

Namespace declaration of this module is as follows.

```
xmlns:mmlPc="http://www.medxml.net/MML/ContentModule/ProgressCourse/1.0"
```

Element list

	Element	Attribute	Data type	Occurrence	Table
1.	mmlPc:ProgressCourseModule				
1.1.	mmlPc:FreeExpression		string		
1.1.1.	mmlCm:extRef			*	
1.2.	mmlPc:structuredExpression				
1.2.1.	mmlPc:problemItem			*	
1.2.1.1.	mmlPc:problem		string	?	
		mmlPc:dxUid	string	#IMPLIED	
1.2.1.2.	mmlPc:subjective			?	
1.2.1.2.1.	mmlPc:freeNotes		string		
1.2.1.2.2.	mmlPc:subjectiveItem			*	
1.2.1.2.2.1.	mmlPc:timeExpression		string		
1.2.1.2.2.2.	mmlPc:eventExpression		string	+	
1.2.1.3.	mmlPc:objective			?	
1.2.1.3.1.	mmlPc:objectiveNotes		string	?	
1.2.1.3.2.	mmlPc:physicalExam			?	
1.2.1.3.2.1.	mmlPc:physicalExamItem			+	
1.2.1.3.2.1.1.	mmlPc:title		string		
1.2.1.3.2.1.2.	mmlPc:result		string		
1.2.1.3.2.1.3.	mmlPc:interpretation		string	?	
1.2.1.3.2.1.4.	mmlPc:referenceInfo			?	
1.2.1.3.2.1.4.1.	mmlCm:extRef			*	
1.2.1.3.3.	mmlPc:testResult		string	?	
1.2.1.3.3.1.	mmlCm:extRef			*	
1.2.1.3.4.	mmlPc:rxRecord		string	?	
1.2.1.3.4.1.	mmlCm:extRef			*	
1.2.1.3.5.	mmlPc:txRecord		string	?	
1.2.1.3.5.1.	mmlCm:extRef			*	
1.2.1.4.	mmlPc:assessment			?	
1.2.1.4.1.	mmlPc:assessmentItem		string	+	
1.2.1.5.	mmlPc:plan			?	

1.2.1.5.1.	mmlPc:testOrder	string	?
1.2.1.5.1.1.	mmlCm:extRef		*
1.2.1.5.2.	mmlPc:rxOrder	string	?
1.2.1.5.2.1.	mmlCm:extRef		*
1.2.1.5.3.	mmlPc:txOrder	string	?
1.2.1.5.3.1.	mmlCm:extRef		*
1.2.1.5.4.	mmlPc:planNotes	string	?

Occurrence; blank: 1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances
 #REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

1.mmlPc:ProgressCourseModule

Description: progress course information. Select either the mmlPc:FreeExpression or mmlPc: structured Expression.

1.1.mmlPc:FreeExpression

Description: progress course in free style expression. This can be present together with the mmlCm:extRef.

Data type: string

Omission: If the mmlPc:structuredExpression is selected, omission is allowed.

Document layout: use of XHTML is allowed.

1.1.1.mmlCm:extRef

Description: refer to the MML common format (External reference format) for the structure.

Omission: allowed

Repetition: allowed. If multiple external references are available, the element should be repeated.

1.2.mmlPc:structuredExpression

Description: structured expression of progress course

Omission: If the mmlPc:FreeExpression is selected, omission is allowed.

1.2.1.mmlPc:problemItem

Description: problem information

Omission: allowed

Repetition: allowed. If there are multiple problems, the element should be repeated.

1.2.1.1.mmlPc:problem

Description: problem name

Data type: string

Omission: allowed

Attribute: enter the uid of a related diagnosis in the attribute.

Attribute name	Data type	Omission	Remarks
mmlPc:dxUid	string	#IMPLIED	Enter the uid of the related mmlRd:RegisteredDiagnosisModule.

Document layout: use of XHTML is allowed.

1.2.1.2.mmlPc:subjective

Description: subjective information. Select either the free style expression (mmlPc:freeNotes) or time and event expressions (mmlPc:timeExpression and mmlPc:eventExpression).

Omission: allowed

1.2.1.2.1.mmlPc:freeNotes

Description: free style expression

Data type: string

Omission: when the combination of the mmlPc:timeExpression and mmlPc:eventExpression is selected, omission is allowed.

Document layout: use of XHTML is allowed.

Example:

```
<mmlPc:freeNotes>
    25-Aug-1999. AM.: Palpitation was felt early in the morning.
    25-Aug-1999. PM.: no palpitations.
</mmlPc:freeNotes>
```

1.2.1.2.2.mmlPc:subjectiveItem

Description: element for repetition

Omission: if the mmlPc:freeNotes is selected, omission is allowed.

Repetition: allowed. If multiple pairs of time expression (1.2.1.2.2.1.) and event expression (1.2.1.2.2.2.) are available, this element should be repeated.

1.2.1.2.2.1.mmlPc:timeExpression

Description: time expression. The expression format is not defined in particular. (Example: recently, since several years ago, childhood, etc.)

Data type: string

Omission: not allowed

1.2.1.2.2.2.mmlPc:eventExpression

Description: corresponding event expression to time expression.

Data type: string

Omission: not allowed

Repetition: allowed. If there are multiple event expressions for one time expression, the element should be repeated.

Document layout: use of XHTML is allowed.

Example: when the same content as in the 1.2.1.2.1.mmlPc:freeNotes is structured.

```
<mmlPc:subjectiveItem>
    <mmlPc:timeExpression>
        25-Aug-1999. AM.
    </mmlPc:timeExpression>
    <mmlPc:eventExpression>
        Palpitation was felt early in the morning.
    </mmlPc:eventExpression>
</mmlPc:subjectiveItem>
<mmlPc:subjectiveItem>
    <mmlPc:timeExpression>
        25-Aug-1999. PM.
    </mmlPc:timeExpression>
    <mmlPc:eventExpression>
        No palpitations.
    </mmlPc:eventExpression>
</mmlPc:subjectiveItem>
```

1.2.1.3.mmlPc:objective

Description: objective information

Omission: allowed

1.2.1.3.1.mmlPc:objectiveNotes

Description: objective information in free style expression

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

1.2.1.3.2.mmlPc:physicalExam

Description: physical examination information

Omission: allowed

1.2.1.3.2.1.mmlPc:physicalExamItem

Description: physical examination items

Omission: not allowed

Repetition: allowed. If multiple combinations of the following elements (from 1.2.1.3.2.1.1. to 1.2.1.3.2.1.4.1.) are available, this element should be repeated.

1.2.1.3.2.1.1.mmlPc:title

Description: item name of physical examination

Data type: string

Omission: not allowed

1.2.1.3.2.1.2.mmlPc:result

Description: result of physical examination

Data type: string

Omission: not allowed

1.2.1.3.2.1.3.mmlPc:interpretation

Description: interpretation of physical examination result

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

1.2.1.3.2.1.4.mmlPc:referenceInfo

Description: external reference information

Omission: allowed

1.2.1.3.2.1.4.1.mmlCm:extRef

Description: refer to the MML common format (External reference format) for the structure.

Omission: allowed

Repetition: allowed. If multiple external references are available, the element should be repeated.

1.2.1.3.3.mmlPc:testResult

Description: test result. This can be present together with the mmlCm:extRef.

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

1.2.1.3.3.1.mmlCm:extRef

Description: refer to the MML common format (External reference format) for the structure.

Omission: allowed

Repetition: allowed. If multiple external references are available, the element should be repeated.

1.2.1.3.4.mmlPc:rxRecord

Description: prescription record. This can be present together with the mmlCm:extRef.

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

1.2.1.3.4.1.mmlCm:extRef

Description: refer to the MML common format (External reference format) for the structure.

Omission: allowed

Repetition: allowed. If multiple external references are available, the element should be repeated.

1.2.1.3.5.mmlPc:txRecord

Description: treatment record. This can be present together with the mmlCm:extRef.

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

1.2.1.3.5.1.mmlCm:extRef

Description: refer to the MML common format (External reference format) for the structure.

Omission: allowed

Repetition: allowed. If multiple external references are available, the element should be repeated.

1.2.1.4.mmlPc:assessment

Description: assessment information

Omission: allowed

1.2.1.4.1.mmlPc:assessmentItem

Description: assessment item

Data type: string

Omission: not allowed

Repetition: allowed. The element should be repeated the same number of times as the number of individual assessments.

Document layout: use of XHTML is allowed.

1.2.1.5.mmlPc:plan

Description: treatment plan information

Omission: allowed

1.2.1.5.1.mmlPc:testOrder

Description: test order. This can be present together with the mmlCm:extRef.

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

1.2.1.5.1.1.mmlCm:extRef

Description: refer to the MML common format (External reference format) for the structure.

Omission: allowed

Repetition: allowed. If multiple external references are available, the element should be repeated.

1.2.1.5.2.mmlPc:rxOrder

Description: prescription order. This can be present together with the mmlCm:extRef.

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

1.2.1.5.2.1.mmlCm:extRef

Description: refer to the MML common format (External reference format) for the structure.

Omission: allowed

Repetition: allowed. If multiple external references are available, the element should be repeated.

1.2.1.5.3.mmlPc:txOrder

Description: treatment order. This can be present together with the mmlCm:extRef.

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

1.2.1.5.3.1.mmlCm:extRef

Description: refer to the MML common format (External reference format) for the structure.

Omission: allowed

Repetition: allowed. If multiple external references are available, the element should be repeated.

1.2.1.5.4.mmlPc:planNotes

Description: treatment plan in free style expression

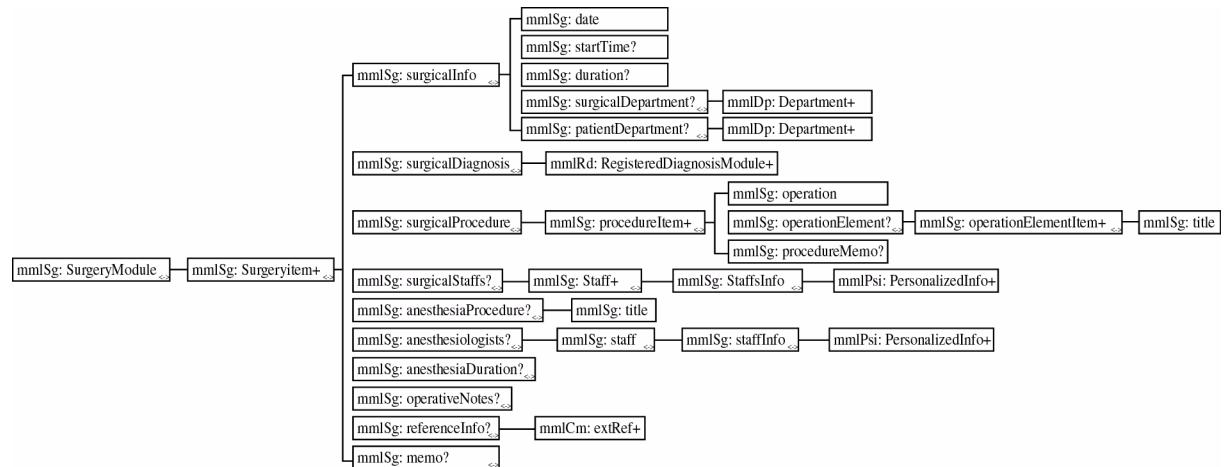
Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

11. 8. Surgery record information module

Element structure



Namespace declaration

Namespace declaration of this module is as follows.

```
xmlns:mmlSg="http://www.medxml.net/MML/ContentModule/Surgery/1.0"
```

Element list

Element	Attribute	Data type	Occurrence	Table
1. mmlSg:SurgeryModule				
1.1. mmlSg:surgeryItem			+	
1.1.1. mmlSg:surgicalInfo	mmlSg:type	string	#IMPLIED	MML0021
1.1.1.1. mmlSg:date		date		
1.1.1.2. mmlSg:startTime		time	?	
1.1.1.3. mmlSg:duration		timePeriod	?	
1.1.1.4. mmlSg:surgicalDepartment			?	
1.1.1.4.1. mmlDp:Department				
1.1.1.5. mmlSg:patientDepartment			?	
1.1.1.5.1. mmlDp:Department				
1.1.2. mmlSg:surgicalDiagnosis				
1.1.2.1. mmlRd:RegisteredDiagnosisModule			+	
1.1.3. mmlSg:surgicalProcedure				
1.1.3.1. mmlSg:procedureItem			+	
1.1.3.1.1. mmlSg:operation		string		
	mmlSg:code	string	#IMPLIED	
	mmlSg:system	string	#IMPLIED	
1.1.3.1.2. mmlSg:operationElement			?	
1.1.3.1.2.1. mmlSg:operationElementItem			+	
1.1.3.1.2.1.1. mmlSg:title		string		
	mmlSg:code	string	#IMPLIED	
	mmlSg:system	string	#IMPLIED	
1.1.3.1.3. mmlSg:procedureMemo		string	?	
1.1.4. mmlSg:surgicalStaffs			?	
1.1.4.1. mmlSg:staff			+	
	mmlSg:staffClass	string	#IMPLIED	MML0022
	mmlSg:superiority	integer	#IMPLIED	
1.1.4.1.1. mmlSg:staffInfo				
1.1.4.1.1.1. mmlPsi:PersonalizedInfo				
1.1.5. mmlSg:anesthesiaProcedure			?	
1.1.5.1. mmlSg:title		string	+	
	mmlSg:code	string	#IMPLIED	
	mmlSg:system	string	#IMPLIED	

1.1.6.	mmlSg:anesthesiologists		?	
1.1.6.1.	mmlSg:staff		*	
		mmlSg:staffClass	string	#IMPLIED MML0023
		mmlSg:superiority	integer	#IMPLIED
1.1.6.1.1.	mmlSg:staffInfo			
1.1.6.1.1.1.	mmlPsi:PersonalizedInfo			
1.1.7.	mmlSg:anesthesiaDuration		timePeriod	?
1.1.8.	mmlSg:operativeNotes		string	?
1.1.9.	mmlSg:referenceInfo			?
1.1.9.1.	mmlCm:extRef			+
1.1.10.	mmlSg:memo		string	?

Occurrence: blank: 1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances

#REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

1.mmlSg:SurgeryModule

Description: surgery record information. Attention should be paid to the granularity of surgeries and element repetition. For the description of different surgeries with apparently different dates, <paragraph> should be repeated. A series of operations performed almost at the same time should be described in one mmlSg:SurgeryModule. If multiple surgical procedures are performed in a series of operation, the mmlSg:surgeryItem (1.1.) should be repeated.

1.1.mmlSg:surgeryItem

Description: element for the input of an individual surgery in a series of operation

Omission: not allowed

Repetition: allowed. If multiple surgeries are performed in a series of operation, the element should be repeated. (Example: if surgeries of lobectomy and aorta replacement with a synthetic graft due to abdominal aortic aneurysm are performed at the same time, each surgical procedure is described in a different mmlSg:surgeryItem.)

1.1.1.mmlSg:surgicalInfo

Description: surgery header information

Omission: not allowed

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlSg:type	string	#IMPLIED	MML0021	Surgery type code

Example: a case of an elective surgery

```
<mmlSg:surgicalInfo mmlSg:type = "elective ">
```

1.1.1.1.mmlSg:date

Description: surgery date

Data type: date Format: CCYY-MM-DD

Omission: not allowed

1.1.1.2.mmlSg:startTime

Description: surgery start time

Data type: time Format: hh:mm:ss

Normally, time can be shortened to hours and minutes (hh:mm).

Omission: allowed

Example:

```
<mmlSg:startTime>08:30</mmlSg:startTime>
```

1.1.1.3.mmlSg:duration

Description: surgery duration

Data type: timePeriod Format: PnYnMnDTnHnMnS

Usually, the PTnHnM form is used.

Omission: allowed

Example: duration of 5 hours and 25 minutes

```
<mmlSg:duration>PT5H25M</mmlSg:duration>
```

1.1.1.4.mmlSg:surgicalDepartment

Description: surgery operating department information

Omission: allowed

1.1.1.4.1.mmlDp:Department

Description: surgery operating department. Refer to the MML common format for the structure.

Omission: not allowed

1.1.1.5.mmlSg:patientDepartment

Description: patient department information. Since the patient department may be different from the surgery-operating department, the patient department information can be entered here.

Omission: allowed

1.1.1.5.1.mmlDp:Department

Description: department to which a patient belonged at the time of surgery. Refer to the MML common format for the structure.

Omission: not allowed

Example: when the patient belongs to the internal medicine (ID 01).

```
<mmlDp:Department>
  <mmlDp:name mmlDp:repCode = "A" mmlDp:tableId = "MML0025">
    Internal medicine
  </mmlDp:name>
  <mmlCm:Id mmlCm:type = "medical" mmlCm:tableId = "MML0029">01</mmlCm:Id>
</mmlDp:Department>
```

1.1.2.mmlSg:surgicalDiagnosis

Description: surgical diagnosis information. Considering diagnoses particular to surgeries, such as Classification of Carcinoma, surgical diagnosis information can be entered separately from the mmlRd:RegisteredDiagnosisModule. However, the structure should be the same.

Omission: not allowed

1.1.2.1.mmlRd:RegisteredDiagnosisModule

Description: refer to the aforementioned explanation for the structure.

Omission: not allowed

Repetition: allowed. If multiple diagnoses are available, the element should be repeated.

Example: a case of upper right lung cancer

```
<mmlSg:surgicalDiagnosis>
  <mmlRd:RegisteredDiagnosisModule>
    <mmlRd:diagnosisContents>
      <mmlRd:dxItem>
        <mmlRd:name mmlRd:code = " C349-.007" mmlRd:system = "ICD10">
          Lung cancer
        </mmlRd:name>
      </mmlRd:dxItem>
      <mmlRd:dxItem>
        <mmlRd:name>right</mmlRd:name>
      </mmlRd:dxItem>
      <mmlRd:dxItem>
        <mmlRd:name>upper lobe</mmlRd:name>
      </mmlRd:dxItem>
    </mmlRd:diagnosisContents>
    <mmlRd:categories>
      <mmlRd:category mmlRd:tableId = "MML0012">mainDiagnosis</mmlRd:category>
      <mmlRd:category mmlRd:tableId = "MML0013">academicDiagnosis</mmlRd:category>
      <mmlRd:category mmlRd:tableId = "MML0014">operativeDiagnosis</mmlRd:category>
      <mmlRd:category mmlRd:tableId = "MML0015">confirmedDiagnosis</mmlRd:category>
    </mmlRd:categories>
  </mmlRd:RegisteredDiagnosisModule>
</mmlSg:surgicalDiagnosis>
```

1.1.3.mmlSg:surgicalProcedure

Description: surgical procedure information

Omission: not allowed

1.1.3.1.mmlSg:procedureItem

Description: element for repetition of surgical procedures. Select either the full expression (1.1.3.1.1.) of the entire procedures including modifiers or separated element expression (1.1.3.1.2.) of surgical procedures in one mmlSg:procedureItem.

Omission: not allowed

Repetition: allowed. If multiple procedures are used for a surgery, the element should be repeated. (Example: coronary bypass grafting and cardio-pulmonary bypass)

1.1.3.1.1.mmlSg:operation

Description: surgical procedure. Full expression of the entire procedure including modifiers.

Data type: string

Omission: If the separated expression (1.1.3.1.2.) of elements is selected, omission is allowed.

Attribute:

Attribute name	Data type	Omission	Remarks
mmlSg:code	string	#IMPLIED	Surgical procedure code
mmlSg:system	string	#IMPLIED	Surgical procedure code system name

Example: coronary bypass grafting and cardio-pulmonary bypass

```
<mmlSg:surgicalProcedure>
  <mmlSg:procedureItem>
    <mmlSg:operation>coronary artery bypass grafting</mmlSg:operation>
  </mmlSg:procedureItem>
  <mmlSg:procedureItem>
    <mmlSg:operation>cardio-pulmonary bypass</mmlSg:operation>
  </mmlSg:procedureItem>
</mmlSg:surgicalProcedure>
```

1.1.3.1.2.mmlSg:operationElement

Description: separated expression of surgical elements

Example: right mastectomy is separated into right and mastectomy.

Example: coronary artery 3 vessel bypass grafting is separated into coronary artery bypass grafting and 3 vessel bypass grafting.

Omission: If the full expression (1.1.3.1.1.) including modifiers is selected, omission is allowed.

1.1.3.1.2.1.mmlSg:operationElementItem

Description: element for repetition of surgical elements.

Omission: not allowed

Repetition: allowed. The element should be repeated the same number of times as the number of elements.

1.1.3.1.2.1.1.mmlSg:title

Description: title of a separated operation element

Data type: string

Omission: not allowed

Attribute:

Attribute name	Data type	Omission	Remarks
mmlSg:code	string	#IMPLIED	Surgical procedure code
mmlSg:system	string	#IMPLIED	Surgical procedure code system name

1.1.3.1.3.mmlSg:procedureMemo

Description: memo for surgical procedures

Data type: string

Omission: allowed

Example: procedures of coronary artery bypass grafting, 3 vessel bypass and cardio-pulmonary bypass, retrograde blood cardioplegia (no blood transfusion)

```
<mmlSg:surgicalProcedure>
    <mmlSg:procedureItem>
        <mmlSg:operationElement>
            <mmlSg:operationElementItem>
                <mmlSg:title> coronary artery bypass grafting </mmlSg:title>
            </mmlSg:operationElementItem>
            <mmlSg:operationElementItem>
                <mmlSg:title>3 vessels (LIMA to LAD, SVGs to #9, #12) </mmlSg:title>
            </mmlSg:operationElementItem>
        </mmlSg:operationElement>
    </mmlSg:procedureItem>
    <mmlSg:procedureItem>
        <mmlSg:operationElement>
            <mmlSg:operationElementItem>
                <mmlSg:title> cardio-pulmonary bypass</mmlSg:title>
            </mmlSg:operationElementItem>
            <mmlSg:operationElementItem>
                <mmlSg:title> retrograde blood cardioplegia</mmlSg:title>
            </mmlSg:operationElementItem>
        </mmlSg:operationElement>
        <mmlSg:procedureMemo>no blood transfusion </mmlSg:procedureMemo>
    </mmlSg:procedureItem>
</mmlSg:surgicalProcedure>
```

1.1.4.mmlSg:surgicalStaffs

Description: surgery staff information except anesthesia staff

Omission: allowed

1.1.4.1.mmlSg:staff

Description: element for repetition

Omission: not allowed

Repetition: allowed. The element should be repeated the same number of times as the number of staff.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlSg:staffClass	string	#IMPLIED	MML0022	Classification of surgery staff
mmlSg:superiority	integer	#IMPLIED		Superiority

Superiority means ranking such as “First” or “Second” assistant. It should be specified with an integer.

Example: a case of the first assistant

```
<mmlSg:staff mmlSg:superiority = "1" mmlSg:staffClass = "assistant">
```

1.1.4.1.1.mmlSg:staffInfo

Description: surgery staff ID information

Omission: not allowed

1.1.4.1.1.1.mmlPsi:PersonalizedInfo

Description: personal identification information. Refer to the aforementioned mmlPsi:PersonalizedInfo.

Omission: not allowed

1.1.5.mmlSg:anesthesiaProcedure

Description: anesthesia procedure information

Omission: allowed

1.1.5.1.mmlSg:title

Description: anesthesia procedure title

Data type: string

Omission: not allowed

Repetition: allowed. If multiple anesthesia procedures are available, the element should be repeated.

Attribute:

Attribute name	Data type	Omission	Remarks
mmlSg:code	string	#IMPLIED	Anesthesia procedure code
mmlSg:system	string	#IMPLIED	Anesthesia procedure code system name

Example: general anesthesia, endotracheal intubation and G+O+Ethrane anesthesia

```
<mmlSg:anesthesiaProcedure>
  <mmlSg:title>general anesthesia</mmlSg:title>
  <mmlSg:title>tracheal intubation </mmlSg:title>
  <mmlSg:title>G+O+Ethrane</mmlSg:title>
</mmlSg:anesthesiaProcedure>
```

1.1.6.mmlSg:anesthesiologists

Description: anesthesiologist information

Omission: not allowed

1.1.6.1.mmlSg:staff

Description: anesthesiologist

Omission: allowed

Repetition: allowed. If multiple anesthesiologists are available, the element should be repeated.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlSg:staffClass	string	#IMPLIED	MML0023	Classification of anesthesiologists
mmlSg:superiority	integer	#IMPLIED		Superiority

1.1.6.1.1.mmlSg:staffInfo

Description: anesthesiologist ID information

Omission: not allowed

1.1.6.1.1.1.mmlPsi:PersonalizedInfo

Description: personal identification information. Refer to the aforementioned mmlPsi:PersonalizedInfo.

Omission: not allowed

1.1.7.mmlSg:anesthesiaDuration

Description: anesthesia duration

Data type: timePeriod Format: PnYnMnDTnHnMnS
Usually, PTnHnM form is used.

Omission: allowed

Example: duration of 6 hours and 25 minutes

<mmlSg:anesthesiaDuration> PT6H25M </mmlSg:anesthesiaDuration>

1.1.8.mmlSg:operativeNotes

Description: free note of operation record

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

1.1.9.mmlSg:referenceInfo

Description: external references of illustrations and photos used for operation record.

Omission: allowed

1.1.9.1.mmlCm:extRef

Description: refer to the MML common format (External reference format) for the structure.

Omission: not allowed

Repetition: allowed. If multiple external references are available, the element should be repeated the number of times.

Example: surgical record figure (Fig. 1: Skin incision)

```
<mmlSg:referenceInfo>
  <mmlCm:extRef mmlCm:contentType = "image/gif"
    mmlCm:medicalRole = " surgicalFigure "
    mmlCm:title = "Fig1. Skin incision"
    mmlCm:href = "patient001/surgicalFigure001.gif" />
</mmlSg:referenceInfo>
```

1.1.10.mmlSg:memo

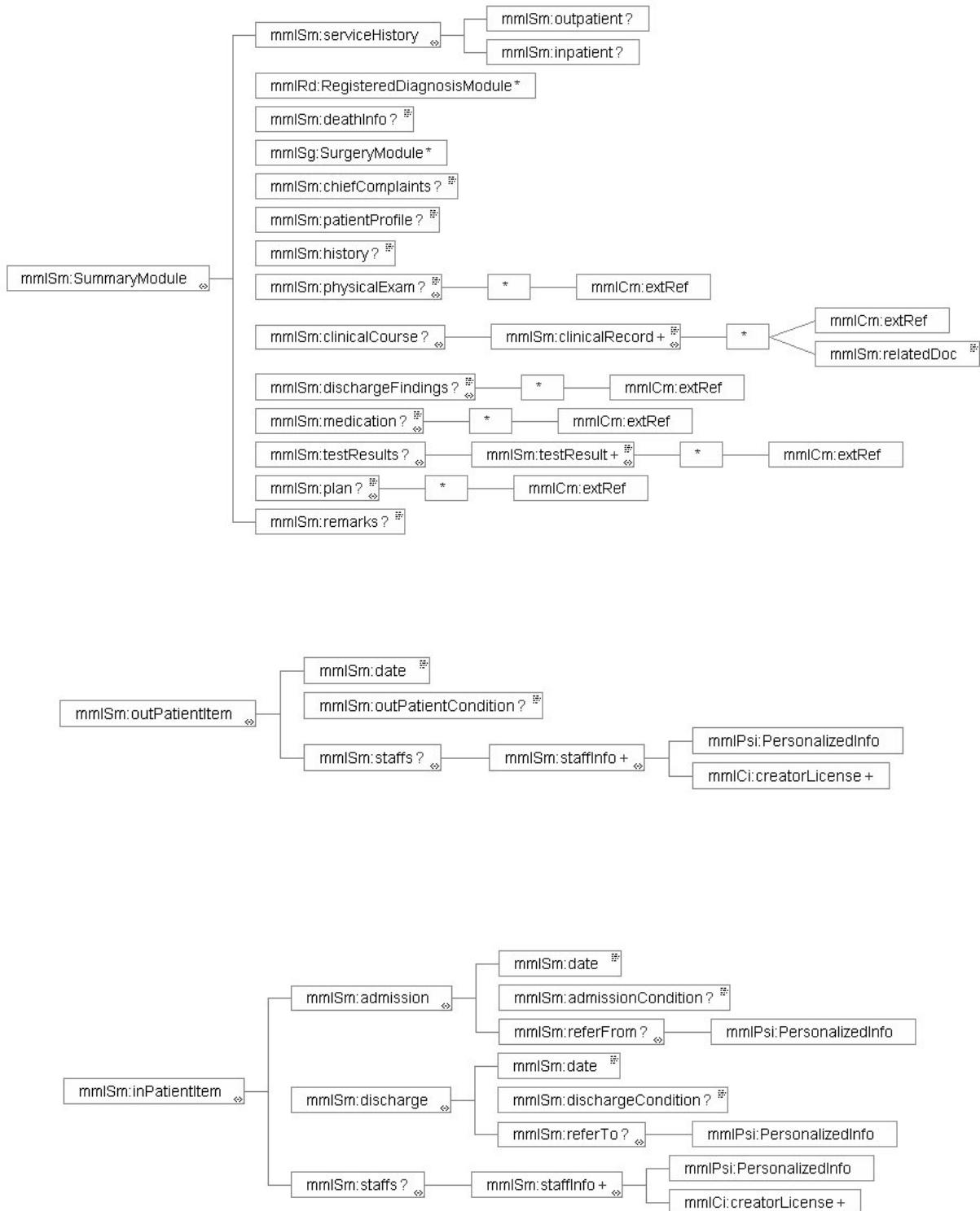
Description: memo for surgery

Data type: string

Omission: allowed

11. 9. Clinical summary information module

Element structure



Namespace declaration

Namespace declaration of this module is as follows.

`xmlns:mmISm="http://www.medxml.net/MML/ContentModule/Summary/1.0"`

Element list

	Element	Attribute	Data type	Occurrence	Table
1.	mmlSm:SummaryModule				
1.1.	mmlSm:serviceHistory				
		mmlSm:start	date	#IMPLIED	
		mmlSm:end	date	#IMPLIED	
1.1.1.	mmlSm:outPatient			?	
1.1.1.1.	mmlSm:outPatientItem			*	
1.1.1.1.1.	mmlSm:date		date		
1.1.1.1.2.	mmlSm:outPatientCondition		string	?	
		mmlSm:first	boolean	#IMPLIED	
		mmlSm:emergency	boolean	#IMPLIED	
1.1.1.1.3.	mmlSm:staffs			?	
1.1.1.1.3.1.	mmlSm:staffInfo			+	
1.1.1.1.3.1.1.	mmlPsi:PersonalizedInfo				
1.1.1.1.3.1.2.	mmlCi:creatorLicense			+	
1.1.2.	mmlSm:inPatient			?	
1.1.2.1.	mmlSm:inPatientItem			*	
1.1.2.1.1.	mmlSm:admission				
1.1.2.1.1.1.	mmlSm:date		date		
1.1.2.1.1.2.	mmlSm:admissionCondition		string	?	
		mmlSm:emergency	boolean	#IMPLIED	
1.1.2.1.1.3.	mmlSm:referFrom			?	
1.1.2.1.1.3.1.	mmlPsi:PersonalizedInfo				
1.1.2.1.2.	mmlSm:discharge				
1.1.2.1.2.1.	mmlSm:date		date		
1.1.2.1.2.2.	mmlSm:dischargeCondition		string	?	
		mmlSm:outcome	string	#IMPLIED	MMLO016
1.1.2.1.2.3.	mmlSm:referTo			?	
1.1.2.1.2.3.1.	mmlPsi:PersonalizedInfo				
1.1.2.1.3.	mmlSm:staffs			?	
1.1.2.1.3.1.	mmlSm:staffInfo			+	
1.1.2.1.3.1.1.	mmlPsi:PersonalizedInfo				
1.1.2.1.3.1.2.	mmlCi:creatorLicense			+	
1.2.	mmlRd:RegisteredDiagnosisModule			*	

1.3.	mmlSm:deathInfo		?
		mmlSm:date	date/ dateTime
		mmlSm:autopsy	boolean
1.4.	mmlSg:SurgeryModule		*
1.5.	mmlSm:chiefComplaints	string	?
1.6.	mmlSm:patientProfile	string	?
1.7.	mmlSm:history	string	?
1.8.	mmlSm:physicalExam	string	?
1.8.1.	mmlCm:extRef		*
1.9.	mmlSm:clinicalCourse		?
1.9.1.	mmlSm:clinicalRecord	string	+
		mmlSm:date	date/ dateTime
1.9.1.1.	mmlCm:extRef		*
1.9.1.2.	mmlSm:relatedDoc	string	*
		mmlSm:relation	string
			#IMPLIED MML0008
1.10.	mmlSm:dischargeFindings	string	?
1.10.1.	mmlCm:extRef		*
1.11.	mmlSm:medication	string	?
1.11.1.	mmlCm:extRef		*
1.12.	mmlSm:testResults		?
1.12.1.	mmlSm:testResult	string	+
		mmlSm:date	date/ dateTime
1.12.1.1.	mmlCm:extRef		*
1.13.	mmlSm:plan	string	?
1.13.1.	mmlCm:extRef		*
1.14.	mmlSm:remarks	string	?

Occurrence; blank: 1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances
 #REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Management

The clinical summary information groups various items of information (progress course, patient information, diagnosis, surgery, etc.). The following methods are available for the creation of a group.

- Method 1: Information on diagnoses and surgeries can be entered in the mmlSm:SummaryModule, not in external references or links.
- Method 2: The mmlSm:SummaryModule and related modules (patient information, diagnosis, surgery, etc.) can be compiled into a single MML instance with repetition of <paragraph>s, not using an external reference or link. In this case, enter “summary” in the extractPolicy (an attribute of the scopePeriod in the docInfo module) to define the data as a general summary.
- Method 3: Use the link function between documents using the MML groupId. More specifically, enter the same uid in the groupId of the related modules (patient information, diagnosis, surgery, etc.) including the mmlSm:SummaryModule. It is not necessary to compile the data into a single MML instance. Specify the appropriate document type in the groupClass attribute of the groupId.

Method 3 is most recommended. The reasons for this are firstly that diagnosis or surgery information entered in the mmlSm:SummaryModule via method 1 is difficult to search or reuse and that, secondly, in the case of method 2 it is difficult to control information in the module unit. In method 3, since diagnosis or surgery information is considered to be an independent module, it is easy to carry out a search or make use of the information; links will not be lost even when the information is controlled in the module unit because of the existence of the groupId.

Element explanation

1.mmlSm:SummaryModule

Description: clinical summary information

1.1.mmlSm:serviceHistory

Description: period information. This module is not necessarily limited to one admission to hospital. Multiple admissions to hospital, visits to outpatient clinic, and the combinations of both may also be included.

Omission: not allowed

Attribute:

Attribute name	Data type	Omission	Remarks
mmlSm:start	date	#IMPLIED	Start date of a summary period
mmlSm:end	date	#IMPLIED	End date of a summary period

Usually, the values of attributes above will be the same as those of the “start” and “end” attributes of the docInfo module, .confirmDate.

Example:

```
<mmlSm:serviceHistory mmlSm:start = "1999-08-25" mmlSm:end = "1999-08-31">
```

Example: summary of one year

```
<mmlSm:serviceHistory mmlSm:start = "1998-01-01" mmlSm:end = "1998-12-31">
```

1.1.1.mmlSm:outPatient

Description: outpatient history information

Omission: allowed

1.1.1.1.mmlSm:outPatientItem

Description: individual outpatient history item

Omission: allowed

Repetition: allowed. If there are multiple visits as outpatients, the element should be repeated.

1.1.1.1.1.mmlSm:date

Description: outpatient visit date

Data type: date Format: CCYY-MM-DD

Omission: not allowed

Example: visit to outpatient clinic on August 25.

```
<mmlSm:date>1999-08-25</mmlSm:date>
```

1.1.1.1.2.mmlSm:outPatientCondition

Description: condition at an outpatient visit

Data type: string

Omission: allowed

Attribute:

Attribute name	Data type	Omission	Remarks
mmlSm:first	boolean	#IMPLIED	Indication of the first time visit. true: First time visit, false: Revisit
mmlSm:emergency	boolean	#IMPLIED	Indication of an emergency visit. true: Emergency, false: Normal

Example: for the first and emergency visit

```
<mmlSm:outPatientCondition mmlSm:first = "true" mmlSm:emergency = "true">
    10A.M.the patient was put into the ambulance on a stretcher and driven to our
    hospital.
</mmlSm:outPatientCondition>
```

1.1.1.1.3.mmlSm:staffs

Description: information on staff for a patient

Omission: allowed

1.1.1.1.3.1.mmlSm:staffInfo

Description: staff for an outpatient

Omission: not allowed

Repetition: allowed. If multiple members of staff are available, the element should be repeated.

1.1.1.3.1.1.mmlPsi:PersonalizedInfo

Description: personal information. Refer to the MML common format for the structure.

Omission: not allowed

1.1.1.3.1.2.mmlCi:creatorLicense

Description: staff license

Data type: string

Omission: not allowed

Repetition: allowed. If multiple licenses are available, the element should be repeated.

1.1.2.mmlSm:inPatient

Description: inpatient history information

Omission: not allowed

1.1.2.1.mmlSm:inPatientItem

Description: individual inpatient history item. Multiple admissions to hospital, ward transfer and change of department in one admission to hospital may be described by repetition.

Omission: allowed

Repetition: allowed. If there are multiple admissions, the element should be repeated.

1.1.2.1.1.mmlSm:admission

Description: admission to hospital

Omission: not allowed

1.1.2.1.1.1.mmlSm:date

Description: admission (or transfer) date

Data type: date Format: CCYY-MM-DD

Omission: not allowed

Example: admission on August 27,1999

<mmlSm:date>1999-8-27</mmlSm:date>

1.1.2.1.1.2.mmlSm:admissionCondition

Description: condition at time of admission to hospital

Data type: string

Omission: allowed

Attribute:

Attribute name	Data type	Omission	Remarks
mmlSm:emergency	boolean	#IMPLIED	Indication of an emergency admission. true: Emergency, false: Normal

Example: emergency admission by ambulance

```
<mmlSm:admissionCondition mmlSm:emergency = "true">  
    Emergency admission by ambulance
```

```
</mmlSm:admissionCondition>
```

1.1.2.1.1.3.mmlSm:referFrom

Description: referring physician information

Omission: allowed

1.1.2.1.1.3.1.mmlPsi:PersonalizedInfo

Description: personal information. Refer to the MML common format for the structure.

Omission: not allowed

Example: referring from Yoko Ono M.D., Internal Medicine, New Millennium Medical College

```
<mmlSm:referFrom>
  <mmlPsi:PersonalizedInfo>
    <mmlCm:Id mmlCm:type = "facility" mmlCm:tableId = "MML0024">
      23234567</mmlCm:Id>
    <mmlPsi:personName>
      <mmlNm:Name mmlNm:repCode = "A" mmlNm:tableId = "MML0025">
        <mmlNm:family>Ono</mmlNm:family>
        <mmlNm:given>Yoko</mmlNm:given>
        <mmlNm:degree>M.D.</mmlNm:degree>
      </mmlNm:Name>
    </mmlPsi:personName>
    <mmlFc:Facility>
      <mmlFc:name mmlFc:repCode = "A" mmlFc:tableId = "MML0025">
        New Millennium Medical College Hospital</mmlFc:name>
      <mmlCm:Id mmlCm:type = "insurance" mmlCm:tableId = "MML0027">
        801.006.3</mmlCm:Id>
    </mmlFc:Facility>
    <mmlDp:Department>
      <mmlDp:name mmlDp:repCode = "A"
        mmlDp:tableId = "MML0025"> Internal medicine </mmlDp:name>
      <mmlCm:Id mmlCm:type = "medical" mmlCm:tableId = "MML0029">01</
        mmlCm:Id>
    </mmlDp:Department>
  </mmlPsi:PersonalizedInfo>
</mmlSm:referFrom>
```

1.1.2.1.2.mmlSm:discharge

Description: discharge from hospital

Omission: not allowed

1.1.2.1.2.1.mmlSm:date

Description: discharge (or transfer) date

Data type: date Format: CCYY-MM-DD

Omission: not allowed

Example: discharge on August 31,1999

```
<mmlSm:date>1999-08-31</mmlSm:date>
```

1.1.2.1.2.2.mmlSm:dischargeCondition

Description: condition at time of discharge from hospital

Data type: string

Omission: allowed

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlSm:outcome	string	#IMPLIED	MML0016	Outcome at time of discharge

Example: a case that the patient is transferred to the chronic hospital on the 4th post operative day.

```
<mmlSm:dischargeCondition mmlSm:outcome = "transferChronic">  
    4 P.O.D, the patient was transferred to the chronic hospital.  
</mmlSm:dischargeCondition>
```

1.1.2.1.2.3.mmlSm:referTo

Description: consulted physician information

Omission: not allowed

1.1.2.1.2.3.1.mmlPsi:PersonalizedInfo

Description: personal information. Refer to the MML common format for the structure.

Omission: not allowed

Example: referring to Fujiko Tanaka M.D., Cardiology, New Millennium Heisei Hospital

```
<mmlSm:referTo>  
    <mmlPsi:PersonalizedInfo>  
        <mmlCm:Id mmlCm:type = "facility" mmlCm:tableId = "MML0024">  
            55234567</mmlCm:Id>  
        <mmlPsi:personName>  
            <mmlNm:Name mmlNm:repCode = "A" mmlNm:tableId = "MML0025">  
                <mmlNm:family>Tanaka</mmlNm:family>  
                <mmlNm:given>Fujiko</mmlNm:given>  
                <mmlNm:degree>M.D.</mmlNm:degree>  
            </mmlNm:Name>  
        </mmlPsi:personName>  
        <mmlFc:Facility>  
            <mmlFc:name mmlFc:repCode = "A" mmlFc:tableId = "MML0025">  
                New Millenium Heisei Hospital</mmlFc:name>  
            <mmlCm:Id mmlCm:type = "insurance" mmlCm:tableId = "MML0027">  
                2354678</mmlCm:Id>  
        </mmlFc:Facility>  
        <mmlDp:Department>  
            <mmlDp:name mmlDp:repCode = "A" mmlDp:tableId = "MML0025">  
                Cardiology </mmlDp:name>  
            <mmlCm:Id mmlCm:type = "medical" mmlCm:tableId = "MML0029">08</mmlCm:Id>  
        </mmlDp:Department>  
    </mmlPsi:PersonalizedInfo>  
</mmlSm:referTo>
```

1.1.2.1.3.mmlSm:staffs

Description: information on staff for a patient

Omission: allowed

1.1.2.1.3.1.mmlSm:staffInfo

Description: staff for an inpatient

Omission: not allowed

Repetition: allowed. If multiple members of staff are available, the element should be repeated.

1.1.2.1.3.1.1.mmlPsi:PersonalizedInfo

Description: personal information. Refer to the MML common format for the structure.

Omission: not allowed

1.1.2.1.3.1.2.mmlCi:creatorLicense

Description: staff license

Data type: string

Omission: not allowed

Repetition: allowed. If multiple licenses are available, the element should be repeated.

Example: the doctor in charge of the patient at the time of admission is Kenji Araki M.D., Cardiovascular surgery,
New Millennium Medical College Hospital.

```
<mmlSm:staffInfo>
  <mmlPsi:PersonalizedInfo>
    <mmlCm:Id mmlCm:type = " facility" mmlCm:tableId = "MML0024">
      23456789</mmlCm:Id>
    <mmlPsi:personName>
      <mmlNm:Name mmlNm:repCode = "A" mmlNm:tableId = "MML0025">
        <mmlNm:family>Araki</mmlNm:family>
        <mmlNm:given>Kenji</mmlNm:given>
        <mmlNm:degree>M.D.</mmlNm:degree>
      </mmlNm:Name>
    </mmlPsi:personName>
    <mmlFc:Facility>
      <mmlFc:name mmlFc:repCode = "A" mmlFc:tableId = "MML0025">
        New Millenium Medical College Hospital</mmlFc:name>
      <mmlCm:Id mmlCm:type = "insurance" mmlCm:tableId = "MML0027">801.006.3</mmlCm:Id>
    </mmlFc:Facility>
    <mmlDp:Department>
      <mmlDp:name mmlDp:repCode = "A" mmlDp:tableId = "MML0025">
        Cardiovascular surgery
      </mmlDp:name>
      <mmlCm:Id mmlCm:type = " medical" mmlCm:tableId = "MML0029">16</mmlCm:Id>
    </mmlDp:Department>
  </mmlPsi:PersonalizedInfo>
  <mmlCi:creatorLicense mmlCi:tableId = "MML0026">doctor</mmlCi:creatorLicense>
</mmlSm:staffInfo>
```

1.2.mmlRd:RegisteredDiagnosisModule

Description: diagnosis record information in a summary. Refer to the aforementioned explanation for the structure.

Refer to the management section above. Use this element in method 1. In methods 2 and 3, this element is omitted.

Omission: allowed

Repetition: allowed. If multiple diagnoses are available, the element should be repeated.

1.3.mmlSm:deathInfo

Description: death related information

Data type: string

Omission: allowed

Attribute:

Attribute name	Data type	Omission	Remarks
mmlSm:date	date/dateTime	#IMPLIED	Date and time of death
mmlSm:autopsy	boolean	#IMPLIED	Whether or not an autopsy is carried out. true: Autopsy, false: No autopsy

Example: died of gastric cancer on August 31,1999. Autopsy performed.

```
<mmlSm:deathInfo mmlSm:date = "1999-08-31" mmlSm:autopsy = "true">
    The patient died of gastric cancer.
</mmlSm:deathInfo>
```

1.4.mmlSg:SurgeryModule

Description: surgery record information in a summary. Refer to the aforementioned explanation for the structure.

Refer to the management section above. Use this element in method 1. In methods 2 and 3, this element is omitted.

Omission: allowed

Repetition: allowed. If multiple surgeries are performed, the element should be repeated.

1.5.mmlSm:chiefComplaints

Description: chief complaint

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

Example:

```
<mmlSm:chiefComplaints>severe chest pain</mmlSm:chiefComplaints>
```

1.6.mmlSm:patientProfile

Description: patient profile

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

Example:

```
<mmlSm:patientProfile>
    The patient is a 40-year-old married forester.
</mmlSm:patientProfile>
```

1.7.mmlSm:history

Description: history before admission

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

Example:

```
<mmlSm:history>
On a background of good health, the patient noted the onset of chest pain and dyspnea
on Aug 25,1999. At 10 A.M., he was put into the ambulance on a stretcher and driven to
our hospital
On arrival, the symptoms subsided and he went home without any medication. Two days ago
(Aug 27), he felt intractable chest pain and was referred to the department of
cardiovascular surgery under the diagnosis of unstable angina pectoris.
</mmlSm:history>
```

1.8.mmlSm:physicalExam

Description: physical findings at time of admission

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

Example:

```
<mmlSm:physicalExam>
Physical findings were essentially normal except for the blood pressure which was 160/
100. Heart sounds were clear and rhythm was regular without audible murmurs or friction
sounds.
</mmlSm:physicalExam>
```

1.8.1.mmlCm:extRef

Description: refer to the MML common format (External reference format) for the structure.

Omission: allowed

Repetition: allowed. If multiple external references are available, the element should be repeated the number of times.

1.9.mmlSm:clinicalCourse

Description: clinical course and treatment

Omission: allowed

1.9.1.mmlSm:clinicalRecord

Description: clinical record. This can be present together with the mmlCm:extRef and mmlSm:relatedDoc.

Data type: string

Omission: not allowed

Repetition: allowed. The element should be repeated the corresponding number of times to dates or items.

Document layout: use of XHTML is allowed.

Attribute:

Attribute name	Data type	Omission	Remarks
mmlSm:date	date/dateTime	#IMPLIED	Date and time of an event occurrence

1.9.1.1.mmlCm:extRef

Description: refer to the MML common format (External reference format) for the structure.

Omission: allowed

Repetition: allowed. If multiple external references are available, the element should be repeated the number of times.

1.9.1.2. mmlSm:relatedDoc

Description: enter the uid of a <paragraph> in an MML document related to this clinical record.

Data type: string

Omission: allowed

Repetition: allowed. If multiple related documents are available, the element should be repeated.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlSm:relatedDoc	string	#IMPLIED	MML0008	Document relation type

Example:

```
<mmlSm:clinicalCourse>
  <mmlSm:clinicalRecord mmlSm:date= "1999-08-27 ">
    Emergency coronary angiography was carried out.
    <mmlCm:extRef mmlCm:contentType = "image/jpeg"
      mmlCm:medicalRole = " angioGraphy "
      mmlCm:title = "Preoperative coronary angiography"
      mmlCm:href = "patient001/surgicalFigure003.jpg"/>
    Three vessels (LAD, #9, #12) were involved.
    <mmlSm:relatedDoc mmlSm:relation= "detail "
      11D1AC5400A0C94A814796045F768ED5</mmlSm:relatedDoc>
    </mmlSm:clinicalRecord>
  </mmlSm:clinicalCourse>
```

1.10.mmlSm:dischargeFindings

Description: findings at time of discharge. This can be present together with the mmlCm:extRef.

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

1.10.1.mmlCm:extRef

Description: refer to the MML common format (External reference format) for the structure.

Omission: allowed

Repetition: allowed. If multiple external references are available, the element should be repeated the number of times.

Example:

```
<mmlSm:dischargeFindings>
    Symptoms free, no wound infection.
</mmlSm:dischargeFindings>
```

1.11.mmlSm:medication

Description: prescription at time of discharge. This can be present together with the mmlCm:extRef.

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

1.11.1.mmlCm:extRef

Description: refer to the MML common format (External reference format) for the structure.

Omission: allowed

Repetition: allowed. If multiple external references are available, the element should be repeated the number of times.

Example:

```
<mmlSm:medication>
    Prescription on discharge
    <mmlCm:extRef
        mmlCm:contentType = "APPLICATION/HL72.3-HL7ER2.3"
        mmlCm:medicalRole = "prescription"
        mmlCm:title = "Prescription on discharge"
        mmlCm:href = "patient1234/prescription003.HL7"/>
</mmlSm:medication>
```

1.12.mmlSm:testResults

Description: test result at time of discharge

Omission: allowed

1.12.1.mmlSm:testResult

Description: individual test result. This can be present together with the mmlCm:extRef.

Data type: string

Omission: not allowed

Repetition: allowed. If multiple tests are available, the element should be repeated.

Document layout: use of XHTML is allowed.

1.12.1.1.mmlCm:extRef

Description: refer to the MML common format (External reference format) for the structure.

Omission: allowed

Repetition: allowed. If multiple external references are available, the element should be repeated the number of times.

Example:

```
<mmlSm:testResults>
  <mmlSm:testResult mmlSm:date="1999-08-31">
    Labo findings on discharge
    <mmlCm:extRef
      mmlCm:contentType = "APPLICATION/HL72.3-HL7ER2.3"
      mmlCm:medicalRole = "laboratoryTest"
      mmlCm:title = "Blood chemistry data on discharge"
      mmlCm:href = "patient1234/prescription004.HL7"/>
  </mmlSm:testResult>
  <mmlSm:testResult mmlSm:date="1999-08-31">
    ECG on discharge. No ST change and new Q wave was observed.
    <mmlCm:extRef
      mmlCm:contentType = "image/gif"
      mmlCm:medicalRole = "ecg"
      mmlCm:title = "ECG on discharge"
      mmlCm:href = "patient1234/exam004.gif"/>
  </mmlSm:testResult>
</mmlSm:testResults>
```

1.13.mmlSm:plan

Description: treatment plan after discharge. This can be present together with the mmlCm:extRef.

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

1.13.1.mmlCm:extRef

Description: refer to the MML common format (External reference format) for the structure.

Omission: allowed

Repetition: allowed. If multiple external references are available, the element should be repeated the number of times.

Example:

```
<mmlSm:plan>
    Rehabilitation program and wound care will continue in the chronic hospital.
</mmlSm:plan>
```

1.14.mmlSm:remarks

Description: remarks for a patient

Data type: string

Omission: allowed

Document layout: use of XHTML is allowed.

Example:

```
<mmlSm:remarks>
    Patient education: good. Appointment in outpatient department in 2 weeks.
</mmlSm:remarks>
```

11. 10. Test history information module (newly established module in Version 2.3)

Purpose and target

The purpose of this MML module is to provide laboratory test result information. In normal operations, a single module corresponds to a single request slip (or single test set). Targeted tests include laboratory (specimen) tests, as well as endocrine load tests and urinary sediment. Bacilli culture tests, histopathological tests, and cytological diagnoses are not targeted.

Namespace declaration

Namespace declaration of this module is as follows.

```
xmlns:mmlLb="http://www.medxml.net/MML/ContentModule/test/1.0"
```

Specification of the document header information (docInfo) specific to this module

docInfo

The test value from table MML0005 should be entered in the contentModuleType attribute.

title

Apparently, there is no necessity for a document title of the test history information module, but, since it cannot be omitted, some sort of document title must be entered. One assumable example is that of using the set name in the module as a title.

For the generationPurpose attribute, the “reportTest” (test history report) value from table MML0007 must be entered.

confirmDate

This is the module creation date. It should match the report date/time in the module.

mmlCi:CreatorInfo

The document creator in the test history information module is not the test requester but the representative of the facility that performed the test. Thus, assumably it may correspond to the test performing laboratory or test performer in the module.

extRefs

The mmlCm:extRef element in the test history information module is described. The element should be repeated only the same number of times as the number of external link information items.

content

Only a single test history information module should be entered in a single content.

Element list

	Element	Attribute	Data type	Occurrence	Table
1.	mmlLb:TestModule				
1.1.	mmlLb:information				
		mmlLb:registId	string	#REQUIRED	
		mmlLb:sampleTime	dateTime	#IMPLIED	
		mmlLb:registTime	dateTime	#REQUIRED	
		mmlLb:reportTime	dateTime	#REQUIRED	
1.1.1.	mmlLb:reportStatus		string		
		mmlLb:statusCode	string	#REQUIRED	mmlLb0001
		mmlLb:statusCodeId	string	#REQUIRED	
1.1.2.	mmlLb:set		string	?	
		mmlLb:setCode	string	#IMPLIED	Specified by users
		mmlLb:setCodeId	string	#IMPLIED	
1.1.3.	mmlLb:facility		string		
		mmlLb:facilityCode	string	#REQUIRED	
		mmlLb:facilityCodeId	string	#REQUIRED	MML0027
1.1.4.	mmlLb:department		string	?	
		mmlLb:depCode	string	#IMPLIED	MML0028
		mmlLb:depCodeId	string	#IMPLIED	
1.1.5.	mmlLb:ward		string	?	
		mmlLb:wardCode	string	#IMPLIED	Specified by users
		mmlLb:wardCodeId	string	#IMPLIED	
1.1.6.	mmlLb:client		string	?	
		mmlLb:clientCode	string	#IMPLIED	Specified by users
		mmlLb:clientCodeId	string	#IMPLIED	
1.1.7.	mmlLb:laboratoryCenter		string		
		mmlLb:centerCode	string	#REQUIRED	Specified by users
		mmlLb:centerCodeId	string	#REQUIRED	
1.1.8.	mmlLb:technician		string	?	
		mmlLb:techCode	string	#IMPLIED	Specified by users
		mmlLb:techCodeId	string	#IMPLIED	
1.1.9.	mmlLb:repMemo		string	*	
		mmlLb:repCodeName	string	#IMPLIED	

		mmlLb:repCode	string	#IMPLIED	Specified by users
		mmlLb:repCodeId	string	#IMPLIED	
1.1.10.	mmlLb:repMemoF		string	?	
1.2.	mmlLb:laboTest			+	
1.2.1.	mmlLb:specimen				
1.2.1.1.	mmlLb:specimenName		string		
		mmlLb:spCode	string	#REQUIRED	Specified by users
		mmlLb:spCodeId	string	#REQUIRED	
1.2.1.2.	mmlLb:spcMemo		string	*	
		mmlLb:smCodeName	string	#IMPLIED	
		mmlLb:smCode	string	#IMPLIED	Specified by users
		mmlLb:smCodeId	string	#IMPLIED	
1.2.1.3.	mmlLb:spcMemoF		string	?	
1.2.2.	mmlLb:item			+	
1.2.2.1.	mmlLb:itemName		string		
		mmlLb:itCode	string	#REQUIRED	Specified by users
		mmlLb:itCodeId	string	#REQUIRED	
		mmlLb:Acode	string	#IMPLIED	JLAC10
		mmlLb:Icode	string	#IMPLIED	JLAC10
		mmlLb:Scode	string	#IMPLIED	JLAC10
		mmlLb:Mcode	string	#IMPLIED	JLAC10
		mmlLb:Rcode	string	#IMPLIED	JLAC10
1.2.2.2.	mmlLb:value		string		
1.2.2.3.	mmlLb:numValue		decimal	?	
		mmlLb:up	decimal	#IMPLIED	
		mmlLb:low	decimal	#IMPLIED	
		mmlLb:normal	string	#IMPLIED	
		mmlLb:out	string	#IMPLIED	mmlLb0002
1.2.2.4.	mmlLb:unit		string	?	
		mmlLb:uCode	string	#IMPLIED	Specified by users
		mmlLb:uCodeId	string	#IMPLIED	
1.2.2.5.	mmlLb:referenceInfo			?	
1.2.2.5.1.	mmlCm:extRef			*	
1.2.2.6.	mmlLb:itemMemo		string	*	

	mmlLb:imCodeName	string	#IMPLIED	
	mmlLb:imCode	string	#IMPLIED	Specified by users
	mmlLb:imCodeId	string	#IMPLIED	
1.2.2.7.	mmlLb:itemMemoF	string	?	

Occurrence; blank: 1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances
 #REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

1.mmlLb:TestModule

Description: test history information module

1.1.mmlLb:information

Description: test history header information

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlLb:registId	string	#REQUIRED		Request ID The same request ID is used for a test progress report and a final report that are created from the same test request.
mmlLb:sampleTime	dateTime	#IMPLIED		Sampling date/time
mmlLb:registTime	dateTime	#REQUIRED		Registration date/time
mmlLb:reportTime	dateTime	#REQUIRED		Report date/time

1.1.1.mmlLb:reportStatus

Description: report status

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlLb:statusCode	string	#REQUIRED	mmlLb0001	mid: test in progress final: final report
mmlLb:statusCodeId	string	#REQUIRED		Enter mmlLb0001

1.1.2.mmlLb:set

Description: set name

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlLb:setCode	string	#IMPLIED		Specified by users
mmlLb:setCodeId	string	#IMPLIED		Enter the name of a used table

1.1.3.mmlLb:facility

Description: requesting facility

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlLb:facilityCode	string	#REQUIRED		
mmlLb:facilityCodeId	string	#REQUIRED	MML0027	Enter the name of a used code system

1.1.4.mmlLb:department

Description: requesting medical department

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlLb:depCode	string	#IMPLIED	MML0028	
mmlLb:depCodeId	string	#IMPLIED		Enter MML0028

1.1.5.mmlLb:ward

Description: requesting ward

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlLb:wardCode	string	#IMPLIED		Specified by users
mmlLb:wardCodeId	string	#IMPLIED		Enter the name of a used table

1.1.6.mmlLb:client

Description: test requester

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlLb:clientCode	string	#IMPLIED		Specified by users
mmlLb:clientCodeId	string	#IMPLIED		Enter the name of a used code system

1.1.7.mmlLb:laboratoryCenter

Description: test-performing laboratory

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlLb:centerCode	string	#REQUIRED		Specified by users
mmlLb:centerCodeId	string	#REQUIRED		Enter the name of a used table

1.1.8.mmlLb:technician

Description: test performer

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlLb:techCode	string	#IMPLIED	Specified by users	
mmlLb:techCodeId	string	#IMPLIED		Enter the name of a used code system

1.1.9.mmlLb:repMemo

Description: report comment

Repetition: allowed. If there are multiple report comments, the element should be repeated the number of times.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlLb:repCodeName	string	#IMPLIED		
mmlLb:repCode	string	#IMPLIED	Specified by users	
mmlLb:repCodeId	string	#IMPLIED		Enter the name of a used table

1.1.10.mmlLb:repMemoF

Description: report free comment

1.2.mmlLb:laboTest

Description: laboratory test result information

Repetition: allowed. In principle, if there are multiple specimen materials, the element should be repeated the number of times.

1.2.1.mmlLb:specimen

Description: specimen information

1.2.1.1.mmlLb:specimenName

Description: specimen material

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlLb:spCode	string	#REQUIRED	Specified by users	
mmlLb:spCodeId	string	#REQUIRED		Enter the name of a used table

1.2.1.2.mmlLb:spcMemo

Description: specimen comment

Repetition: allowed. If there are multiple specimen comments, the element should be repeated the number of times.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlLb:smCodeName	string	#IMPLIED		Specimen comment name
mmlLb:smCode	string	#IMPLIED		Specified by users
mmlLb:smCodeId	string	#IMPLIED		Enter the name of a used table

1.2.1.3.mmlLb:spcMemoF

Description: specimen free comment

1.2.2.mmlLb:item

Description: item information

Repetition: allowed. If there are multiple items, the element should be repeated the number of times.

1.2.2.1.mmlLb:itemName

Description: item name

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlLb:itCode	string	#REQUIRED	Specified by users	Facility's unique code
mmlLb:itCodeId	string	#REQUIRED		Name of a facility's unique code system Enter the name of a used table
mmlLb:Acode	string	#IMPLIED	JLAC10	Analyzed item code of JLAC10
mmlLb:Icode	string	#IMPLIED	JLAC10	Identification code of JLAC10
mmlLb:Scode	string	#IMPLIED	JLAC10	Material code of JLAC10
mmlLb:Mcode	string	#IMPLIED	JLAC10	Measurement method code of JLAC10
mmlLb:Rcode	string	#IMPLIED	JLAC10	Result identification code of JLAC10

1.2.2.2.mmlLb:value

Description: value in character strings for display-purpose. This is a required element.

1.2.2.3.mmlLb:numValue

Description: value (numerical value). This element is specified only for numerical value data.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlLb:up	decimal	#IMPLIED		Upper limit value
mmlLb:low	decimal	#IMPLIED		Lower limit value
mmlLb:normal	string	#IMPLIED		Normal range shown in character strings. Example: “negative”
mmlLb:out	string	#IMPLIED	mmlLb0002	Abnormal value flag H: above upper limit value N: within normal range L: below lower limit value A: abnormal

1.2.2.4.mmlLb:unit

Description: unit

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlLb:uCode	string	#IMPLIED		Specified by users
mmlLb:uCodeId	string	#IMPLIED		Enter the name of a used table

1.2.2.5.mmlLb:referenceInfo

Description: external reference information

1.2.2.5.1. mmlCm:extRef

Description: external reference. When a figure or graph is attached, the MML common format (External reference format) is used.

Repetition: allowed. If multiple external references are available, the element should be repeated the number of times.

1.2.2.6.mmlLb:itemMemo

Description: item comment

Repetition: allowed. If there are multiple item comments, the element should be repeated the number of times.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlLb:imCodeName	string	#IMPLIED		Item comment name
mmlLb:imCode	string	#IMPLIED	Specified by users	
mmlLb:imCodeId	string	#IMPLIED		Enter the name of a used table

1.2.2.7.mmlLb:itemMemoF

Description: item free comment

11. 11. Report information module (newly established module in Version 2.3)

Purpose and target

The purpose of this MML module is to provide reports on radiological tests, physiological tests, and pathological tests

Namespace declaration

Namespace declaration of this module is as follows.

```
xmlns:mmlRp="http://www.medxml.net/MML/ContentModule/report/1.0"
```

Specification of the document header information (docInfo) specific to this module

docInfo

The “report” value from table MML0005 is specified in the contentModuleType attribute.

title

A title that indicates the content of the report should be entered.

In the generationPurpose attribute, select and enter a suitable value from MML0007 table’s “report”, “reportRadiology” “reportPathology”, etc.

confirmDate

This is the module creation date. It should match the report date/time in the module.

mmlCi:CreatorInfo

The document creator in the report information module is not the test requester but the person who writes the report.

extRefs

The mmlCm:extRef element in the report information module is described. The element should be repeated only the same number of times as the number of external link information items.

content

Only a single report information module should be entered in a single content.

Element list

	Element	Attribute	Data type	Occurrence	Table
1.	mmlRp:ReportModule				
1.1.	mmlRp:information				
		mmlRp:performTime	dateTime	#REQUIRED	
		mmlRp:reportTime	dateTime	#REQUIRED	
1.1.1.	mmlRp:reportStatus		string		
		mmlRp:statusCode	string	#REQUIRED	mmlLb0001
		mmlRp:statusCodeId	string	#REQUIRED	
1.1.2.	mmlRp:testClass		string		
		mmlRp:testClassCode	string	#REQUIRED	MML0033
		mmlRp:testClassCodeId	string	#REQUIRED	
1.1.3.	mmlRp:testSubclass		string	?	
		mmlRp:testSubclassCode	string	#IMPLIED	Specified by users
		mmlRp:testSubclassCodeId	string	#IMPLIED	
1.1.4.	mmlRp:organ		string	?	
1.1.5.	mmlRp:consultFrom			?	
1.1.5.1.	mmlRp:conFacility		string	?	
		mmlRp:facilityCode	string	#IMPLIED	
		mmlRp:facilityCodeId	string	#IMPLIED	MML0027
1.1.5.2.	mmlRp:conDepartment		string	?	
		mmlRp:depCode	string	#IMPLIED	MML0028
		mmlRp:depCodeId	string	#IMPLIED	
1.1.5.3.	mmlRp:conWard		string	?	
		mmlRp:wardCode	string	#IMPLIED	Specified by users
		mmlRp:wardCodeId	string	#IMPLIED	
1.1.5.4.	mmlRp:client		string	?	
		mmlRp:clientCode	string	#IMPLIED	Specified by users
		mmlRp:clientCodeId	string	#IMPLIED	
1.1.6.	mmlRp:perfom				
1.1.6.1.	mmlRp:pFacility		string		
		mmlRp:facilityCode	string	#REQUIRED	
		mmlRp:facilityCodeId	string	#REQUIRED	MML0027

1.1.6.2.	mmlRp:pDepartment	string	?		
	mmlRp:depCode	string	#IMPLIED	MML0028	
	mmlRp:depCodeId	string	#IMPLIED		
1.1.6.3.	mmlRp:pWard	string	?		
	mmlRp:wardCode	string	#IMPLIED	Specified by users	
	mmlRp:wardCodeId	string	#IMPLIED		
1.1.6.4.	mmlRp:performer	string			
	mmlRp:performerCode	string	#REQUIRED	Specified by users	
	mmlRp:performerCodeId	string	#REQUIRED		
1.1.6.5.	mmlRp:supervisor	string	?		
	mmlRp:supervisorCode	string	#IMPLIED	Specified by users	
	mmlRp:supervisorCodeId	string	#IMPLIED		
1.2.	mmlRp:reportBody				
1.2.1.	mmlRp:chiefComplaints	string	?		
1.2.2.	mmlRp:testPurpose	string	?		
1.2.3.	mmlRp:testDx	string	?		
1.2.4.	mmlRp:testNotes	string	?		
	mmlCm:extRef		*		
1.2.5.	mmlRp:testMemo	string	*		
	mmlRp:tmCodeName	string	#IMPLIED		
	mmlRp:tmCode	string	#IMPLIED	Specified by users	
	mmlRp:tmCodeId	string	#IMPLIED		
1.2.6.	mmlRp:testMemoF	string	?		

Occurrence; blank: 1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances

#REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

1.mmlRp:ReportModule

Description: report information module

1.1.mmlRp:information

Description: report header information

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlRp:performTime	dateTime	#REQUIRED		Test performance date/time
mmlRp:reportTime	dateTime	#REQUIRED		Report date/time

1.1.1.mmlRp:reportStatus

Description: report status

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlRp:statusCode	string	#REQUIRED	mmlLb0001	mid: test in progress final: final report
mmlRp:statusCodeId	string	#REQUIRED		Enter mmlLb0001

1.1.2.mmlRp:testClass

Description: report class

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlRp:testClassCode	string	#REQUIRED	MML0033	
mmlRp:testClassCodeId	string	#REQUIRED		MML0033

1.1.3.mmlRp:testSubclass

Description: report subclass. A detailed class that cannot be covered by the report class is entered. When using codes, use an original table defined by users.

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlRp:testSubclassCode	string	#IMPLIED		Specified by users
mmlRp:testSubclassCodeId	string	#IMPLIED		Enter the name of a used table

1.1.4.mmlRp:organ

Description: internal organ. This is an internal organ targeted at for testing. Codes are not particularly used.

1.1.5.mmlRp:consultFrom

Description: requester information

1.1.5.1.mmlRp:conFacility

Description: requesting facility

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlRp:facilityCode	string	#IMPLIED		Facility code
mmlRp:facilityCodeId	string	#IMPLIED	MML0027	

1.1.5.2.mmlRp:conDepartment

Description: requesting medical department

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlRp:depCode	string	#IMPLIED	MML0028	
mmlRp:depCodeId	string	#IMPLIED		Enter MML0028

1.1.5.3.mmlRp:conWard

Description: requesting ward

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlRp:wardCode	string	#IMPLIED		Specified by users
mmlRp:wardCodeId	string	#IMPLIED		Enter the name of a used table

1.1.5.4.mmlRp:client

Description: test requester

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlRp:clientCode	string	#IMPLIED		Specified by users
mmlRp:clientCodeId	string	#IMPLIED		Enter the name of a used table

1.1.6.mmlRp:perform

Description: performer information

1.1.6.1.mmlRp:pFacility

Description: performing facility

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlRp:facilityCode	string	#REQUIRED		
mmlRp:facilityCodeId	string	#REQUIRED	MML0027	

1.1.6.2.mmlRp:pDepartment

Description: performing medical department

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlRp:depCode	string	#IMPLIED	MML0028	
mmlRp:depCodeId	string	#IMPLIED		Enter MML0028

1.1.6.3.mmlRp:pWard

Description: performing ward

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlRp:wardCode	string	#IMPLIED	Specified by users	
mmlRp:wardCodeId	string	#IMPLIED		Enter the name of a used table

1.1.6.4.mmlRp:performer

Description: performer

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlRp:performerCode	string	#REQUIRED	Specified by users	
mmlRp:performerCodeId	string	#REQUIRED		Enter the name of a used table

1.1.6.5.mmlRp:supervisor

Description: supervisor

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlRp:supervisorCode	string	#IMPLIED	Specified by users	
mmlRp:supervisorCodeId	string	#IMPLIED		Enter the name of a used table

1.2.mmlRp:reportBody

Description: report body information

1.2.1.mmlRp:chiefComplaints

Description: chief complaint

Document layout: use of XHTML is allowed.

1.2.2.mmlRp:testPurpose

Description: test purpose

Document layout: use of XHTML is allowed.

1.2.3.mmlRp:testDx

Description: test diagnosis. Within this element, diagnoses are written in text (XHTML can be used). If structured diagnoses information is required, create the required number of diagnosis record information modules and link the documents by the groupId.

Document layout: use of XHTML is allowed.

1.2.4.mmlRp:testNotes

Description: test notes. Text (#PCDATA) and mmlCm:extRef can be mixed.

Document layout: use of XHTML is allowed.

1.2.4.1.mmlCm:extRef

Description: external reference. When a figure or graph is attached, the MML common format (External reference format) is used.

Repetition: allowed. If multiple external references are available, the element should be repeated the number of times.

1.2.5.mmlRp:testMemo

Description: test comment

Attribute:

Attribute name	Data type	Omission	Table	Remarks
mmlRp:tmCodeName	string	#IMPLIED		Test comment name
mmlRp:tmCode	string	#IMPLIED	Specified by users	
mmlRp:tmCodeId	string	#IMPLIED		Enter the name of a used table

1.2.6.mmlRp:testMemoF

Description: test free comment

11. 12. Referral module (newly established module in Version 2.3)

Introduction

The referral module is described as mmlRe:ReferralModule. For easier use, an unstructured, flat form was adopted for the elements included in this module. Since the referral module considers MML as a higher-level standard, the provisions included in the MML specification apply to the referral module as well.

Overview

The referral module specifies a data exchange method for linking hospitals and local clinics, based on letters of referral. Although letters of referral are documents offering clinical information written in Form 6, the form of each referral letter issued by a given medical facility may differ slightly from Form 6. Here, based on Form 6, the minimum data sets for data exchange are defined and presented. The minimum data sets refer to the minimum vocabularies used for definitions for letters of referral in the newly established module in MML. When a letter of referral is actually written, for example, the patient information module already defined in MML is used for patient information. More specifically, an element group defined by the mmlPi:PatientModule is used for patient information such as name, birth date/year, address, and telephone number, etc.

Data such as images, test results, and prescriptions that may be attached to letters of referral are already classified by the mmlCm:medicalRole in the MML common format, the external reference format. For these data, it is recommended that external files viewed from the MML instance be referred to, similarly using the mmlCm:extRef element of the external reference format. On the other hand, it is possible to standardize the mmlRe:testResults with XML by using the test history information module. Furthermore, as for prescriptions, it is possible to describe the mmlRe:medication in a different CLAIM module, which is a data exchange method for linking electronic medical charts and clinical accounting systems. Using this module also makes it possible to standardize the element with XML.

Similarly, for the creator of a letter of referral, the mmlCi:CreatorInfo in the MML common format (Creator information format) is used to match the creator information in the referral module instance with the actual creator of the letter. The mmlPsi:PersonalizedInfo in the MML common format (Personal information format) is used for the medical institution and department of the doctor who creates the letter of referral.

Namespace declaration

Namespace declaration of this module is as follows.

```
xmlns:mmlRe="http://www.medxml.net/MML/ContentModule/Referral/1.0"
```

Specification of the document header information (docInfo) specific to this module

docInfo

The “referral” value from table MML0005 is specified in the contentModuleType attribute.

title

A title that indicates the content of the referral letter should be entered.

For the generationPurpose attribute, the “consult” value from table MML0007 must be specified.

confirmDate

This is the referral module creation date.

mmlCi:CreatorInfo

The document creator in the referral module is the writer of a letter of referral. The persons who introduces the patient (mmlRe:referFrom) and writes the letter (mmlCi:CreatorInfo) may not be the same due to the use of a substitute writer, for instance.

extRefs

The mmlCm:extRef element in the referral module is described. The element should be repeated only the same number of times as the number of external link information items.

content

Only a single referral module should be entered in a single content.

Element list

	Element	Attribute	Data type	Occurrence	Table
1	mmlRe:ReferralModule				
1.1.	mmlPi:PatientModule				
1.2.	mmlRe:occupation		string	?	
1.3.	mmlRe:referFrom				
1.3.1	mmlPsi:PersonalizedInfo				
1.4.	mmlRe:title		string		
1.5.	mmlRe:greeting		string	?	
1.6.	mmlRe:chiefComplaints		string		
1.7.	mmlRe:clinicalDiagnosis		string	?	
1.8.	mmlRe:pastHistory		string	?	
1.8.1.	mmlCm:extRef			*	
1.9.	mmlRe:familyHistory		string	?	
1.9.1.	mmlCm:extRef			*	
1.10.	mmlRe:presentIllness		string		
1.10.1.	mmlCm:extRef			*	
1.11.	mmlRe:testResults		string	?	
1.11.1.	mmlCm:extRef			*	
1.12.	mmlSm:clinicalCourse			?	
1.13.	mmlRe:medication		string	?	
1.13.1.	mmlCm:extRef			*	
1.14.	mmlRe:referPurpose		string		
1.15.	mmlRe:remarks		string	?	
1.15.1.	mmlCm:extRef			*	
1.16.	mmlRe:referToFacility				
1.16.1.	mmlFc:Facility				
1.16.2.	mmlDp:Department			?	
1.17.	mmlRe:referToPerson			?	
1.17.1.	mmlPsi:PersonalizedInfo				
1.18.	mmlRe:referToUnknownName		string	?	

Occurrence; blank: 1 appearance without fail, ?: 0 or 1 appearance, +: 1 or more appearances, *: 0 or more appearances

#REQUIRED: Required attribute, #IMPLIED: Omissible attribute

Element explanation

1.mmlRe:ReferralModule

Description: referral module. A single act of a creation of a referral letter by a single doctor is described in a single module.

Omission: not allowed

1.1.mmlPi:PatientModule

Description: patient information, such as name, birth date/year, address, and telephone number. Refer to the MML module (Patient information module) for the structure.

Omission: not allowed

1.2.mmlRe:occupation

Description: occupation

Omission: allowed

Document layout: use of XHTML is allowed.

1.3. mmlRe:referFrom

Description: parent element for the input of information on a person who introduces a patient.

Omission: not allowed

1.3. 1. mmlPsi:PersonalizedInfo

Description: person who introduces a patient. Refer to the mmlPsi:PersonalizedInfo in the MML common format (Personal information format) for the structure.

Omission: not allowed

1.4. mmlRe:title

Description: title of a letter, such as letters of referral, clinical information offering forms, etc. This element has been set up on the assumption of test request forms in future.

Omission: not allowed

1.5. mmlRe:greeting

Description: greetings

Omission: allowed

Document layout: use of XHTML is allowed.

Example:

```
<mmlRe:greeting>
Dear Doctor: Thank you for the professional medical care services that you provide to patients.<xhtml:br/>
At this time, I would like to refer the following patient to you.<xhtml:br/>
I sincerely appreciate your taking time from your busy schedule to examine this patient.
</mmlRe:greeting>
```

1.6.mmlRe:chiefComplaints

Description: chief complaint

Omission: not allowed

Document layout: use of XHTML is allowed.

1.7.mmlRe:clinicalDiagnosis

Description: diagnosis. Within this element, diagnoses are written in an unstructured form using XHTML. If a structured diagnosis is required, a diagnosis record information module is created separately and linked with the referral module by the groupId.

Omission: allowed

Document layout: use of XHTML is allowed.

1.8.mmlRe:pastHistory

Description: past history. This can be present together with text data (#PCDATA) and the mmlCm:extRef.

Omission: allowed

Document layout: use of XHTML is allowed.

1.8.1.mmlCm:extRef

Description: external reference. When a figure or graph is attached, the MML common format (External reference format) is used.

Repetition: allowed. If multiple external references are available, the element should be repeated the number of times.

1.9.mmlRe:familyHistory

Description: family history. This can be present together with text data (#PCDATA) and the mmlCm:extRef.

Omission: allowed

Document layout: use of XHTML is allowed.

1.9.1.mmlCm:extRef

Description: external reference. When a figure or table is attached, the MML common format (External reference format) is used.

Repetition: allowed. If multiple external references are available, the element should be repeated the number of times.

1.10. mmlRe:presentIllness

Description: progress of condition. This can be present together with text data (#PCDATA) and the mmlCm:extRef.

Omission: not allowed

Document layout: use of XHTML is allowed.

1.10.1.mmlCm:extRef

Description: external reference. When a figure or table is attached, the MML common format (External reference format) is used.

Repetition: allowed. If multiple external references are available, the element should be repeated the number of times.

1.11.mmlRe:testResults

Description: test result. This can be present together with text data (#PCDATA) and the mmlCm:extRef.

Omission: allowed

Document layout: use of XHTML is allowed.

1.11.1.mmlCm:extRef

Description: external reference. When a figure, graph, or table is attached, the MML common format (External reference format) is used.

Repetition: allowed. If multiple external references are available, the element should be repeated the number of times.

1.12. mmlSm:clinicalCourse

Description: progress of treatment. Refer to the mmlSm:clinicalCourse of the MML module (Clinical summary information module) for the structure.

Omission: allowed

1.13.mmlRe:medication

Description: current prescription. This can be present together with text data (#PCDATA) and the mmlCm:extRef.

Omission: allowed

Document layout: use of XHTML is allowed.

1.13.1.mmlCm:extRef

Description: external reference. When a figure, file, or table is attached, the MML common format (External reference format) is used.

Repetition: allowed. If multiple external references are available, the element should be repeated the number of times.

1.14.mmlRe:referPurpose

Description: purpose of referral

Omission: not allowed

Document layout: use of XHTML is allowed.

1.15. mmlRe:remarks

Description: remarks. This can be present together with text data (#PCDATA) and the mmlCm:extRef.

Omission: allowed

Document layout: use of XHTML is allowed.

1.15.1.mmlCm:extRef

Description: external reference. When a figure, file, or table is attached, the MML common format (External reference format) is used.

Repetition: allowed. If multiple external references are available, the element should be repeated the number of times.

1.16.mmlRe:referToFacility

Description: consulted medical institution name. A parent element for the input of facility information.

Omission: not allowed

1.16.1. mmlFc:Facility

Description: consulted medical institution. Refer to the mmlFc:Facility in the MML common format (Facility information format) for the structure.

Omission: not allowed

1.16.2. mmlDp:Department

Description: consulted medical department. Refer to the mmlDp:Department in the MML common format (Medical department information format) for the structure.

Omission: allowed

1.17.mmlRe:referToPerson

Description: consulted doctor's name. A parent element for the input of name information.

Omission: allowed

1.17.1. mmlPsi:PersonalizedInfo

Description: consulted doctor. Refer to the mmlPsi:PersonalizedInfo in the MML common format (Personal information format) for the structure.

1.18. mmlRe:referToUnknownName

Description: unspecified consulted doctor

Omission: allowed

12. MML table list

Table number

MML0001 Check digit scheme (HL7-0061 compliance)

Value	Description
M10	Mod 10 algorithm
M11	Mod 11 algorithm

MML0002 Address Type (HL7-0190 compliance)

Value	Description
current	Current or Temporary
permanent	Permanent
mailing	Mailing
business	Business
office	Office
home	Home
birth	Birthplace
county	County of Origin

MML0003 Telecommunication Equipment Type (HL7 table0202 compliance)

Value	Description
PH	Telephone
FX	Fax
MD	Modem
CP	Cellular Phone
BP	Beeper/Pager
Internet	Internet Address: Use only if telecommunication use code is NET.
X.400	X.400 email address: Use only if telecommunication use code is NET.

MML0004 Extraction policy

Value	Description
firstEncounter	Information at the first time visit
laboratory	Laboratory information
prescription	Prescription
summary	Summary of creation period
random	Random extraction
nonExtracted	Not extracted
other	Others

MML0005 Content module type

Value	Description
patientInfo	Patient information module
healthInsurance	Health insurance module
registeredDiagnosis	Diagnosis record information module
lifestyle	Lifestyle information module
baseClinic	Basic clinical information module
firstClinic	Initial-consultation-specific information module
progressCourse	Progress course information module
surgery	Surgery record information module
summary	Clinical summary information module
claim	Claim module
claimAmount	Point and amount module
referral	Referral module
test	Test history information module
report	Report information module

MML0006 Access (Access right holders)

Value	Description
all	All accessing persons
creatorFacility	Those in the same facility as the document creator's
creatorDepartment	Those in the same department as the document creator's
creator	Document creator
patient	Patients
doctor	Doctors
nurse	Nurses
dentist	Dentists
MML0007	Generation purpose (document type in detail)
Value	Description
record	Medical record
recordAdmission	Medical record at admission
recordInpatient	Medical record in hospital
recordConsult	Medical record at referral (status, prescription, test value, etc.)
recordDischarge	Medical record at time of discharge (condition, prescription, test value, etc.)
recordOutpatient	Medical record of outpatient
legalRecord	Medical record based on legal obligation
consult	Letter of referral
report	Reply report
reportRadiology	Radiological report
reportPathology	Pathological report
reportTest	Test report
summary	Summary

summaryAdmission	Summary (at admission)
summaryPreoperation	Summary (before surgery)
summaryPostoperation	Summary (after surgery)
summaryMid	Summary (intermediate)
summaryDischarge	Summary (at time of discharge)
summaryOutpatient	Summary (outpatient)
disclosure	For disclosure of patient clinical information
informedConsent	Document for informed consent
study	Record for study
other	Others
claim	Clinical information

MML0008 Document relation (type of relation between documents)

Value	Description
origin	parent document is the origin and this document is the result.
oldEdition	parent document is the document before correction and this document is the document after correction.
order	parent document is the order and this document is the result of the order.
consult	parent document is the consultation (question, request) and this document is the response.
originalDiagnosis	parent document is the diagnosis before change and this document is the diagnosis after change.
diagnosis	parent document is the diagnosis and this document is the related information.
surgery	parent document is the surgery record information and this document is the related information.
patient	parent document is the patient information and this document is the related information.
surgery	parent document is the surgery record information and this document is the related information.

patient	parent document is the patient information and this document is the related information.
healthInsurance	parent document is the health insurance and this document is the related information.
detail	parent document is the detailed information and this document is the summary.
simpleLink	parent document is the reference information for this document.

MML0009 Other ID type

Value	Description
temporaryPatientId	Temporary ID for patients in emergency
otherPatientId	Other ID of the patient
spouseId	Spouse ID
motherId	Mother ID
fatherId	Father ID
childId	Child ID
relativeId	Relative ID
roommateId	Roommate ID
friendId	Friend ID
representativeId	Representative ID
emergencyContactId	Emergency contact ID
coWorkerId	Co-worker ID

MML0010 Sex

Value	Description
female	Female
male	Male
other	Other
unknown	Unknown

MML0011 Marital Status (HL7 table 0002 compliance)

Value	Description
separated	Separated
divorced	Divorced
married	Married
single	Single
widowed	Widowed

MML0012 Diagnosis category 1

Value	Description
mainDiagnosis	Main diagnosis
complication	Complication (concomitant disease)
drg	Diagnosis related group (DRG)

MML0013 Diagnosis category 2

Value	Description
academicDiagnosis	Academic diagnosis
claimingDiagnosis	Claiming diagnosis

MML0014 Diagnosis category 3

Value	Description
clinicalDiagnosis	Clinical diagnosis
pathologicalDiagnosis	Pathological diagnosis
laboratoryDiagnosis	Laboratory diagnosis
preOperativeDiagnosis	Preoperative diagnosis
intraOperativeDiagnosis	Intraoperative diagnosis
postOperativeDiagnosis	Postoperative diagnosis

MML0015 Diagnosis category 4

Value	Description
confirmedDiagnosis	Confirmed diagnosis
suspectedDiagnosis	Suspected diagnosis

MML0016 Outcome

Value	Description
died	Death
worsening	Worsening
unchanged	Unchanged
recovering	Recovering
fullyRecovered	Fully recovered
sequelae	(Occurrence of) Sequela
end	End
pause	Pause
continued	Continued
transfer	Transfer
transferAcute	Transfer (to acute hospital)
transferChronic	Transfer (to chronic hospital)
home	Discharge to home, etc.
unknown	Unknown

MML0017 Allergy severity (degree of allergic response)

Value	Description
severe	Severe
moderate	Moderate
mild	Mild
noReaction	No allergic reaction

MML0018 ABO blood type

Value	Description
a	Type A
b	Type B
o	Type O
ab	Type AB

MML0019 Rho (D) blood type

Value	Description
rhD+	Rho (D) +
rhD-	Rho (D) -

MML0020 Relation code

Value	Description
self	Patient-self
wife	Wife
husband	Husband
brother	Brother
sister	Sister
cousin	Cousin
secondCousin	Second cousin
mother	Mother
father	Father
aunt	Aunt
uncle	Uncle
grandMother	Grandmother
grandFather	Grandfather
greatGrandMother	Great-grandmother

greatGrandFather	Great-grandfather
daughter	Daughter
son	Son
grandDaughter	Granddaughter
grandSon	Grandson
greatGrandDaughter	Great-granddaughter
greatGrandSon	Great-grandson
other	Other

Note 1: Add “InLaw” at the end of each value for “in-law” relation.

Note 2: Input the text in mmlFcl:memo of mmlFcl:familyHistoryItem if notes are required.

Example: step-brother, a distant relative living together

MML0021 Type of surgery

Value	Description
elective	Elective surgery
emergent	Emergent surgery

MML0022 Classification of surgery staff

Value	Description
operator	Surgeon
assistant	Assistant
scrubNurse	Scrub nurse
perfusionist	Perfusionist
other	Other

MML0023 Classification of anesthesiologists

Value	Description
anesthesiologist	Anesthesiologist
assistant	Assistant
supervisor	Supervisor

MML0024	ID type																																
	<table border="1"> <thead> <tr> <th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>national</td><td>National ID</td></tr> <tr> <td>local</td><td>Local ID</td></tr> <tr> <td>facility</td><td>ID in the facility</td></tr> </tbody> </table>	Value	Description	national	National ID	local	Local ID	facility	ID in the facility																								
Value	Description																																
national	National ID																																
local	Local ID																																
facility	ID in the facility																																
MML0025	Name representation code (HL7 table 4000 compliance)																																
	<table border="1"> <thead> <tr> <th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>I</td><td>Ideographic (i.e., Kanji)</td></tr> <tr> <td>A</td><td>Alphabetic (i.e., Default or single-byte)</td></tr> <tr> <td>P</td><td>Phonetic((i.e., ASCII, Katakana, Hiragana, etc.)</td></tr> </tbody> </table>	Value	Description	I	Ideographic (i.e., Kanji)	A	Alphabetic (i.e., Default or single-byte)	P	Phonetic((i.e., ASCII, Katakana, Hiragana, etc.)																								
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MML0026	Creator license code (Classification of creators and medical license code)																																
	<table border="1"> <thead> <tr> <th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>doctor</td><td>Doctor</td></tr> <tr> <td>dentist</td><td>Dentist</td></tr> <tr> <td>nurse</td><td>Nurse</td></tr> <tr> <td>assistantNurse</td><td>Assistant Nurse</td></tr> <tr> <td>lab</td><td>Laboratory medical technologist</td></tr> <tr> <td>rad</td><td>Radiologist</td></tr> <tr> <td>pharmacist</td><td>Pharmacist</td></tr> <tr> <td>pt</td><td>Physical therapist</td></tr> <tr> <td>ot</td><td>Occupational therapist</td></tr> <tr> <td>psy</td><td>Psychiatric social worker</td></tr> <tr> <td>cps</td><td>Clinical psychologist</td></tr> <tr> <td>nutritionist</td><td>Nutritionist</td></tr> <tr> <td>dentalHygienist</td><td>Dental hygienist</td></tr> <tr> <td>dentalTechnician</td><td>Dental technician</td></tr> <tr> <td>clinicalEngineer</td><td>Clinical engineer</td></tr> </tbody> </table>	Value	Description	doctor	Doctor	dentist	Dentist	nurse	Nurse	assistantNurse	Assistant Nurse	lab	Laboratory medical technologist	rad	Radiologist	pharmacist	Pharmacist	pt	Physical therapist	ot	Occupational therapist	psy	Psychiatric social worker	cps	Clinical psychologist	nutritionist	Nutritionist	dentalHygienist	Dental hygienist	dentalTechnician	Dental technician	clinicalEngineer	Clinical engineer
Value	Description																																
doctor	Doctor																																
dentist	Dentist																																
nurse	Nurse																																
assistantNurse	Assistant Nurse																																
lab	Laboratory medical technologist																																
rad	Radiologist																																
pharmacist	Pharmacist																																
pt	Physical therapist																																
ot	Occupational therapist																																
psy	Psychiatric social worker																																
cps	Clinical psychologist																																
nutritionist	Nutritionist																																
dentalHygienist	Dental hygienist																																
dentalTechnician	Dental technician																																
clinicalEngineer	Clinical engineer																																

careManager	Care manager
other	Others who engage in medical work
acupuncturist	Acupuncturist
patient	Patient and his/her agent

MML0027 Facility ID type

Value	Description
ca	ID issued by certificate authorities
insurance	Health and medical institution code
monbusho	Facility classification of a college hospital under Ministry of Education
JMARI	Japan medical association research institute code

MML0028 Medical department ID type (Medical department code)

Value	Description
01	Internal medicine
02	Psychiatry
03	Neurology
04	Neurological internal medicine
05	Respiratory organs
06	Digestive organs
07	Gastroenterology
08	Cardiology
09	Pediatrics
10	Surgery
11	Orthopedics
12	Plastic surgery
13	Cosmetic surgery
14	Cranial nerve surgery
15	Respiratory surgery
16	Cardiovascular surgery

17	Pediatric surgery
18	Dermatology and urology
19	Dermatology
20	Urology
21	Venereology
22	Proctology
23	Obstetrics and gynecology
24	Obstetrics
25	Gynecology
26	Ophthalmology
27	Otorhinolaryngology
28	Tracheoesophageal organs
29	Physiatrics
30	Radiology
31	Anesthesiology
32	Dialysis
33	Psychological clinic
34	Allergy
35	Rheumatism
36	Rehabilitation
A1	Acupuncture and moxibustion

MML0029 Department ID type

Value	Description
medical	Medical department code (Refer to MML0028.)
dental	Dental department code (Refer to MML0030.)
facility	Department code in the facility (defined by user)

MML0030 Dental department ID type (Dental department code)

Value	Description
-------	-------------

01	Dentistry
02	Pedodontics
03	Orthodontic dentistry
04	Oral surgery

MML0031 Insurance class (type of insurance)

Value	Description
01	Government managed
02	Seamen
03	Daily laborers
04	Daily laborers, special cases
06	Union
07	Self-defense officials
31	National mutual aid
32	Local mutual aid
33	Police personnel mutual aid
34	Teacher's mutual aid
00	National health insurance
10	Tuberculosis Control Law, Article 34
11	Tuberculosis Control Law, Article 35
12	Daily Life Protection Law
13	War wound treatment
14	War wound rehabilitation
15	Physical handicap rehabilitation
16	Child rearing
17	Children's medical care
18	Certified atomic bomb victims
19	General atomic bomb medical care
20	Mental Health Law, Article 29
21	Mental Health Law, Article 32
22	Narcotic

23	Mother and child support
27	Senior citizens health insurance
41	Senior citizens/prefectural
42	Senior citizens/municipal
51	Specially designated disease
52	Children/chronic
53	Child protection
67	Retirees
63	Specially designated health insurance
72	Specially designated for government officials
73	Specially designated for local government officials
74	Specially designated for police personnel
75	Specially designated for teachers
Z1	Self-paid expense 1
Z2	Self-paid expense 2
Z3	Self-paid expense 3

MML0032 Pay ratio type (payment type code)

Value	Description
fix	Fixed-amount share
ratio	Ratio share

MML0033 Medical Role

Value	Description
laboratoryTest	Laboratory specimen test
endoScopy	Endoscope test
xRay	Simple X-ray
upperGi	Upper gastrointestinal tract test
baEnema	Barium enema test
ctScan	CT scan

mri	MRI
riInVivo	RI image test
angioGraphy	Angiography
otherRadiology	Other radiological tests
echo	Echo
ecg	Electrocardiography
eeg	Electroencephalography
emg	Electromyography
pcg	Phonocardiography
pulmonaryFunction	Pulmonary function test
otherPhysiologicalTest	Other physiological tests
prescription	Prescription
vitalSign	Vital sign table
physicalExam	Physical findings (e.g. chart)
anesthesiaCourse	Anesthesia record table
pathology	Pathological test (e.g. image)
surgicalFigure	Surgical record figure
referencePaper	Reference document
referenceFigure	Reference figure
treatment	Treatment (instruction, record, etc.)
other	Items other than the above

MML0034 Access approval classification

Value	Description
none	No access permissible
read	Reference permissible
write	Reference and correction permissible
delete	Reference and deletion permissible
all	Reference, correction, and deletion permissible

MML0035 Facility access right definition

Value	Description
all	All facilities
creator	Creator's facility
experience	Facilities with the experience of medical cares
individual	Facilities with individually specified facility IDs

MML0036 Personal access right definition

Value	Description
all	All accessing persons
creator	Creator
patient	Described persons (patients)
individual	Persons with individually specified personal IDs

13. DTD list

13. 1. MML_datatypes_and_header_3.0.dtd (MML common formats)

```
<?xml version='1.0' encoding='Shift_JIS' ?>

<!--*****-->
<!-- Basic data types -->
<!--*****-->

<!-- xs:boolean -->
<!ENTITY % xs.boolean "(true | false)">

<!-- xs:integer -->
<!ENTITY % xs.integer "CDATA">

<!-- xs:positiveInteger -->
<!ENTITY % xs.positiveInteger "CDATA">

<!-- xs:anyURI -->
<!ENTITY % xs.anyURI "CDATA">

<!-- xs:date -->
<!ENTITY % xs.date "CDATA">

<!-- xs:dateTime -->
<!ENTITY % xs.dateTime "CDATA">

<!--*****-->
<!-- MML data types -->
<!--*****-->

<!-- MML0001 -->
<!ENTITY % mmlDt.MML0001 "(M10 | M11 )">

<!-- MML0002 -->
<!ENTITY % mmlDt.MML0002 "("
  current |
  permanent |
  mailing |
  business |
  office |
  home |
  birth |
  county)" |
>

<!-- MML0003 -->
<!ENTITY % mmlDt.MML0003 "("
  PH |
```

```

FX |
MD |
CP |
BP |
Internet |
X.400)"
>

<!-- MML0004 -->
<!ENTITY % mmldt.MML0004 "(

firstEncounter |
laboratory |
prescription |
summary |
random |
nonExtracted |
other)"

>

<!-- MML0005 -->
<!ENTITY % mmldt.MML0005 "(

patientInfo |
healthInsurance |
registeredDiagnosis |
lifestyle |
baseClinic |
firstClinic |
progressCourse |
surgery |
summary |
referral |
test |
report |
claim |
claimAmount)"

>

<!-- MML0007 -->
<!ENTITY % mmldt.MML0007 "(

record |
recordAdmission |
recordInpatient |
recordConsult |
recordDischarge |
recordOutpatient |
legalRecord |
consult |
report |
reportRadiology |
reportPathology |

```

```
reportTest |  
summary |  
summaryAdmission |  
summaryPreoperation |  
summaryPostoperation |  
summaryMid |  
summaryDischarge |  
summaryOutpatient |  
disclosure |  
informedConsent |  
study |  
other |  
claim)"  
>
```

```
<!-- MML0008 -->  
<!ENTITY % mmlDt.MML0008 "(  
origin |  
oldEdition |  
order |  
consult |  
originalDiagnosis |  
diagnosis |  
surgery |  
patient |  
healthInsurance |  
detail |  
simpleLink)"  
>
```

```
<!-- MML0009 -->  
<!ENTITY % mmlDt.MML0009 "(  
temporaryPatientId |  
otherPatientId |  
spouseId |  
motherId |  
fatherId |  
childId |  
relativeId |  
roommateId |  
friendId |  
representativeId |  
emergencyContactId |  
coWorkerId)"  
>
```

```
<!-- MML0016 -->  
<!ENTITY % mmlDt.MML0016 "(  
died |  
worsening |
```

```

unchanged |
recovering |
fullyRecovered |
sequelae |
end |
pause |
continued |
transfer |
transferAcute |
transferChronic |
home |
unknown) "
>

<!-- MML0021 -->
<!ENTITY % mmldt.MML0021 "(elective | emergent)">

<!-- MML0027 -->
<!ENTITY % mmldt.MML0027 "(

ca |
insurance |
monbusho |
JMARI )"
>

<!-- MML0032 -->
<!ENTITY % mmldt.MML0032 "(fix | ratio)">

<!-- MML0033 -->
<!ENTITY % mmldt.MML0033 "(

laboratoryTest |
endoScopy |
xRay |
upperGi |
baEnema |
ctScan |
mri |
riInVivo |
angioGraphy |
otherRadiology |
echo |
ecg |
eeg |
emg |
pcg |
pulmonaryFunction |
otherPhysiologicalTest |
prescription |
vitalSign |
physicalExam |

```

```

anesthesiaCourse |
pathology |
surgicalFigure |
referencePaper |
referenceFigure |
treatment |
other)"
>

<!-- MML0034 -->
<!ENTITY % mmlDt.MML0034 "(

none |
read |
write |
delete |
all)"
>

<!-- Claim001 -->
<!ENTITY % mmlDt.Claim001 "(0 | 1 | 2 | 3)">

<!-- Claim008 -->
<!ENTITY % mmlDt.Claim008 "(

appoint |
regist |
perform |
account)"
>

<!-- mmllb0002 -->
<!ENTITY % mmlDt.mmllb0002 "(H | N | L | A)">

<!-- JLAC10 -->
<!ENTITY % mmlDt.JLAC10 "CDATA">

<!-- ISO 3166 A3 -->
<!ENTITY % mmlDt.ISO3166A3 "(

ISL | IRL | AZE | AFG | USA | ASM | ARE | DZA | ARG | ABW |
ALB | ARM | AIA | AGO | ATG | AND | YEM | GBR | IOT | ISR |
ITA | IRQ | IRN | IND | IDN | UGA | UKR | UZB | URY | ECU |
EGY | EST | ETH | ERI | SLV | AUS | AUT | OMN | NLD | ANT |
GHA | CPV | GUY | KAZ | QAT | CAN | GAB | CMR | KOR | GMB |
KHM | PRK | MNP | GIN | GNB | CYP | CUB | GRC | KIR | KGZ |
GTM | GLP | GUM | KWT | COK | GRL | CXR | GEO | GRD | HRV |
CYM | KEN | CIV | CCK | CRI | COM | COL | COG | ZAR | SAU |
SGS | STP | ZMB | SPM | SMR | SLE | DJI | GIB | JAM | SYR |
SGP | ZWE | CHE | SWE | SDN | SJM | ESP | SUR | LKA | SVK |
SVN | SWZ | SYC | GNQ | SEN | KNA | VCT | SHN | LCA | SOM |
SLB | TCA | THA | TWN | TJK | TZA | CZE | TCD | CAF | CHN |
TUN | CHL | TUV | DNK | DEU | TGO | TKL | DMA | DOM | TTO |

```

TKM	TUR	TON	NGA	NRU	NAM	ATA	NIU	NIC	NER
ESH	WSM	JPN	NCL	NZL	NPL	NFK	NOR	VGB	VIR
HMD	BMU	HTI	PAK	VAT	PAN	VUT	BHS	BHR	PNG
PLW	PRY	BRB	HUN	BGD	PCN	TMP	FJI	PHL	FIN
BTN	BVT	PRI	FRO	FLK	BRA	FRA	FXX	GUF	PYF
BGR	BFA	BRN	BDI	VNM	BEN	VEN	BLR	BLZ	PER
BEL	POL	BIH	BWA	BOL	PRT	HKG	HND	MHL	MAC
MKD	MDG	MYT	MWI	MLI	MLT	MTQ	MYS	FSM	ZAF
MMR	MEX	MUS	MRT	MOZ	MCO	MDV	MDA	MAR	MNG
MSR	YUG	JOR	LAO	LVA	LTU	LBY	LIE	LBR	ROM
LUX	RWA	LSO	LBN	REU	RUS	WLF	ATF	UMI)"

>

```

<!-- date/dateTime -->
<!ENTITY % mmlDt.date-dateTime "CDATA">

<!--*****-->
<!-- MMLcommon formats -->
<!--*****-->

<!--*****-->
<!-- Address expression format -->
<!-- Address DTD Version 1.0 -->
<!--*****-->

<!ELEMENT mmlAd:Address (
  (mmlAd:full? |
  (mmlAd:prefecture?, mmlAd:city?, mmlAd:town?, mmlAd:homeNumber?)),
  mmlAd:zip?,
  mmlAd:countryCode?)>
<
<!ATTLIST mmlAd:Address
  mmlAd:repCode      (A | I | P)      #REQUIRED
  mmlAd:addressClass %mmlDt.MML0002; #IMPLIED
  mmlAd:tableId      CDATA          "MML0025"
  >
<!ELEMENT mmlAd:countryCode (#PCDATA)>
<!ELEMENT mmlAd:zip (#PCDATA)>
<!ELEMENT mmlAd:homeNumber (#PCDATA)>
<!ELEMENT mmlAd:town (#PCDATA)>
<!ELEMENT mmlAd:city (#PCDATA)>
<!ELEMENT mmlAd:prefecture (#PCDATA)>
<!ELEMENT mmlAd:full (#PCDATA)>

<!--*****-->
<!-- Telephone number format -->
<!-- Phone DTD Version 1.0 -->
<!--*****-->

<!ELEMENT mmlPh:Phone (
  (mmlPh:full? |

```

```

(mmlPh:area?, mmlPh:city?, mmlPh:number?, mmlPh:extension?)),
mmlPh:country?,
mmlPh:memo? )
>
<!ATTLIST mmlPh:Phone
mmlPh:telEquipType %mmlDt.MML0003; #IMPLIED
>
<!ELEMENT mmlPh:memo (#PCDATA)>
<!ELEMENT mmlPh:country (#PCDATA)>
<!ELEMENT mmlPh:extension (#PCDATA)>
<!ELEMENT mmlPh:number (#PCDATA)>
<!ELEMENT mmlPh:city (#PCDATA)>
<!ELEMENT mmlPh:area (#PCDATA)>
<!ELEMENT mmlPh:full (#PCDATA)>

<!--*****-->
<! -- ID format, external reference format, and E-mail -->
<! -- MML Common DTD Version 1.0 -->
<!--*****-->
<!ELEMENT mmlCm:Id (#PCDATA)>
<!ATTLIST mmlCm:Id
  mmlCm:type          CDATA          #REQUIRED
  mmlCm:checkDigitSchema %mmlDt.MML0001; #IMPLIED
  mmlCm:checkDigit    %xs.integer;   #IMPLIED
  mmlCm:tableId       CDATA          #REQUIRED
>
<!ELEMENT mmlCm:extRef EMPTY>
<!ATTLIST mmlCm:extRef
  mmlCm:contentType CDATA          #IMPLIED
  mmlCm:medicalRole  %mmlDt.MML0033; #IMPLIED
  mmlCm:title        CDATA          #IMPLIED
  mmlCm:href         %xs.anyURI;    #REQUIRED
>
<!ELEMENT mmlCm:email (#PCDATA)>

<!--*****-->
<! -- Name expression format -->
<! -- Name DTD Version 1.0 -->
<!--*****-->
<!ELEMENT mmlNm:Name (
  ((mmlNm:family, mmlNm:given, mmlNm:middle?) |
  mmlNm:fullname),
  mmlNm:prefix?,
  mmlNm:degree?)
>
<!ATTLIST mmlNm:Name
  mmlNm:repCode (I | A | P) #REQUIRED
  mmlNm:tableId CDATA          "MML0025"
>
<!ELEMENT mmlNm:degree (#PCDATA)>
```

```

<!ELEMENT mm1Nm:prefix (#PCDATA)>
<!ELEMENT mm1Nm:fullname (#PCDATA)>
<!ELEMENT mm1Nm:middle (#PCDATA)>
<!ELEMENT mm1Nm:given (#PCDATA)>
<!ELEMENT mm1Nm:family (#PCDATA)>

<!--*****-->
<!-- Facility information format -->
<!-- Facility DTD Version 1.0 -->
<!--*****-->
<!ELEMENT mm1Fc:Facility (mm1Fc:name+, mm1Cm:Id?)>
<!ELEMENT mm1Fc:name (#PCDATA)>
<!ATTLIST mm1Fc:name
  mm1Fc:repCode (I | A | P) #REQUIRED
  mm1Fc:tableId CDATA          "MML0025"
>

<!--*****-->
<!-- Medical department information format -->
<!-- Department DTD Version 1.0 -->
<!--*****-->
<!ELEMENT mm1Dp:Department (mm1Dp:name+, mm1Cm:Id?)>
<!ELEMENT mm1Dp:name (#PCDATA)>
<!ATTLIST mm1Dp:name
  mm1Dp:repCode (I | A | P) #REQUIRED
  mm1Dp:tableId CDATA          "MML0025"
>

<!--*****-->
<!-- Personal information format -->
<!-- PersonalizedInfo DTD Version 1.0 -->
<!--*****-->
<!ELEMENT mm1Psi:PersonalizedInfo (
  mm1Cm:Id,
  mm1Psi:personName,
  mm1Fc:Facility?,
  mm1Dp:Department?,
  mm1Psi:addresses?,
  mm1Psi:emailAddresses?,
  mm1Psi:phones?
)
>

<!ELEMENT mm1Psi:phones (mm1Ph:Phone+ )>
<!ELEMENT mm1Psi:emailAddresses (mm1Cm:email* )>
<!ELEMENT mm1Psi:addresses (mm1Ad:Address+ )>
<!ELEMENT mm1Psi:personName (mm1Nm:Name+ )>

<!--*****-->
<!-- Creator information format -->
<!-- CreatorInfo DTD Version 1.0 -->
<!--*****-->

```

```

<!ELEMENT mmlCi:CreatorInfo (
  mmlPsi:PersonalizedInfo,
  mmlCi:creatorLicense+
)
>
<!ELEMENT mmlCi:creatorLicense (#PCDATA)>
<!ATTLIST mmlCi:creatorLicense
  mmlCi:tableId CDATA #IMPLIED
>

<!--*****-->
<!-- MmlHeader -->
<!-- Mml Header DTD Version 1.0 -->
<!--*****-->

<!ELEMENT mml:MmlHeader (
  mmlCi:CreatorInfo,
  mml:masterId,
  mml:toc,
  mml:scopePeriod?,
  mml:encryptInfo?
)
>

<!--*****-->
<!--MML docInfo module -->
<!--*****-->
<!--*****-->
<!-- DOCINFO -->
<!-- docInfo DTD Version 1.0 -->
<!--*****-->

<!ELEMENT mml:docInfo (
  mml:securityLevel,
  mml:title,
  mml:docId,
  mml:confirmDate,
  mmlCi:CreatorInfo,
  mml:extRefs)
>
<!ATTLIST mml:docInfo
  contentModuleType %mmlDt.MML0005; #REQUIRED
  moduleVersion      %xs.anyURI;      #IMPLIED
>
<!ELEMENT mml:encryptInfo (#PCDATA)>
<!ELEMENT mml:title (#PCDATA)>
<!ATTLIST mml:title
  generationPurpose CDATA #IMPLIED
>
<!ELEMENT mml:docId (
  mml:uid,
  mml:parentId*,

```

```

mml:groupId*)
>
<!ELEMENT mml:masterId (mmlCm:Id)>
<!ELEMENT mml:content (
  mmlPi:PatientModule |
  mmlHi:HealthInsuranceModule |
  mmlRd:RegisteredDiagnosisModule |
  mmlLs:LifestyleModule |
  mmlBc:BaseClinicModule |
  mmlFc:FirstClinicModule |
  mmlPc:ProgressCourseModule |
  mmlSg:SurgeryModule |
  mmlSm:SummaryModule |
  mmlLb:TestModule |
  mmlRp:ReportModule |
  mmlRe:ReferralModule |
  claim:ClaimModule |
  claimA:ClaimAmountModule)
>
<!ELEMENT mml:toc (mml:tocItem+)>
<!ELEMENT mml:tocItem (#PCDATA)>
<!ELEMENT mml:extRefs (mmlCm:extRef*)>
<!ELEMENT mml:scopePeriod EMPTY>
<!ATTLIST mml:scopePeriod
  start      %xs.date;          #IMPLIED
  end        %xs.date;          #IMPLIED
  hasOtherInfo %xs.boolean;    #IMPLIED
  isExtract   %xs.boolean;    #IMPLIED
  extractPolicy %mmlDt.MML0004; #IMPLIED
>
<!ELEMENT mml:uid (#PCDATA)>
<!ELEMENT mml:parentId (#PCDATA)>
<!ATTLIST mml:parentId
  relation %mmlDt.MML0008; #IMPLIED
>
<!ELEMENT mml:groupId (#PCDATA)>
<!ATTLIST mml:groupId
  groupClass %mmlDt.MML0007; #IMPLIED
>
<!ELEMENT mml:confirmDate (#PCDATA)>
<!ATTLIST mml:confirmDate
  start      %xs.dateTime; #IMPLIED
  end        %xs.dateTime; #IMPLIED
  firstConfirmDate %xs.dateTime; #IMPLIED
  eventDate   %xs.dateTime; #IMPLIED >

<!--*****-->
<!-- Security DTD Version 1.0 -->
<!--*****-->
<!ELEMENT mml:securityLevel (mml:accessRight*)>

```

```

<!ELEMENT mm1:accessRight (
  mm1Sc:facility?,
  mm1Sc:person?,
  mm1Sc:license?,
  mm1Sc:department?
)
>
<!ATTLIST mm1:accessRight
  permit      %mm1Dt.MML0034; #REQUIRED
  startDate  %xs.date;        #IMPLIED
  endDate    %xs.date;        #IMPLIED
>
<!ELEMENT mm1Sc:facility (mm1Sc:facilityName+)
<!ELEMENT mm1Sc:facilityName (#PCDATA)
<!ATTLIST mm1Sc:facilityName
  mm1Sc:facilityCode (all |
                        creator |
                        experience |
                        individual)      #REQUIRED
  mm1Sc:tableId      CDATA          "MML0035"
  mm1Sc:facilityId   CDATA          "#IMPLIED"
  mm1Sc:facilityIdType %mm1Dt.MML0027; #IMPLIED
>
<!ELEMENT mm1Sc:person (mm1Sc:personName+ ) >
<!ELEMENT mm1Sc:personName (#PCDATA)
<!ATTLIST mm1Sc:personName
  mm1Sc:personCode (all |
                        creator |
                        patient |
                        individual) #REQUIRED
  mm1Sc:tableId      CDATA          "MML0036"
  mm1Sc:personId     CDATA          "#IMPLIED"
  mm1Sc:personIdType CDATA          "#IMPLIED
>
<!ELEMENT mm1Sc:license (mm1Sc:licenseName+ ) >
<!ELEMENT mm1Sc:licenseName EMPTY>
<!ATTLIST mm1Sc:licenseName
  mm1Sc:licenseCode CDATA #REQUIRED
  mm1Sc:tableId     CDATA "MML0026"
>
<!ELEMENT mm1Sc:department (mm1Sc:departmentName+ ) >
<!ELEMENT mm1Sc:departmentName EMPTY>
<!ATTLIST mm1Sc:departmentName
  mm1Sc:departmentCode CDATA #REQUIRED
  mm1Sc:tableId       CDATA "MML0028"
>

<!--*****-->
<!-- Part of XHTML elements supported by MML -->
<!--*****-->

```

```

<!ENTITY % LanguageCode "NMTOKEN">
  <!-- a language code, as per [RFC3066] -->

<!ENTITY % Character "CDATA">
  <!-- a single character, as per section 2.2 of [XML] -->

<!ENTITY % Number "CDATA">
  <!-- one or more digits -->

<!ENTITY % Script "CDATA">
  <!-- script expression -->

<!ENTITY % StyleSheet "CDATA">
  <!-- style sheet data -->

<!ENTITY % Text "CDATA">
  <!-- used for titles etc. -->

<!-- a color using sRGB: #RRGGBB as Hex values -->
<!ENTITY % Color "CDATA">

<===== Generic Attributes =====>

<!-- core attributes common to most elements
     id      document-wide unique id
     class   space separated list of classes
     style   associated style info
     title   advisory title/amplification
-->
<!ENTITY % coreattrs
  "id      ID          #IMPLIED
   class   CDATA       #IMPLIED
   style   %StyleSheet; #IMPLIED
   title   %Text;      #IMPLIED"
  >

<!-- internationalization attributes
     lang    language code (backwards compatible)
     xml:lang language code (as per XML 1.0 spec)
     dir    direction for weak/neutral text
-->
<!ENTITY % i18n
  "lang    %LanguageCode; #IMPLIED
   xml:lang %LanguageCode; #IMPLIED
   dir    (ltr|rtl)      #IMPLIED"
  >

<!-- attributes for common UI events
     onclick  a pointer button was clicked
     ondblclick  a pointer button was double clicked

```

```

onmousedown a pointer button was pressed down
onmouseup a pointer button was released
onmousemove a pointer was moved onto the element
onmouseout a pointer was moved away from the element
onkeypress a key was pressed and released
onkeydown a key was pressed down
onkeyup a key was released

-->

<!ENTITY % events
  "onclick      %Script;          #IMPLIED
   ondblclick   %Script;          #IMPLIED
   onmousedown  %Script;          #IMPLIED
   onmouseup    %Script;          #IMPLIED
   onmouseover  %Script;          #IMPLIED
   onmousemove  %Script;          #IMPLIED
   onmouseout   %Script;          #IMPLIED
   onkeypress   %Script;          #IMPLIED
   onkeydown    %Script;          #IMPLIED
   onkeyup      %Script;          #IMPLIED"
>

<!ENTITY % attrs "%coreattrs; %i18n; %events;">

<!--===== Text Elements =====-->

<!ENTITY % mmlxhtmlinline "
  #PCDATA |
  xhtml:br |
  xhtml:i |
  xhtml:b |
  xhtml:u |
  xhtml:font"
>

<!ENTITY % mmlxhtmlInline "(%mmlxhtmlinline;)*">

<!--===== Part of XHTML elements supported by MML=====-->

<!ELEMENT xhtml:br EMPTY>    <!-- forced line break -->
<!ATTLIST xhtml:br
  %coreattrs;
  clear      (left|all|right|none) "none"
  >

<!ELEMENT xhtml:i %mmlxhtmlInline;>    <!-- italic font -->
<!ATTLIST xhtml:i %attrs;>

<!ELEMENT xhtml:b %mmlxhtmlInline;>    <!-- bold font -->
<!ATTLIST xhtml:b %attrs;>

<!ELEMENT xhtml:u %mmlxhtmlInline;>    <!-- underline -->

```

```

<!ATTLIST xhtml:u %attrs;>

<!ELEMENT xhtml:font %mmlxhtmlInline; > <!-- local change to font -->
<!ATTLIST xhtml:font
  %coreattrs;
  %i18n;
  size      CDATA          #IMPLIED
  color     %Color;        #IMPLIED
  face      CDATA          #IMPLIED
>

<!ENTITY % mmlxhtml_with_extRefInline
  " (%mmlxhtmlinline; | mmlCm:extRef )*"
>
<!ENTITY % mmlxhtml_with_extRef_and_relatedDocInline
  " (%mmlxhtmlinline; | mmlCm:extRef | mmlSm:relatedDoc)*"
>

```

13. 2. MML_Modules_3.0.dtd (MML module)

```

<?xml version='1.0' encoding='Shift_JIS' ?>

<!--*****-->
<!-- MML modules -->
<!--*****-->

<!--*****-->
<!-- Patient information -->
<!-- PatientModule DTD Version 1.0 -->
<!--*****-->
<!ELEMENT mm1Pi:PatientModule (
  mm1Pi:uniqueInfo,
  mm1Pi:personName,
  mm1Pi:birthday,
  mm1Pi:sex,
  mm1Pi:nationality?,
  mm1Pi:race?,
  mm1Pi:marital?,
  mm1Pi:addresses?,
  mm1Pi:emailAddresses?,
  mm1Pi:phones?,
  mm1Pi:accountNumber?,
  mm1Pi:socialIdentification?,
  mm1Pi:death?)
>
<!ELEMENT mm1Pi:otherId (mm1Cm:Id)>
<!ATTLIST mm1Pi:otherId
  mm1Pi:type %mm1Dt.MML0009; #REQUIRED
>
<!ELEMENT mm1Pi:masterId (mm1Cm:Id)>
```

```

<!ELEMENT mm1Pi:uniqueInfo (mm1Pi:masterId, mm1Pi:otherId*)>
<!ELEMENT mm1Pi:death (#PCDATA)>
<!ATTLIST mm1Pi:death
  mm1Pi:date CDATA #IMPLIED
  >
<!ELEMENT mm1Pi:socialIdentification (#PCDATA)>
<!ELEMENT mm1Pi:accountNumber (#PCDATA)>
<!ELEMENT mm1Pi:phones (mm1Ph:Phone*)>
<!ELEMENT mm1Pi:emailAddresses (mm1Cm:email*)>
<!ELEMENT mm1Pi:addresses (mm1Ad:Address*)>
<!ELEMENT mm1Pi:race (#PCDATA)>
<!ATTLIST mm1Pi:race
  mm1Pi:raceCode CDATA #IMPLIED
  mm1Pi:raceCodeId CDATA #IMPLIED
  >
<!ELEMENT mm1Pi:marital (#PCDATA)>
<!ELEMENT mm1Pi:nationality (#PCDATA)>
<!ATTLIST mm1Pi:nationality
  mm1Pi:subtype %mm1Dt.ISO3166A3; #IMPLIED
  >
<!ELEMENT mm1Pi:sex (#PCDATA)>
<!ELEMENT mm1Pi:birthday (#PCDATA)>
<!ELEMENT mm1Pi:personName (mm1Nm:Name+)>

<!--*****-->
<!-- Health insurance information (Japanese version) -->
<!-- HealthInsuranceModule DTD Version 1.1 -->
<!--*****-->
<!ELEMENT mm1Hi:HealthInsuranceModule (
  mm1Hi:insuranceClass?,
  mm1Hi:insuranceNumber,
  mm1Hi:clientId,
  mm1Hi:familyClass,
  mm1Hi:clientInfo?,
  mm1Hi:continuedDiseases?,
  mm1Hi:startDate,
  mm1Hi:expiredDate,
  mm1Hi:paymentInRatio?,
  mm1Hi:paymentOutRatio?,
  mm1Hi:insuredInfo?,
  mm1Hi:workInfo?,
  mm1Hi:publicInsurance?
)
>
<!ATTLIST mm1Hi:HealthInsuranceModule
  mm1Hi:countryType %mm1Dt.ISO3166A3; #IMPLIED
  >
<!ELEMENT mm1Hi:insuranceClass (#PCDATA)>
<!ATTLIST mm1Hi:insuranceClass
  mm1Hi:ClassCode CDATA #REQUIRED
  mm1Hi:tableId CDATA #REQUIRED

```

```

>
<!ELEMENT mmlHi:insuranceNumber (#PCDATA)>
<!ELEMENT mmlHi:clientId (mmlHi:group, mmlHi:number)>
<!ELEMENT mmlHi:group (#PCDATA)>
<!ELEMENT mmlHi:number (#PCDATA)>
<!ELEMENT mmlHi:familyClass (#PCDATA)>
<!ELEMENT mmlHi:clientInfo (
  mmlHi:personName?,
  mmlHi:addresses?,
  mmlHi:phones?
)
>
<!ELEMENT mmlHi:personName (mmlNm:Name*)>
<!ELEMENT mmlHi:addresses (mmlAd:Address*)>
<!ELEMENT mmlHi:phones (mmlPh:Phone*)>
<!ELEMENT mmlHi:continuedDiseases (mmlHi:diseases+)>
<!ELEMENT mmlHi:diseases (#PCDATA)>
<!ELEMENT mmlHi:startDate (#PCDATA)>
<!ELEMENT mmlHi:expiredDate (#PCDATA)>
<!ELEMENT mmlHi:paymentInRatio (#PCDATA)>
<!ELEMENT mmlHi:paymentOutRatio (#PCDATA)>
<!ELEMENT mmlHi:insuredInfo (
  mmlHi:facility?,
  mmlHi:addresses?,
  mmlHi:phones?
)
>
<!ELEMENT mmlHi:facility (mmlFc:Facility?)>
<!ELEMENT mmlHi:workInfo (
  mmlHi:facility?,
  mmlHi:addresses?,
  mmlHi:phones?
)
>
<!ELEMENT mmlHi:publicInsurance (mmlHi:publicInsuranceItem+)>
<!ELEMENT mmlHi:publicInsuranceItem (
  mmlHi:providerName?,
  mmlHi:provider,
  mmlHi:recipient,
  mmlHi:startDate,
  mmlHi:expiredDate,
  mmlHi:paymentRatio?
)
>
<!ATTLIST mmlHi:publicInsuranceItem
  mmlHi:priority %xs.positiveInteger; #REQUIRED
>
<!ELEMENT mmlHi:providerName (#PCDATA)>
<!ELEMENT mmlHi:provider (#PCDATA)>
<!ELEMENT mmlHi:recipient (#PCDATA)>
<!ELEMENT mmlHi:paymentRatio (#PCDATA)>
<!ATTLIST mmlHi:paymentRatio
  mmlHi:ratioType %mmlDt.MML0032; #REQUIRED
>

```

```

<!--*****-->
<!-- Diagnosis record information -->
<!-- RegisteredDiagnosisModule DTD Version 1.0          -->
<!--*****-->
<!ELEMENT mm1Rd:RegisteredDiagnosisModule (
  (mm1Rd:diagnosis | mm1Rd:diagnosisContents),
  mm1Rd:categories?,
  mm1Rd:startDate?,
  mm1Rd:endDate?,
  mm1Rd:outcome?,
  mm1Rd:firstEncounterDate?,
  mm1Rd:relatedHealthInsurance?)
>
<!ELEMENT mm1Rd:diagnosis (#PCDATA)>
<!ATTLIST mm1Rd:diagnosis
  mm1Rd:code    CDATA #IMPLIED
  mm1Rd:system  CDATA #IMPLIED
>
<!ELEMENT mm1Rd:diagnosisContents (mm1Rd:dxItem+)>
<!ELEMENT mm1Rd:dxItem (mm1Rd:name)>
<!ELEMENT mm1Rd:name (#PCDATA)>
<!ATTLIST mm1Rd:name
  mm1Rd:code    CDATA #IMPLIED
  mm1Rd:system  CDATA #IMPLIED
>
<!ELEMENT mm1Rd:category (#PCDATA)>
<!ATTLIST mm1Rd:category
  mm1Rd:tableId (MML0012 |
                  MML0013 |
                  MML0014 |
                  MML0015) #REQUIRED
>
<!ELEMENT mm1Rd:startDate (#PCDATA)>
<!ELEMENT mm1Rd:endDate (#PCDATA)>
<!ELEMENT mm1Rd:outcome (#PCDATA)>
<!ELEMENT mm1Rd:firstEncounterDate (#PCDATA)>
<!ELEMENT mm1Rd:relatedHealthInsurance EMPTY>
<!ATTLIST mm1Rd:relatedHealthInsurance
  mm1Rd:uid CDATA #IMPLIED
>
<!ELEMENT mm1Rd:categories (mm1Rd:category+)>

<!--*****-->
<!-- Lifestyle information -->
<!-- LifestyleModule DTD Version 1.0          -->
<!--*****-->
<!ELEMENT mm1Ls:LifestyleModule (
  mm1Ls:occupation,
  mm1Ls:tobacco,

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mmlLs:alcohol,
mmlLs:other?)
>
<!ELEMENT mmlLs:occupation %mmlxhtmlInline;*>
<!ELEMENT mmlLs:tobacco %mmlxhtmlInline;*>
<!ELEMENT mmlLs:alcohol %mmlxhtmlInline;*>
<!ELEMENT mmlLs:other %mmlxhtmlInline;*>

<!--*****-->
<!-- Basic clinical information -->
<!-- BaseClinicModule DTD Version 1.0 -->
<!--*****-->
<!ELEMENT mm1Bc:BaseClinicModule (
mm1Bc:allergy?,
mm1Bc:bloodtype?,
mm1Bc:infection?)

>
<!ELEMENT mm1Bc:allergy (mm1Bc:allergyItem+)>
<!ELEMENT mm1Bc:allergyItem (
mm1Bc:factor,
mm1Bc:severity?,
mm1Bc:identifiedDate?,
mm1Bc:memo?)

>
<!ELEMENT mm1Bc:factor (#PCDATA)>
<!ELEMENT mm1Bc:severity (#PCDATA)>
<!ELEMENT mm1Bc:identifiedDate (#PCDATA)>
<!ELEMENT mm1Bc:memo %mmlxhtmlInline;*>
<!ELEMENT mm1Bc:bloodtype (
mm1Bc:abo,
mm1Bc:rh?,
mm1Bc:others?,
mm1Bc:memo?)

>
<!ELEMENT mm1Bc:rh (#PCDATA)>
<!ELEMENT mm1Bc:abo (#PCDATA)>
<!ELEMENT mm1Bc:other (
mm1Bc:typeName,
mm1Bc:typeJudgement,
mm1Bc:description?)

>
<!ELEMENT mm1Bc:typeName (#PCDATA)>
<!ELEMENT mm1Bc:typeJudgement (#PCDATA)>
<!ELEMENT mm1Bc:description %mmlxhtmlInline;*>
<!ELEMENT mm1Bc:infection (mm1Bc:infectionItem+)>
<!ELEMENT mm1Bc:infectionItem (
mm1Bc:factor,
mm1Bc:examValue,
mm1Bc:identifiedDate?,
mm1Bc:memo?)

```

```

>
<!ELEMENT mmlBc:examValue (#PCDATA)>
<!ELEMENT mmlBc:others (mmlBc:other*)>

<!--*****-->
<!-- Initial-consultation-specific information -->
<!-- FirstClinicModule DTD Version 1.0 -->
<!--*****-->
<!ELEMENT mmlFcl:FirstClinicModule (
  mmlFcl:familyHistory?,
  mmlFcl:childhood?,
  mmlFcl:pastHistory?,
  mmlFcl:chiefComplaints?,
  mmlFcl:presentIllnessNotes?
)
>
<!ELEMENT mmlFcl:familyHistory (mmlFcl:familyHistoryItem+)>
<!ELEMENT mmlFcl:familyHistoryItem (
  mmlFcl:relation,
  mmlRd:RegisteredDiagnosisModule,
  mmlFcl:age?,
  mmlFcl:memo?
)
>
<!ELEMENT mmlFcl:relation (#PCDATA)>
<!ELEMENT mmlFcl:age (#PCDATA)>
<!ELEMENT mmlFcl:memo %mmlxhtmlInline;>
<!ELEMENT mmlFcl:childhood (mmlFcl:birthInfo?, mmlFcl:vaccination?)>
<!ELEMENT mmlFcl:birthInfo (
  mmlFc:Facility?,
  mmlFcl:deliveryWeeks?,
  mmlFcl:deliveryMethod?,
  mmlFcl:bodyWeight?,
  mmlFcl:bodyHeight?,
  mmlFcl:chestCircumference?,
  mmlFcl:headCircumference?,
  mmlFcl:memo?
)
>
<!ELEMENT mmlFcl:deliveryWeeks (#PCDATA)>
<!ELEMENT mmlFcl:deliveryMethod (#PCDATA)>
<!ELEMENT mmlFcl:bodyWeight (#PCDATA)>
<!ATTLIST mmlFcl:bodyWeight
  mmlFcl:unit CDATA #REQUIRED
>
<!ELEMENT mmlFcl:bodyHeight (#PCDATA)>
<!ATTLIST mmlFcl:bodyHeight
  mmlFcl:unit CDATA #REQUIRED
>
<!ELEMENT mmlFcl:chestCircumference (#PCDATA)>
<!ATTLIST mmlFcl:chestCircumference
  mmlFcl:unit CDATA #REQUIRED
>

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<!ELEMENT mm1Fcl:headCircumference (#PCDATA)>
<!ATTLIST mm1Fcl:headCircumference
  mm1Fcl:unit CDATA #REQUIRED
  >
<!ELEMENT mm1Fcl:vaccination (mm1Fcl:vaccinationItem+)>
<!ELEMENT mm1Fcl:vaccinationItem (
  mm1Fcl:vaccine,
  mm1Fcl:injected,
  mm1Fcl:age?,
  mm1Fcl:memo?
  >
<!ELEMENT mm1Fcl:vaccine (#PCDATA)>
<!ELEMENT mm1Fcl:injected (#PCDATA)>
<!ELEMENT mm1Fcl:pastHistory (
  mm1Fcl:freeNotes |
  mm1Fcl:pastHistoryItem*)
  >
<!ELEMENT mm1Fcl:pastHistoryItem (
  mm1Fcl:timeExpression,
  mm1Fcl:eventExpression*)
  >
<!ELEMENT mm1Fcl:timeExpression (#PCDATA)>
<!ELEMENT mm1Fcl:eventExpression %mm1xhtmlInline;>
<!ELEMENT mm1Fcl:chiefComplaints %mm1xhtmlInline;>
<!ELEMENT mm1Fcl:presentIllnessNotes %mm1xhtmlInline;>
<!ELEMENT mm1Fcl:freeNotes %mm1xhtmlInline;>

<!--*****-->
<!-- Progress course information -->
<!-- ProgressCourseModule DTD Version 1.0          -->
<!--*****-->
<!ELEMENT mm1Pc:ProgressCourseModule (
  mm1Pc:FreeExpression |
  mm1Pc:structuredExpression)
  >
<!ELEMENT mm1Pc:problem %mm1xhtmlInline;>
<!ATTLIST mm1Pc:problem
  mm1Pc:dxUid CDATA #IMPLIED
  >
<!ELEMENT mm1Pc:subjective (
  mm1Pc:freeNotes |
  mm1Pc:subjectiveItem*)
  >
<!ELEMENT mm1Pc:subjectiveItem (
  mm1Pc:timeExpression,
  mm1Pc:eventExpression+)
  >
<!ELEMENT mm1Pc:timeExpression (#PCDATA)>
<!ELEMENT mm1Pc:eventExpression %mm1xhtmlInline;>
<!ELEMENT mm1Pc:objective (

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mmlPc:objectiveNotes?,
mmlPc:physicalExam?,
mmlPc:testResult?,
mmlPc:rxRecord?,
mmlPc:txRecord?)

>
<!ELEMENT mmlPc:physicalExam (mmlPc:physicalExamItem+)>
<!ELEMENT mmlPc:physicalExamItem (
  mmlPc:title,
  mmlPc:result,
  mmlPc:interpretation?,
  mmlPc:referenceInfo?)

>
<!ELEMENT mmlPc:title (#PCDATA)>
<!ELEMENT mmlPc:result (#PCDATA)>
<!ELEMENT mmlPc:interpretation %mmlxhtmlInline;>
<!ELEMENT mmlPc:referenceInfo (mmlCm:extRef*)>
<!ELEMENT mmlPc:testResult %mmlxhtml_with_extRefInline;>
<!ELEMENT mmlPc:rxRecord %mmlxhtml_with_extRefInline;>
<!ELEMENT mmlPc:txRecord %mmlxhtml_with_extRefInline;>
<!ELEMENT mmlPc:planNotes %mmlxhtmlInline;>
<!ELEMENT mmlPc:assessment (mmlPc:assessmentItem+)>
<!ELEMENT mmlPc:assessmentItem %mmlxhtmlInline;>
<!ELEMENT mmlPc:plan (
  mmlPc:testOrder?,
  mmlPc:rxOrder?,
  mmlPc:txOrder?,
  mmlPc:planNotes?)

>
<!ELEMENT mmlPc:testOrder %mmlxhtml_with_extRefInline;>
<!ELEMENT mmlPc:rxOrder %mmlxhtml_with_extRefInline;>
<!ELEMENT mmlPc:txOrder %mmlxhtml_with_extRefInline;>
<!ELEMENT mmlPc:objectiveNotes %mmlxhtmlInline;>
<!ELEMENT mmlPc:FreeExpression %mmlxhtml_with_extRefInline;>
<!ELEMENT mmlPc:structuredExpression (mmlPc:problemItem*)>
<!ELEMENT mmlPc:problemItem (
  mmlPc:problem?,
  mmlPc:subjective?,
  mmlPc:objective?,
  mmlPc:assessment?,
  mmlPc:plan?)

>
<!ELEMENT mmlPc:freeNotes %mmlxhtmlInline;>

<!--*****-->
<!-- Surgery record information -->
<!-- SurgeryModule DTD Version 1.0 -->
<!--*****-->
<!ELEMENT mmlSg:SurgeryModule (mmlSg:surgeryItem+)>
<!ELEMENT mmlSg:surgeryItem (

```

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mmlSg:surgicalInfo,
mmlSg:surgicalDiagnosis,
mmlSg:surgicalProcedure,
mmlSg:surgicalStaffs?,
mmlSg:anesthesiaProcedure?,
mmlSg:anesthesiologists?,
mmlSg:anesthesiaDuration?,
mmlSg:operativeNotes?,
mmlSg:referenceInfo?,
mmlSg:memo?)

>
<!ELEMENT mmlSg:surgicalInfo (
  mmlSg:date,
  mmlSg:startTime?,
  mmlSg:duration?,
  mmlSg:surgicalDepartment?,
  mmlSg:patientDepartment?
)
>
<!ATTLIST mmlSg:surgicalInfo
  mmlSg:type %mmlDt.MML0021; #IMPLIED
>
<!ELEMENT mmlSg:surgicalDepartment (mmlDp:Department+)
<!ELEMENT mmlSg:patientDepartment (mmlDp:Department+)
<!ELEMENT mmlSg:date (#PCDATA)
<!ELEMENT mmlSg:startTime (#PCDATA)
<!ELEMENT mmlSg:duration (#PCDATA)
<!ELEMENT mmlSg:surgicalDiagnosis (mmlRd:RegisteredDiagnosisModule+)
<!ELEMENT mmlSg:title (#PCDATA)
<!ATTLIST mmlSg:title
  mmlSg:code   CDATA #IMPLIED
  mmlSg:system CDATA #IMPLIED
>
<!ELEMENT mmlSg:memo (#PCDATA)
<!ELEMENT mmlSg:surgicalProcedure (mmlSg:procedureItem+)
<!ELEMENT mmlSg:procedureItem (
  (mmlSg:operation | mmlSg:operationElement),
  mmlSg:procedureMemo?
)
>
<!ELEMENT mmlSg:operationElement (mmlSg:operationElementItem+)
<!ELEMENT mmlSg:operationElementItem (mmlSg:title)
<!ELEMENT mmlSg:surgicalStaffs (mmlSg:staff+)
<!ELEMENT mmlSg:staff (mmlSg:staffInfo)
<!ATTLIST mmlSg:staff
  mmlSg:superiority %xs.positiveInteger; #IMPLIED
  mmlSg:staffClass   CDATA           #IMPLIED
>
<!ELEMENT mmlSg:staffInfo (mmlPsi:PersonalizedInfo+)
<!ELEMENT mmlSg:anesthesiaProcedure (mmlSg:title+)
<!ELEMENT mmlSg:anesthesiologists (mmlSg:staff*)
<!ELEMENT mmlSg:operativeNotes %mmlxhtmlInline;>

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<!ELEMENT mm1Sg:referenceInfo (mm1Cm:extRef+)>
<!ELEMENT mm1Sg:operation (#PCDATA)>
<!ELEMENT mm1Sg:procedureMemo (#PCDATA)>
<!ELEMENT mm1Sg:anesthesiaDuration (#PCDATA)>

<!--*****-->
<!-- Clinical summary information -->
<!-- SummaryModule DTD Version 1.0 -->
<!--*****-->

<!ELEMENT mm1Sm:SummaryModule (
  mm1Sm:serviceHistory,
  mm1Rd:RegisteredDiagnosisModule*,
  mm1Sm:deathInfo?,
  mm1Sg:SurgeryModule*,
  mm1Sm:chiefComplaints?,
  mm1Sm:patientProfile?,
  mm1Sm:history?,
  mm1Sm:physicalExam?,
  mm1Sm:clinicalCourse?,
  mm1Sm:dischargeFindings?,
  mm1Sm:medication?,
  mm1Sm:testResults?,
  mm1Sm:plan?,
  mm1Sm:remarks?
)
>

<!ELEMENT mm1Sm:serviceHistory (mm1Sm:outPatient?, mm1Sm:inPatient?)>
<!ATTLIST mm1Sm:serviceHistory
  mm1Sm:start %xs.date; #IMPLIED
  mm1Sm:end    %xs.date; #IMPLIED
>

<!ELEMENT mm1Sm:outPatient (mm1Sm:outPatientItem*)>
<!ELEMENT mm1Sm:inPatient (mm1Sm:inPatientItem*)>
<!ELEMENT mm1Sm:outPatientItem (
  mm1Sm:date,
  mm1Sm:outPatientCondition?,
  mm1Sm:staffs?
)
>

<!ELEMENT mm1Sm:inPatientItem (
  mm1Sm:admission,
  mm1Sm:discharge,
  mm1Sm:staffs?
)
>

<!ELEMENT mm1Sm:date (#PCDATA)>
<!ELEMENT mm1Sm:outPatientCondition (#PCDATA)>
<!ATTLIST mm1Sm:outPatientCondition
  mm1Sm:first      CDATA      #IMPLIED
  mm1Sm:emergency  %xs.boolean; #IMPLIED
>

<!ELEMENT mm1Sm:staffs (mm1Sm:staffInfo+)>
<!ELEMENT mm1Sm:admission (

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mmlSm:date,
mmlSm:admissionCondition?,
mmlSm:referFrom?)

>
<!ELEMENT mmlSm:discharge (
mmlSm:date,
mmlSm:dischargeCondition?,
mmlSm:referTo?)

>
<!ELEMENT mmlSm:admissionCondition (#PCDATA)>
<!ATTLIST mmlSm:admissionCondition
mmlSm:emergency %xs:boolean; #IMPLIED
>
<!ELEMENT mmlSm:referFrom (mmlPsi:PersonalizedInfo)>
<!ELEMENT mmlSm:dischargeCondition (#PCDATA)>
<!ATTLIST mmlSm:dischargeCondition
mmlSm:outcome %mmlDt.MML0016; #IMPLIED
>
<!ELEMENT mmlSm:referTo (mmlPsi:PersonalizedInfo)>
<!ELEMENT mmlSm:staffInfo (
mmlPsi:PersonalizedInfo,
mmlCi:creatorLicense+)

>
<!ELEMENT mmlSm:deathInfo (#PCDATA)>
<!ATTLIST mmlSm:deathInfo
mmlSm:date      CDATA          #IMPLIED
mmlSm:autopsy %xs:boolean; #IMPLIED
>
<!ELEMENT mmlSm:chiefComplaints %mmlxhtmlInline;>
<!ELEMENT mmlSm:patientProfile %mmlxhtmlInline;>
<!ELEMENT mmlSm:history %mmlxhtmlInline;>
<!ELEMENT mmlSm:physicalExam  %mmlxhtml_with_extRefInline;>
<!ELEMENT mmlSm:clinicalCourse (mmlSm:clinicalRecord+)>
<!ELEMENT mmlSm:dischargeFindings %mmlxhtml_with_extRefInline;>
<!ELEMENT mmlSm:medication %mmlxhtml_with_extRefInline;>
<!ELEMENT mmlSm:testResults (mmlSm:testResult+)>
<!ELEMENT mmlSm:plan %mmlxhtml_with_extRefInline;>
<!ELEMENT mmlSm:remarks %mmlxhtmlInline;>
<!ELEMENT mmlSm:clinicalRecord %mmlxhtml_with_extRef_and_relatedDocInline;>
<!ATTLIST mmlSm:clinicalRecord
mmlSm:date      CDATA #IMPLIED
>
<!ELEMENT mmlSm:testResult %mmlxhtml_with_extRefInline;>
<!ATTLIST mmlSm:testResult
mmlSm:date      CDATA #IMPLIED
>
<!ELEMENT mmlSm:relatedDoc (#PCDATA)>
<!ATTLIST mmlSm:relatedDoc
mmlSm:relation CDATA #IMPLIED
>

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<!--*****-->
<!-- Test history information -->
<!-- TestModule DTD Version 1.0 -->
<!--*****-->
<!ELEMENT mm1Lb:TestModule (mm1Lb:information, mm1Lb:laboTest+)>
<!ELEMENT mm1Lb:information (
  mm1Lb:reportStatus,
  mm1Lb:set?,
  mm1Lb:facility,
  mm1Lb:department?,
  mm1Lb:ward?,
  mm1Lb:client?,
  mm1Lb:laboratoryCenter,
  mm1Lb:technician?,
  mm1Lb:repMemo*,
  mm1Lb:repMemoF?
)
>

<!ELEMENT mm1Lb:laboTest (mm1Lb:specimen, mm1Lb:item+)>
<!ATTLIST mm1Lb:information
  mm1Lb:regisId   CDATA          #REQUIRED
  mm1Lb:sampleTime %xs.dateTime; #IMPLIED
  mm1Lb:registTime %xs.dateTime; #REQUIRED
  mm1Lb:reportTime %xs.dateTime; #REQUIRED
>
<!ELEMENT mm1Lb:reportStatus (#PCDATA)>
<!ATTLIST mm1Lb:reportStatus
  mm1Lb:statusCode   CDATA #REQUIRED
  mm1Lb:statusCodeId CDATA #REQUIRED
>
<!ELEMENT mm1Lb:set (#PCDATA)>
<!ATTLIST mm1Lb:set
  mm1Lb:setCode     CDATA #IMPLIED
  mm1Lb:setCodeId   CDATA #IMPLIED
>
<!ELEMENT mm1Lb:facility (#PCDATA)>
<!ATTLIST mm1Lb:facility
  mm1Lb:facilityCode   CDATA          #REQUIRED
  mm1Lb:facilityCodeId %mmlDt.MML0027; #REQUIRED
>
<!ELEMENT mm1Lb:department (#PCDATA)>
<!ATTLIST mm1Lb:department
  mm1Lb:depCode     CDATA #IMPLIED
  mm1Lb:depCodeId   CDATA "MML0028"
>
<!ELEMENT mm1Lb:ward (#PCDATA)>
<!ATTLIST mm1Lb:ward
  mm1Lb:wardCode    CDATA #IMPLIED
  mm1Lb:wardCodeId  CDATA #IMPLIED
>

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<!ELEMENT mmllb:client (#PCDATA)>
<!ATTLIST mmllb:client
  mmllb:clientCode   CDATA #IMPLIED
  mmllb:clientCodeId CDATA #IMPLIED
  >
<!ELEMENT mmllb:laboratoryCenter (#PCDATA)>
<!ATTLIST mmllb:laboratoryCenter
  mmllb:centerCode   CDATA #REQUIRED
  mmllb:centerCodeId CDATA #REQUIRED
  >
<!ELEMENT mmllb:technician (#PCDATA)>
<!ATTLIST mmllb:technician
  mmllb:techCode   CDATA #IMPLIED
  mmllb:techCodeId CDATA #IMPLIED
  >
<!ELEMENT mmllb:repMemo (#PCDATA)>
<!ATTLIST mmllb:repMemo
  mmllb:repCodeName CDATA #IMPLIED
  mmllb:repCode     CDATA #IMPLIED
  mmllb:repCodeId   CDATA #IMPLIED
  >
<!ELEMENT mmllb:repMemoF (#PCDATA)>
<!ELEMENT mmllb:specimen (
  mmllb:specimenName,
  mmllb:spcMemo*,
  mmllb:spcMemoF?)>
<!ELEMENT mmllb:specimenName (#PCDATA)>
<!ATTLIST mmllb:specimenName
  mmllb:spCode   CDATA #REQUIRED
  mmllb:spCodeId CDATA #REQUIRED
  >
<!ELEMENT mmllb:spcMemo (#PCDATA)>
<!ATTLIST mmllb:spcMemo
  mmllb:smCodeName CDATA #IMPLIED
  mmllb:smCode     CDATA #IMPLIED
  mmllb:smCodeId   CDATA #IMPLIED
  >
<!ELEMENT mmllb:spcMemoF (#PCDATA)>
<!ELEMENT mmllb:item (
  mmllb:itemName,
  mmllb:value,
  mmllb:numValue?,
  mmllb:unit?,
  mmllb:referenceInfo?,
  mmllb:itemMemo*,
  mmllb:itemMemoF?)>
<!ELEMENT mmllb:itemName (#PCDATA)>
<!ATTLIST mmllb:itemName

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mmlLb:itCode      CDATA          #REQUIRED
mmlLb:itCodeId    CDATA          #REQUIRED
mmlLb:Acode       %mmlDt.JLAC10; #IMPLIED
mmlLb:Icode       %mmlDt.JLAC10; #IMPLIED
mmlLb:Scode       %mmlDt.JLAC10; #IMPLIED
mmlLb:Mcode       %mmlDt.JLAC10; #IMPLIED
mmlLb:Rcode       %mmlDt.JLAC10; #IMPLIED
>
<!ELEMENT mmlLb:value (#PCDATA)>
<!ELEMENT mmlLb:numValue (#PCDATA)>
<!ATTLIST mmlLb:numValue
  mmlLb:up      CDATA #IMPLIED
  mmlLb:low     CDATA #IMPLIED
  mmlLb:normal   CDATA #IMPLIED
  mmlLb:out     CDATA #IMPLIED
>
<!ELEMENT mmlLb:unit (#PCDATA)>
<!ATTLIST mmlLb:unit
  mmlLb:uCode    CDATA #IMPLIED
  mmlLb:uCodeId  CDATA #IMPLIED
>
<!ELEMENT mmlLb:referenceInfo (mmlCm:extRef*)>
<!ELEMENT mmlLb:itemMemo (#PCDATA)>
<!ATTLIST mmlLb:itemMemo
  mmlLb:imCodeName CDATA #IMPLIED
  mmlLb:imCode     CDATA #IMPLIED
  mmlLb:imCodeId   CDATA #IMPLIED
>
<!ELEMENT mmlLb:itemMemoF (#PCDATA)>

<!--*****-->
<!-- Report information -->
<!-- ReportModule DTD Version 1.0                      -->
<!--*****-->
<!ELEMENT mmlRp:ReportModule (mmlRp:information, mmlRp:reportBody)>
<!ELEMENT mmlRp:information (
  mmlRp:reportStatus,
  mmlRp:testClass,
  mmlRp:testSubclass?,
  mmlRp:organ?,
  mmlRp:consultFrom?,
  mmlRp:perform)
>
<!ATTLIST mmlRp:information
  mmlRp:performTime %xs.dateTime; #REQUIRED
  mmlRp:reportTime  %xs.dateTime; #REQUIRED
>
<!ELEMENT mmlRp:reportStatus (#PCDATA)>
<!ATTLIST mmlRp:reportStatus
  mmlRp:statusCode  CDATA #REQUIRED

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mmlRp:statusCodeId CDATA #REQUIRED
>
<!ELEMENT mmlRp:testClass (#PCDATA)>
<!ATTLIST mmlRp:testClass
  mmlRp:testClassCode CDATA #REQUIRED
  mmlRp:testClassCodeId CDATA #REQUIRED
>
<!ELEMENT mmlRp:testSubclass (#PCDATA)>
<!ATTLIST mmlRp:testSubclass
  mmlRp:testSubclassCode CDATA #IMPLIED
  mmlRp:testSubclassCodeId CDATA #IMPLIED
>
<!ELEMENT mmlRp:organ (#PCDATA)>
<!ELEMENT mmlRp:consultFrom (
  mmlRp:conFacility?,
  mmlRp:conDepartment?,
  mmlRp:conWard?,
  mmlRp:client?
)
>
<!ELEMENT mmlRp:conFacility (#PCDATA)>
<!ATTLIST mmlRp:conFacility
  mmlRp:facilityCode CDATA #IMPLIED
  mmlRp:facilityCodeId CDATA #IMPLIED
>
<!ELEMENT mmlRp:conDepartment (#PCDATA)>
<!ATTLIST mmlRp:conDepartment
  mmlRp:depCode CDATA #IMPLIED
  mmlRp:depCodeId CDATA #IMPLIED
>
<!ELEMENT mmlRp:conWard (#PCDATA)>
<!ATTLIST mmlRp:conWard
  mmlRp:wardCode CDATA #IMPLIED
  mmlRp:wardCodeId CDATA #IMPLIED
>
<!ELEMENT mmlRp:client (#PCDATA)>
<!ATTLIST mmlRp:client
  mmlRp:clientCode CDATA #IMPLIED
  mmlRp:clientCodeId CDATA #IMPLIED
>
<!ELEMENT mmlRp:perform (
  mmlRp:pFacility,
  mmlRp:pDepartment?,
  mmlRp:pWard?,
  mmlRp:performer,
  mmlRp:supervisor?
)
>
<!ELEMENT mmlRp:pFacility (#PCDATA)>
<!ATTLIST mmlRp:pFacility
  mmlRp:facilityCode CDATA #REQUIRED
  mmlRp:facilityCodeId CDATA #REQUIRED

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>
<!ELEMENT mmlRp:pDepartment (#PCDATA)>
<!ATTLIST mmlRp:pDepartment
  mmlRp:depCode   CDATA #IMPLIED
  mmlRp:depCodeId CDATA "MML0028"
>
<!ELEMENT mmlRp:pWard (#PCDATA)>
<!ATTLIST mmlRp:pWard
  mmlRp:wardCode   CDATA #IMPLIED
  mmlRp:wardCodeId CDATA #IMPLIED
>
<!ELEMENT mmlRp:performer (#PCDATA)>
<!ATTLIST mmlRp:performer
  mmlRp:performerCode   CDATA #REQUIRED
  mmlRp:performerCodeId CDATA #REQUIRED
>
<!ELEMENT mmlRp:supervisor (#PCDATA)>
<!ATTLIST mmlRp:supervisor
  mmlRp:supervisorCode   CDATA #IMPLIED
  mmlRp:supervisorCodeId CDATA #IMPLIED
>
<!ELEMENT mmlRp:reportBody (
  mmlRp:chiefComplaints?,
  mmlRp:testPurpose?,
  mmlRp:testDx?,
  mmlRp:testNotes?,
  mmlRp:testMemo*,
  mmlRp:testMemoF?
)
>
<!ELEMENT mmlRp:chiefComplaints %mmlxhtmlInline;>
<!ELEMENT mmlRp:testPurpose %mmlxhtmlInline;>
<!ELEMENT mmlRp:testDx %mmlxhtmlInline;>
<!ELEMENT mmlRp:testNotes %mmlxhtml_with_extRefInline;>
<!ELEMENT mmlRp:testMemo (#PCDATA)>
<!ATTLIST mmlRp:testMemo
  mmlRp:tmCodeName CDATA #IMPLIED
  mmlRp:tmCode      CDATA #IMPLIED
  mmlRp:tmCodeId    CDATA #IMPLIED
>
<!ELEMENT mmlRp:testMemoF (#PCDATA)>

<!--*****-->
<!-- Referral -->
<!-- ReferralModule DTD Version 1.0          -->
<!--*****-->
<!ELEMENT mmlRe:ReferralModule (
  mmlPi:PatientModule,
  mmlRe:occupation?,
  mmlRe:referFrom,
  mmlRe:title,

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mmlRe:greeting?,
mmlRe:chiefComplaints,
mmlRe:clinicalDiagnosis?,
mmlRe:pastHistory?,
mmlRe:familyHistory?,
mmlRe:presentIllness,
mmlRe:testResults?,
mmlSm:clinicalCourse?,
mmlRe:medication?,
mmlRe:referPurpose,
mmlRe:remarks?,
mmlRe:referToFacility,
mmlRe:referToPerson?,
mmlRe:referToUnknownName?)

>

<!ELEMENT mmlRe:occupation %mmlxhtmlInline;*>
<!ELEMENT mmlRe:referFrom (mmlPsi:PersonalizedInfo)>
<!ELEMENT mmlRe:title (#PCDATA)>
<!ELEMENT mmlRe:greeting %mmlxhtmlInline;*>
<!ELEMENT mmlRe:chiefComplaints %mmlxhtmlInline;*>
<!ELEMENT mmlRe:clinicalDiagnosis %mmlxhtmlInline;*>
<!ELEMENT mmlRe:pastHistory %mmlxhtml_with_extRefInline;*>
<!ELEMENT mmlRe:familyHistory %mmlxhtml_with_extRefInline;*>
<!ELEMENT mmlRe:presentIllness %mmlxhtml_with_extRefInline;*>
<!ELEMENT mmlRe:testResults %mmlxhtml_with_extRefInline;*>
<!ELEMENT mmlRe:medication %mmlxhtml_with_extRefInline;*>
<!ELEMENT mmlRe:referPurpose %mmlxhtmlInline;*>
<!ELEMENT mmlRe:remarks %mmlxhtml_with_extRefInline;*>
<!ELEMENT mmlRe:referToFacility (mmlFc:Facility, mmlDp:Department?) >
<!ELEMENT mmlRe:referToPerson (mmlPsi:PersonalizedInfo) >
<!ELEMENT mmlRe:referToUnknownName (#PCDATA)>

<!--*****-->
<!-- Claim module -->
<!-- ClaimModule DTD Version 2.1 -->
<!--*****-->

<!ELEMENT claim:ClaimModule (claim:information, claim:bundle+)>
<!ELEMENT claim:information (
  claim:appoint?,
  claim:patientDepartment?,
  claim:patientWard?,
  mmlHi:insuranceClass?
)
>

<!ATTLIST claim:information
  claim:status      CDATA          #REQUIRED
  claim:orderTime   CDATA          #IMPLIED
  claim:appointTime CDATA          #IMPLIED
  claim:registTime  CDATA          #IMPLIED
  claim:performTime CDATA          #IMPLIED
  claim:admitFlag   %xs.boolean;  #REQUIRED

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claim:timeClass      %mmlDt.Claim001; #IMPLIED
claim:insuranceUid  CDATA           #IMPLIED
claim:defaultTableId CDATA           #IMPLIED
>
<!ELEMENT claim:bundle (
  claim:className?,
  claim:administration?,
  claim:admMemo?,
  claim:bundleNumber?,
  claim:item+,
  claim:memo?)>
>
<!ATTLIST claim:bundle
  claim:classCode   CDATA #IMPLIED
  claim:classCodeId CDATA #IMPLIED
>
<!ELEMENT claim:appoint (claim:appName*, claim:memo?)>
<!ELEMENT claim:appName (#PCDATA)>
<!ATTLIST claim:appName
  claim:appCode     CDATA #IMPLIED
  claim:appCodeId  CDATA #IMPLIED
>
<!ELEMENT claim:patientDepartment (mmlDp:Department) >
<!ELEMENT claim:patientWard (mmlDp:Department) >
<!ELEMENT claim:className (#PCDATA)>
<!ELEMENT claim:administration (#PCDATA)>
<!ATTLIST claim:administration
  claim:adminCode   CDATA #IMPLIED
  claim:adminCodeId CDATA #IMPLIED
>
<!ELEMENT claim:admMemo (#PCDATA)>
<!ELEMENT claim:bundleNumber (#PCDATA)>
<!ELEMENT claim:item (
  claim:name,
  claim:number*,
  claim:duration?,
  claim:location*,
  claim:film*,
  claim:event?,
  claim:memo?)>
>
<!ATTLIST claim:item
  claim:subclassName CDATA #IMPLIED
  claim:subclassNameId CDATA #IMPLIED
  claim:code          CDATA #REQUIRED
  claim:tableId       CDATA #IMPLIED
  claim:aliasCode     CDATA #IMPLIED
  claim:aliasTableId  CDATA #IMPLIED
>
<!ELEMENT claim:name (#PCDATA)>

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<!ELEMENT claim:number (#PCDATA)>
<!ATTLIST claim:number
  claim:numberCode   CDATA #REQUIRED
  claim:numberCodeId CDATA #REQUIRED
  claim:unit         CDATA #IMPLIED
  >
<!ELEMENT claim:duration (#PCDATA)>
<!ELEMENT claim:location (#PCDATA)>
<!ELEMENT claim:film (claim:filmSize, claim:filmNumber) >
<!ELEMENT claim:event (#PCDATA)>
<!ATTLIST claim:event
  claim:eventStart %xs.date; #IMPLIED
  claim:eventEnd   %xs.date; #IMPLIED
  >
<!ELEMENT claim:memo (#PCDATA)>
<!ELEMENT claim:filmSize (#PCDATA)>
<!ATTLIST claim:filmSize
  claim:sizeCode   CDATA #IMPLIED
  claim:sizeCodeId CDATA #IMPLIED
  >
<!ELEMENT claim:filmNumber (#PCDATA)>

<!--*****-->
<!-- point and amount module -->
<!-- ClaimAmountModule DTD Version 2.1 -->
<!--*****-->
<!ELEMENT claimA:ClaimAmountModule (
  claimA:amountInformation,
  claimA:bundle+)
  >
<!ELEMENT claimA:amountInformation (
  claimA:patientDepartment?,
  claimA:patientWard?,
  mmlHi:insuranceClass?)
  >
<!ATTLIST claimA:amountInformation
  claimA:status          %mmlDt.Claim008;      #REQUIRED
  claimA:orderTime        %mmlDt.date-dateTime; #IMPLIED
  claimA:appointTime      %mmlDt.date-dateTime; #IMPLIED
  claimA:registTime       %mmlDt.date-dateTime; #IMPLIED
  claimA:performTime      %mmlDt.date-dateTime; #IMPLIED
  claimA:accountTime      %mmlDt.date-dateTime; #IMPLIED
  claimA:admitFlag        %xs.boolean;           #REQUIRED
  claimA:timeClass         %mmlDt.Claim001;      #IMPLIED
  claimA:insuranceUid     CDATA                 #IMPLIED
  claimA:defaultTableId   CDATA                 #IMPLIED
  >
<!ELEMENT claimA:bundle (
  claimA:className?,

```

```

claimA:claimBundlePoint,
claimA:claimBundleRate,
claimA:administration?,
claimA:admMemo?,
claimA:bundleNumber?,
claimA:methodPoint?,
claimA:materialPoint?,
claimA:drugPoint?,
claimA:ppsClass?,
claimA:item+,
claimA:memo?)

>
<!ATTLIST claimA:bundle
  claimA:classCode    CDATA #IMPLIED
  claimA:classCodeId CDATA #IMPLIED
  >
<!ELEMENT claimA:patientDepartment (mmlDp:Department) >
<!ELEMENT claimA:patientWard (mmlDp:Department) >
<!ELEMENT claimA:className (#PCDATA)>
<!ELEMENT claimA:claimBundlePoint (#PCDATA)>
<!ELEMENT claimA:claimBundleRate (#PCDATA)>
<!ELEMENT claimA:administration (#PCDATA)>
<!ATTLIST claimA:administration
  claimA:adminCode    CDATA #IMPLIED
  claimA:adminCodeId CDATA #IMPLIED
  >
<!ELEMENT claimA:admMemo (#PCDATA)>
<!ELEMENT claimA:bundleNumber (#PCDATA)>
<!ELEMENT claimA:methodPoint (#PCDATA)>
<!ELEMENT claimA:materialPoint (#PCDATA)>
<!ELEMENT claimA:drugPoint (#PCDATA)>
<!ELEMENT claimA:ppsClass (#PCDATA)>
<!ELEMENT claimA:item (
  claimA:name,
  claimA:number*,
  claimA:claimPoint?,
  claimA:claimRate,
  claimA:duration?,
  claimA:location*,
  claimA:film*,
  claimA:event?,
  claimA:memo?
  )
  >
<!ATTLIST claimA:item
  claimA:subclassCode    CDATA #IMPLIED
  claimA:subclassCodeId CDATA #IMPLIED
  claimA:code            CDATA #REQUIRED
  claimA:tableId         CDATA #IMPLIED
  claimA:aliasCode       CDATA #IMPLIED
  claimA:aliasTableId   CDATA #IMPLIED

```

```

>
<!ELEMENT claimA:name (#PCDATA)>
<!ELEMENT claimA:number (#PCDATA)>
<!ATTLIST claimA:number
  claimA:numberCode   CDATA #REQUIRED
  claimA:numberCodeId CDATA #REQUIRED
  claimA:unit         CDATA #IMPLIED
>
<!ELEMENT claimA:claimPoint (#PCDATA)>
<!ELEMENT claimA:claimRate (#PCDATA)>
<!ELEMENT claimA:duration (#PCDATA)>
<!ELEMENT claimA:location (#PCDATA)>
<!ELEMENT claimA:film (claimA:filmSize, claimA:filmNumber) >
<!ELEMENT claimA:event (#PCDATA)>
<!ATTLIST claimA:event
  claimA:eventStart CDATA #IMPLIED
  claimA:eventEnd   CDATA #IMPLIED
>
<!ELEMENT claimA:memo (#PCDATA)>
<!ELEMENT claimA:filmSize (#PCDATA)>
<!ATTLIST claimA:filmSize
  claimA:sizeCode   CDATA #IMPLIED
  claimA:sizeCodeId CDATA #IMPLIED
>
<!ELEMENT claimA:filmNumber (#PCDATA)>

```

13. 3. MML_3.0_header_1.0.dtd

```

<!--
=====
=====

HL7 Clinical Document Architecture, Version 1.0

```

CDA Header DTD

Public Identifier :: "-//HL7//DTD CDA Header 1.0//EN"

Derived from HL7 Reference Information Model, Version 0.98

```

=====
=====

-->
```

```

<!--
=====
=====

Import the V3 data type DTD
```

```

(The following system id must be changed to point to the location of the V3DT file on
your system.)
=====
=====

-->

<!ENTITY % HL7V3.0-datatypes PUBLIC
  "-//HL7//DTD V3DT 1.0//EN"
  "v3DT_1.0.dtd" >
%HL7V3.0-datatypes;

<!--
=====
=====

Import the MML data type and MMLHeader DTD

(The following system id must be changed to point to the location of the MML datatype
and header file on your system.)
=====
=====

-->

<!ENTITY % MMLV3.0-datatypes-and-header PUBLIC
  "-//MML//DTD DATATYPE_AND_HEADER 3.0//EN"
  "MML_datatypes_and_header_3.0.dtd" >
%MMLV3.0-datatypes-and-header;

<!--
=====
=====

Common attributes

=====
=====

-->

<!ENTITY % common_atts "
  ID ID #IMPLIED "
>

<!--
=====
=====

The base RIM class for the DTD is Document_service

=====
=====

-->

<!ELEMENT clinical_document_header (
  id,

```

```

set_id?,
version_nbr?,
document_type_cd,
service_tmr?,
origination_dttm,
copy_dttm?,
confidentiality_cd*,
document_relationship*,
fulfills_order?,
patient_encounter?,
authenticator*,
legal_authenticator?,
intended_recipient*,
originator*,
originating_organization?,
transcriptionist?,
provider+,
service_actor*,
patient,
originating_device*,
service_target*,
local_header*)>

<!ATTLIST clinical_document_header
%common_atts;
    HL7-NAME CDATA #FIXED 'document_service_as_clinical_document_header'
    T CDATA #FIXED 'service'
    RIM-VERSION CDATA #FIXED '0.98'>

<!--
=====
=====
RIM components (classes, attributes, associations) nested under
clinical_document_header

```

There are four logical components of the CDA Header:

- (1) Document information;
- (2) Encounter data;
- (3) Service actors (such as providers);
- (4) Service targets (such as patients).

The four components are presented in this order, similar to their order in the CDA Header Hierarchical Description.

```

=====
=====
```

-->

```
<!--
=====
```

```
=====
=====
```

Document Information

Document information identifies the document, defines confidentiality status, and describes relationships to other documents and orders.

```
=====
=====
```

-->

<!--

```
=====
=====
```

Document Information :: Document Identification

Elements declared in this section include:

<id>, <set_id>, <version_nbr>, <document_type_cd>

```
=====
=====
```

-->

<!ELEMENT id %II-cont.model;>

<!ATTLIST id

%II-attrib.list;

%common_atts;

HL7-NAME CDATA #FIXED 'id'>

<!ELEMENT set_id %II-cont.model;>

<!ATTLIST set_id

%II-attrib.list;

%common_atts;

HL7-NAME CDATA #FIXED 'set_id'>

<!ELEMENT version_nbr %INT-cont.model;>

<!ATTLIST version_nbr

%INT-attrib.list;

%common_atts;

HL7-NAME CDATA #FIXED 'version_nbr'>

<!ELEMENT document_type_cd %CE-cont.model;>

<!ATTLIST document_type_cd

%CE-attrib.list;

%common_atts;

HL7-NAME CDATA #FIXED 'service_cd'>

<!--

```
=====
=====
```

Document Information :: Document Time Stamps

Elements declared in this section include:

<service_tmr>, <origination_dttm>, <copy_dttm>

```
=====
=====
```

-->

<!ELEMENT service_tmr %GTS-cont.model;>

<!ATTLIST service_tmr

%GTS-attrib.list;

%common_atts;

```

    HL7-NAME CDATA #FIXED 'service_tmr'>

<!ELEMENT origination_dttm %TS-cont.model;>
<!ATTLIST origination_dttm
  %TS-attrib.list;
  %common_atts;
  HL7-NAME CDATA #FIXED 'origination_dttm'>

<!ELEMENT copy_dttm %TS-cont.model;>
<!ATTLIST copy_dttm
  %TS-attrib.list;
  %common_atts;
  HL7-NAME CDATA #FIXED 'copy_dttm'>

<!--
=====
Document Information :: Document Confidentiality

Elements declared in this section include:
<confidence_cd>
=====
-->

<!ELEMENT confidentiality_cd %CE-cont.model;>
<!ATTLIST confidentiality_cd
  %CE-attrib.list;
  %common_atts;
  HL7-NAME CDATA #FIXED 'confidence_cd'>

<!--
=====
Document Information :: Document Relationships

Elements declared in this section include:
<document_relationship>, <document_relationship.type_cd>, <related_document>,
  <fulfills_order>, <fulfills_order.type_cd>, <order>
=====
-->

<!ELEMENT document_relationship (
  document_relationship.type_cd,
  related_document,
  local_header*)>
<!ATTLIST document_relationship
  %common_atts;
  HL7-NAME CDATA #FIXED 'is_source_for_service_relationship'
  T CDATA #FIXED 'service_relationship'>

<!ELEMENT document_relationship.type_cd %CS-cont.model;>
<!ATTLIST document_relationship.type_cd
  T NMTOKEN #FIXED "CS"

```

```

V (APND|RPLC) #REQUIRED
V-T NMTOKEN #FIXED "ST"
V-HL7_NAME CDATA #FIXED "code"
DN CDATA #IMPLIED
DN-T NMTOKEN #FIXED "ST"
DN-HL7_NAME CDATA #FIXED "displayName"
%common_atts;
HL7-NAME CDATA #FIXED 'type_cd'>

<!ELEMENT related_document (
  id,
  set_id?,
  version_nbr?,
  local_header*)>
<!ATTLIST related_document
  %common_atts;
  HL7-NAME CDATA #FIXED 'has_target_service'
  T CDATA #FIXED 'service'>

<!ELEMENT fulfills_order (
  fulfills_order.type_cd,
  order+,
  local_header*)>
<!ATTLIST fulfills_order
  %common_atts;
  HL7-NAME CDATA #FIXED 'is_source_for_service_relationship'
  T CDATA #FIXED 'service_relationship'>

<!ELEMENT fulfills_order.type_cd %CS-cont.model;>
<!ATTLIST fulfills_order.type_cd
  T NMTOKEN #FIXED "CS"
  V CDATA #FIXED "FLFS"
  V-T NMTOKEN #FIXED "ST"
  V-HL7_NAME CDATA #FIXED "code"
  DN CDATA #IMPLIED
  DN-T NMTOKEN #FIXED "ST"
  DN-HL7_NAME CDATA #FIXED "displayName"
  %common_atts;
  HL7-NAME CDATA #FIXED 'type_cd'>

<!ELEMENT order (
  id,
  local_header*)>
<!ATTLIST order
  %common_atts;
  HL7-NAME CDATA #FIXED 'has_target_service'
  T CDATA #FIXED 'service'>

<!--
=====

```

```
=====
```

Encounter Data

Encounter data describes the setting in which the documented encounter occurred.

Elements declared in this section include:

```
<patient_encounter>, <practice_setting_cd>, <encounter_tmr>, <service_location>, <addr>
=====
-->

<!ELEMENT patient_encounter (
  id?,
  practice_setting_cd?,
  encounter_tmr,
  service_location?,
  local_header*)>
<!ATTLIST patient_encounter
  %common_atts;
  HL7-NAME CDATA #FIXED 'is_assigned_to_patient_encounter'
  T CDATA #FIXED 'patient_encounter'>

<!ELEMENT practice_setting_cd %CE-cont.model;>
<!ATTLIST practice_setting_cd
  %CE-attrib.list;
  %common_atts;
  HL7-NAME CDATA #FIXED 'practice_setting_cd'>

<!ELEMENT encounter_tmr %IVL_TS-cont.model;>
<!ATTLIST encounter_tmr
  %IVL_TS-attrib.list;
  %common_atts;
  HL7-NAME CDATA #FIXED 'encounter_tmr'>

<!ELEMENT service_location (
  id?,
  addr?,
  local_header*)>
<!ATTLIST service_location
  %common_atts;
  HL7-NAME CDATA #FIXED 'has_master_patient_service_location'
  T CDATA #FIXED 'master_patient_service_location'>

<!ELEMENT addr %AD-cont.model;>
<!ATTLIST addr
  %AD-attrib.list;
  %common_atts;
  HL7-NAME CDATA #FIXED 'addr'>

<!--
```

```
=====
=====
Service Actors
```

Service actors include those who authenticate the document, those intended to receive a copy of the document, document originators and transcriptionists, and health care providers who participated in the service(s) being documented.

```
-->
```

```
<!--
=====
Service Actors :: People Responsible for a Clinical Document
```

Elements declared in this section include:

```
<person>, <person_name>, <effective_tmr>, <nml>, <person_name.type_cd>, <telecom>
=====
```

```
-->
```

```
<!ELEMENT person (
  id+,
  person_name*,
  addr*,
  telecom*,
  local_header*)>
<!ATTLIST person
  %common_atts;
  HL7-NAME CDATA #FIXED 'participation_of_person'
  T CDATA #FIXED 'person'>
```

```
<!ELEMENT person_name (
  effective_tmr?,
  nm,
  person_name.type_cd?,
  local_header*)>
<!ATTLIST person_name
  %common_atts;
  HL7-NAME CDATA #FIXED 'has_person_name'
  T CDATA #FIXED 'person_name'>
```

```
<!ELEMENT effective_tmr %IVL_TS-cont.model;>
<!ATTLIST effective_tmr
  %IVL_TS-attrib.list;
  %common_atts;
  HL7-NAME CDATA #FIXED 'effective_tmr'>
```

```
<!ELEMENT nm %PN-cont.model;>
<!ATTLIST nm
  %PN-attrib.list;
  %common_atts;
```

```

    HL7-NAME CDATA #FIXED 'nm'>

<!ELEMENT person_name.type_cd %CE-cont.model;>
<!ATTLIST person_name.type_cd
  %CE-attrib.list;
  %common_atts;
  HL7-NAME CDATA #FIXED 'type_cd'>

<!ELEMENT telecom %TEL-cont.model;>
<!ATTLIST telecom
  %TEL-attrib.list;
  %common_atts;
  HL7-NAME CDATA #FIXED 'phon'>

<!--
=====
Service Actors :: Authenticators

Elements declared in this section include:
<authenticator>, <authenticator.type_cd>, <participation_tmr>, <signature_cd>,
  <legal_authenticator>, <legal_authenticator.type_cd>
=====
-->

<!ELEMENT authenticator (
  authenticator.type_cd,
  participation_tmr,
  signature_cd,
  person,
  local_header*)>
<!ATTLIST authenticator
  %common_atts;
  HL7-NAME CDATA #FIXED 'has_service_actor'
  T CDATA #FIXED 'service_actor'>

<!ELEMENT authenticator.type_cd %CS-cont.model;>
<!ATTLIST authenticator.type_cd
  T NMOKEN #FIXED "CS"
  V CDATA #FIXED "VRF"
  V-T NMOKEN #FIXED "ST"
  V-HL7_NAME CDATA #FIXED "code"
  DN CDATA #IMPLIED
  DN-T NMOKEN #FIXED "ST"
  DN-HL7_NAME CDATA #FIXED "displayName"
  %common_atts;
  HL7-NAME CDATA #FIXED 'type_cd'>

<!ELEMENT participation_tmr %IVL_TS-cont.model;>
<!ATTLIST participation_tmr
  %IVL_TS-attrib.list;
  %common_atts;

```

```

HL7-NAME CDATA #FIXED 'tmr' >

<!ELEMENT signature_cd %CS-cont.model;>
<!ATTLIST signature_cd
  T NMTOKEN #FIXED "CS"
  V (S|X) "S"
  V-T NMTOKEN #FIXED "ST"
  V-HL7_NAME CDATA    #FIXED "code"
  DN CDATA #IMPLIED
  DN-T NMTOKEN #FIXED "ST"
  DN-HL7_NAME CDATA #FIXED "displayName"
  %common_atts;
  HL7-NAME CDATA #FIXED 'signature_cd'>

<!ELEMENT legal_authenticator (
  legal_authenticator.type_cd,
  participation_tmr,
  signature_cd,
  person,
  local_header*)>
<!ATTLIST legal_authenticator
  %common_atts;
  HL7-NAME CDATA #FIXED 'has_service_actor'
  T CDATA #FIXED 'service_actor'>

<!ELEMENT legal_authenticator.type_cd %CS-cont.model;>
<!ATTLIST legal_authenticator.type_cd
  T NMTOKEN #FIXED "CS"
  V CDATA #FIXED "SPV"
  V-T NMTOKEN #FIXED "ST"
  V-HL7_NAME CDATA    #FIXED "code"
  DN CDATA #IMPLIED
  DN-T NMTOKEN #FIXED "ST"
  DN-HL7_NAME CDATA #FIXED "displayName"
  %common_atts;
  HL7-NAME CDATA #FIXED 'type_cd'>

<!--
=====
Service Actors :: Intended Recipients

Elements declared in this section include:
<intended_recipient>, <intended_recipient.type_cd>
=====
-->

<!ELEMENT intended_recipient (
  intended_recipient.type_cd,
  person,
  local_header*)>

```

```

<!ATTLIST intended_recipient
  %common_atts;
  HL7-NAME CDATA #FIXED 'has_service_actor'
  T CDATA #FIXED 'service_actor'>

<!ELEMENT intended_recipient.type_cd %CS-cont.model;>
<!ATTLIST intended_recipient.type_cd
  T NMTOKEN #FIXED "CS"
  V CDATA #FIXED "TRC"
  V-T NMTOKEN #FIXED "ST"
  V-HL7_NAME CDATA #FIXED "code"
  DN CDATA #IMPLIED
  DN-T NMTOKEN #FIXED "ST"
  DN-HL7_NAME CDATA #FIXED "displayName"
  %common_atts;
  HL7-NAME CDATA #FIXED 'type_cd'>

<!--
=====
Service Actors :: Originators

```

Elements declared in this section include:

```

<originator>, <originator.type_cd>, <originating_organization>,
  <originating_organization.type_cd>, <organization>, <organization.nm>
=====
-->
```

```

<!ELEMENT originator (
  originator.type_cd,
  participation_tmr,
  person,
  local_header*)>
<!ATTLIST originator
  %common_atts;
  HL7-NAME CDATA #FIXED 'has_service_actor'
  T CDATA #FIXED 'service_actor'>

<!ELEMENT originator.type_cd %CS-cont.model;>
<!ATTLIST originator.type_cd
  T NMTOKEN #FIXED "CS"
  V CDATA #FIXED "AUT"
  V-T NMTOKEN #FIXED "ST"
  V-HL7_NAME CDATA #FIXED "code"
  DN CDATA #IMPLIED
  DN-T NMTOKEN #FIXED "ST"
  DN-HL7_NAME CDATA #FIXED "displayName"
  %common_atts;
  HL7-NAME CDATA #FIXED 'type_cd'>
```

```
<!ELEMENT originating_organization (
  originating_organization.type_cd,
```

```

organization,
local_header*)>
<!ATTLIST originating_organization
%common_atts;
HL7-NAME CDATA #FIXED 'has_service_actor'
T CDATA #FIXED 'service_actor'>

<!ELEMENT originating_organization.type_cd %CS-cont.model;>
<!ATTLIST originating_organization.type_cd
T NMOKEN #FIXED "CS"
V CDATA #FIXED "CST"
V-T NMOKEN #FIXED "ST"
V-HL7_NAME CDATA #FIXED "code"
DN CDATA #IMPLIED
DN-T NMOKEN #FIXED "ST"
DN-HL7_NAME CDATA #FIXED "displayName"
%common_atts;
HL7-NAME CDATA #FIXED 'type_cd'>

<!ELEMENT organization (
id*,
organization.nm*,
addr*,
local_header*)>
<!ATTLIST organization
%common_atts;
HL7-NAME CDATA #FIXED 'participation_of_organization'
T CDATA #FIXED 'organization'>

<!ELEMENT organization.nm %ON-cont.model;>
<!ATTLIST organization.nm
%ON-attrib.list;
%common_atts;
HL7-NAME CDATA #FIXED 'nm'>

<!--
=====
Service Actors :: Transcriptionist

Elements declared in this section include:
<transcriptionist>, <transcriptionist.type_cd>
=====
-->

<!ELEMENT transcriptionist (
transcriptionist.type_cd,
participation_tmr?,
person,
local_header*)>
<!ATTLIST transcriptionist

```

```

%common_atts;
HL7-NAME CDATA #FIXED 'has_service_actor'
T CDATA #FIXED 'service_actor'>

<!ELEMENT transcriptionist.type_cd %CS-cont.model;>
<!ATTLIST transcriptionist.type_cd
  T NMTOKEN #FIXED "CS"
  V CDATA #FIXED "ENT"
  V-T NMTOKEN #FIXED "ST"
  V-HL7_NAME CDATA    #FIXED "code"
  DN CDATA #IMPLIED
  DN-T NMTOKEN #FIXED "ST"
  DN-HL7_NAME CDATA #FIXED "displayName"
  %common_atts;
  HL7-NAME CDATA #FIXED 'type_cd'>

<!--
=====
Service Actors :: Healthcare providers

Elements declared in this section include:
<provider>, <provider.type_cd>, <function_cd>
-->

<!ELEMENT provider (
  provider.type_cd,
  function_cd?,
  participation_tmr?,
  person,
  local_header*)>
<!ATTLIST provider
  %common_atts;
  HL7-NAME CDATA #FIXED 'has_service_actor'
  T CDATA #FIXED 'service_actor'>

<!ELEMENT provider.type_cd %CS-cont.model;>
<!ATTLIST provider.type_cd
  T NMTOKEN #FIXED "CS"
  V (ASS|CON|PRF) "PRF"
  V-T NMTOKEN #FIXED "ST"
  V-HL7_NAME CDATA    #FIXED "code"
  DN CDATA #IMPLIED
  DN-T NMTOKEN #FIXED "ST"
  DN-HL7_NAME CDATA #FIXED "displayName"
  %common_atts;
  HL7-NAME CDATA #FIXED 'type_cd'>

<!ELEMENT function_cd %CE-cont.model;>
<!ATTLIST function_cd

```

```

%CE-attrib.list;
%common_atts;
HL7-NAME CDATA #FIXED 'function_cd'>

<!--
=====
Service Actors :: Other Service Actors

Elements declared in this section include:
<service_actor>, <service_actor.type_cd>
=====
-->

<!ELEMENT service_actor (
    service_actor.type_cd,
    participation_tmr?,
    signature_cd?,
    (person | organization),
    local_header*)>
<!ATTLIST service_actor
    %common_atts;
    HL7-NAME CDATA #FIXED 'has_service_actor'
    T CDATA #FIXED 'service_actor'>

<!ELEMENT service_actor.type_cd %CE-cont.model;>
<!ATTLIST service_actor.type_cd
    %CE-attrib.list;
    %common_atts;
    HL7-NAME CDATA #FIXED 'type_cd'>

<!--
=====
=====

Service Targets

Service targets include the patient, other significant participants (such as family
members), and those devices that may have originated portions of the document.
=====
=====

-->

<!--
=====
=====

Service Targets :: Patient

Elements declared in this section include:
<patient>, <patient.type_cd>, <assigned_identifier>, <is_known_by>, <birth_dttm>,
    <administrative_gender_cd>
=====
-->

```

```

<!ELEMENT patient (
  patient.type_cd,
  participation_tmr?,
  person,
  is_known_by*,
  birth_dttm?,
  administrative_gender_cd?,
  local_header*)>
<!ATTLIST patient
  %common_atts;
  HL7-NAME CDATA #FIXED 'has_service_target'
  T CDATA #FIXED 'service_target'>

<!ELEMENT patient.type_cd %CS-cont.model;>
<!ATTLIST patient.type_cd
  T NMOKEN #FIXED "CS"
  V (PAT|PATSBJ) "PATSBJ"
  V-T NMOKEN #FIXED "ST"
  V-HL7_NAME CDATA #FIXED "code"
  DN CDATA #IMPLIED
  DN-T NMOKEN #FIXED "ST"
  DN-HL7_NAME CDATA #FIXED "displayName"
  %common_atts;
  HL7-NAME CDATA #FIXED 'type_cd'>

<!ELEMENT is_known_by (
  id+,
  is_known_to,
  local_header*)>
<!ATTLIST is_known_by
  %common_atts;
  HL7-NAME CDATA #FIXED 'is_known_by'
  T CDATA #FIXED 'person_provider_association'>

<!ELEMENT is_known_to (
  id+,
  local_header*)>
<!ATTLIST is_known_to
  %common_atts;
  HL7-NAME CDATA #FIXED 'is_known_to'
  T CDATA #FIXED 'healthcare_service_provider'>

<!ELEMENT birth_dttm %TS-cont.model;>
<!ATTLIST birth_dttm
  %TS-attrib.list;
  %common_atts;
  HL7-NAME CDATA #FIXED 'birth_dttm'>

<!ELEMENT administrative_gender_cd %CE-cont.model;>
<!ATTLIST administrative_gender_cd

```

```

%CE-attrib.list;
%common_atts;
HL7-NAME CDATA #FIXED 'administrative_gender_cd'>

<!--
=====
Service Targets :: Originating Device

Elements declared in this section include:
<originating_device>, <originating_device.type_cd>, <device>, <responsibility>,
  <responsibility.type_cd>, <responsibility_tmr>
=====
-->

<!ELEMENT originating_device (
  originating_device.type_cd,
  participation_tmr?,
  device,
  local_header*)>
<!ATTLIST originating_device
  %common_atts;
  HL7-NAME CDATA #FIXED 'has_service_target'
  T CDATA #FIXED 'service_target'>

<!ELEMENT originating_device.type_cd %CS-cont.model;>
<!ATTLIST originating_device.type_cd
  T NMTOKEN #FIXED "CS"
  V CDATA #FIXED "ODV"
  V-T NMTOKEN #FIXED "ST"
  V-HL7_NAME CDATA #FIXED "code"
  DN CDATA #IMPLIED
  DN-T NMTOKEN #FIXED "ST"
  DN-HL7_NAME CDATA #FIXED "displayName"
  %common_atts;
  HL7-NAME CDATA #FIXED 'type_cd'>

<!ELEMENT device (
  id+,
  responsibility*,
  local_header*)>
<!ATTLIST device
  %common_atts;
  HL7-NAME CDATA #FIXED 'participation_of_material'
  T CDATA #FIXED 'device'>

<!ELEMENT responsibility (
  responsibility.type_cd?,
  responsibility_tmr?,
  person,
  local_header*)>
<!ATTLIST responsibility

```

```

%common_atts;
HL7-NAME CDATA #FIXED 'is_the_responsibility'
T CDATA #FIXED 'responsibility'>

<!ELEMENT responsibility.type_cd %CE-cont.model;>
<!ATTLIST responsibility.type_cd
  %CE-attrib.list;
  %common_atts;
  HL7-NAME CDATA #FIXED 'type_cd'>

<!ELEMENT responsibility_tmr %IVL_TS-cont.model;>
<!ATTLIST responsibility_tmr
  %IVL_TS-attrib.list;
  %common_atts;
  HL7-NAME CDATA #FIXED 'tmr'>

<!--
=====
Service Targets :: Other Service Targets

Elements declared in this section include:
<service_target>, <service_target.type_cd>
=====
-->

<!ELEMENT service_target (
  service_target.type_cd,
  participation_tmr?,
  person,
  local_header*)>
<!ATTLIST service_target
  %common_atts;
  HL7-NAME CDATA #FIXED 'has_service_target'
  T CDATA #FIXED 'service_target'>

<!ELEMENT service_target.type_cd %CE-cont.model;>
<!ATTLIST service_target.type_cd
  %CE-attrib.list;
  %common_atts;
  HL7-NAME CDATA #FIXED 'type_cd'>

<!--
=====
=====
```

Local Header Information

Locally-defined markup must be used when local semantics have no corresponding representation in the CDA specification. CDA seeks to standardize the highest level of shared meaning while providing a clean and standard mechanism for tagging meaning that is not shared. This is achieved with the CDA <local_header> element.

The <local_header> element is optionally repeating, and recursive. The "descriptor" attribute describes the element, and the value can be drawn from a local vocabulary domain. The "ignore" attribute tells the receiver to ignore just the <local_header> tag (ignore="markup"), or to ignore the <local_header> tag and all contained content (ignore="all"). The "render" attribute indicates how the sender would render the contents. The value can be drawn from a local vocabulary domain. The language of contained character data can be specified using the xml:lang attribute (see 3.3.2.4.1 Character data). The nested <local_attr> element is provided to make it easier to map local XML attribute values into local markup.

```
=====
=====
-->
```

```
<!ELEMENT local_header (#PCDATA | local_header | local_attr | mml:MmlHeader)* >
<!ATTLIST local_header
  ignore (all | markup) "markup"
  descriptor CDATA #IMPLIED
  render CDATA #IMPLIED
  %common_atts;
  xml:lang NMTOKEN #IMPLIED>

<!ELEMENT local_attr EMPTY>
<!ATTLIST local_attr
  name NMTOKEN #REQUIRED
  value CDATA #REQUIRED
  %common_atts;
  xml:lang NMTOKEN #IMPLIED>
```

13. 4. MML_3.0_levelone_1.0.dtd

```
<?xml version='1.0' encoding='Shift_JIS' ?>

<!--Generated by XML Authority-->

<!--
=====
=====
HL7 Clinical Document Architecture, Version 1.0

CDA Level One DTD

Public Identifier :: "-//HL7//DTD CDA Level One 1.0//EN"

=====
=====
-->
<!--
=====
=====
The following system id must be changed to point to the location of the Header file on
your system.
=====
```

```

=====
-->
<!ENTITY % CDA-Header-1.0 PUBLIC "-//HL7//DTD CDA Header 1.0//EN"
  "MML_3.0_header_1.0.dtd">

%CDA-Header-1.0;

<!--
=====
=====

The following system id must be changed to point to the location of the MML Module file
on your system.

=====
=====

-->
<!ENTITY % MML-Modules-3.0 PUBLIC "-//MML//DTD MML Module 1.0//EN"
  "mml_modules_3.0.dtd">

%MML-Modules-3.0;

<!--
=====
=====

Shared XML attributes

XML element identification
Every XML element within a CDA document has an optional identifier, which must be unique
within the document. (See 3.2.2.1.1 XML element identification). (This attribute is
declared in the CDA Header DTD.)
```

Confidentiality

The confidentiality attribute can occur on any element within the CDA body. The CDA Header contains an optionally repeating element <confidence_cd> (see 3.2.2.2.3 Document confidentiality). The confidentiality attribute on CDA Body elements can reference one or more of the confidentiality values in the CDA Header using XML IDREFS. The value(s) referenced must be XML ID(s) in the <confidence_cd> element of the CDA Header. Confidentiality is inherited by nested content, unless overridden.

Originators

The originator attribute can occur on any element within the CDA body. The CDA Header contains optionally repeating elements <originator> (see 3.2.2.4.1 Originating person) and <originating_device> (see 3.2.2.5.2 Originating device). The originator attribute on an element within the CDA Body can reference one or more of these values using XML IDREFS. The value(s) referenced must be XML ID(s) in the <originator> or <originating_device> element of the CDA Header. Origination is inherited by nested content, unless overridden.

```

=====
=====

-->
<!ENTITY % body_atts " %common_atts;
  originator      IDREFS    #IMPLIED
  confidentiality  IDREFS    #IMPLIED
  xml:lang        NMTOKEN   #IMPLIED">
```

```
<!ENTITY % entries "#PCDATA | content | link | coded_entry | observation_media |  
local_markup">
```

```
<!ENTITY % structures "paragraph | list | table">
```

```
<!--
```

```
=====
```

```
=====
```

```
Level One Root
```

The CDA element <levelone> is the root element of a CDA Level One document. The <levelone> element contains a <clinical_document_header> and a <body>. The <clinical_document_header> is derived from the RIM (see 3.2 CDA Header). The <body> is comprised of either <section> elements, or a <non_xml> element, which is used when the document body is in some format other than XML. A CDA <section> can contain "structures", nested <section> elements, and <coded_entry> elements. CDA structures include the <paragraph>, <list>, and <table> elements. These structures contain CDA "entries", which include the <content>, <link>, <coded_entry>, <observation_media>, and <local_markup> elements, in addition to plain character data.

```
=====
```

```
=====
```

```
-->
```

```
<!ELEMENT levelone (clinical_document_header , body)>
```

```
<!ATTLIST levelone  
%body_atts;  
  xmlns:mml    CDATA #FIXED 'http://www.medxml.net/MML'  
  xmlns:xhtml   CDATA #FIXED 'http://www.w3.org/1999/xhtml'  
  xmlns:mmlCm   CDATA #FIXED 'http://www.medxml.net/MML/SharedComponent/Common/1.0'  
  xmlns:mmlNm   CDATA #FIXED 'http://www.medxml.net/MML/SharedComponent/Name/1.0'  
  xmlns:mmlFc   CDATA #FIXED 'http://www.medxml.net/MML/SharedComponent/Facility/1.0'  
  xmlns:mmlDp   CDATA #FIXED 'http://www.medxml.net/MML/SharedComponent/Department/1.0'  
  xmlns:mmlAd   CDATA #FIXED 'http://www.medxml.net/MML/SharedComponent/Address/1.0'  
  xmlns:mmlPh   CDATA #FIXED 'http://www.medxml.net/MML/SharedComponent/Phone/1.0'  
  xmlns:mmlPsi  CDATA #FIXED 'http://www.medxml.net/MML/SharedComponent/PersonalizedInfo/  
    1.0'  
  xmlns:mmlCi   CDATA #FIXED 'http://www.medxml.net/MML/SharedComponent/CreatorInfo/1.0'  
  xmlns:mmlPi   CDATA #FIXED 'http://www.medxml.net/MML/ContentModule/PatientInfo/1.0'  
  xmlns:mmlBc   CDATA #FIXED 'http://www.medxml.net/MML/ContentModule/BaseClinic/1.0'  
  xmlns:mmlFcl  CDATA #FIXED 'http://www.medxml.net/MML/ContentModule/FirstClinic/1.0'  
  xmlns:mmlHi   CDATA #FIXED 'http://www.medxml.net/MML/ContentModule/HealthInsurance/  
    1.1'  
  xmlns:mmlLs   CDATA #FIXED 'http://www.medxml.net/MML/ContentModule/Lifestyle/1.0'  
  xmlns:mmlPc   CDATA #FIXED 'http://www.medxml.net/MML/ContentModule/ProgressCourse/1.0'  
  xmlns:mmlRd   CDATA #FIXED 'http://www.medxml.net/MML/ContentModule/  
    RegisteredDiagnosis/1.0'  
  xmlns:mmlSg   CDATA #FIXED 'http://www.medxml.net/MML/ContentModule/Surgery/1.0'  
  xmlns:mmlSm   CDATA #FIXED 'http://www.medxml.net/MML/ContentModule/Summary/1.0'  
  xmlns:mmlLb   CDATA #FIXED 'http://www.medxml.net/MML/ContentModule/test/1.0'  
  xmlns:mmlRp   CDATA #FIXED 'http://www.medxml.net/MML/ContentModule/report/1.0'  
  xmlns:mmlRe   CDATA #FIXED 'http://www.medxml.net/MML/ContentModule/Referral/1.0'  
  xmlns:mmlSc   CDATA #FIXED 'http://www.medxml.net/MML/SharedComponent/Security/1.0'
```

```
xmlns:claim CDATA #FIXED 'http://www.medxml.net/claim/claimModule/2.1'  
xmlns:claimA CDATA #FIXED 'http://www.medxml.net/claim/claimAmountModule/2.1'  
>
```

```
<!--  
=====  
=====  
Document body and sections
```

The CDA <body> occurs in the <levelone> element. All CDA documents have exactly one <body>. The <body> contains either one or more <section> elements (see 3.3.2.2.2 Document sections) or a single non_xml data segment (see 3.3.2.2.3 Non_xml body).

The CDA <section> is a container used to wrap other containers. A <section> can occur in the <body>, or can be nested within another <section>. A <section> has an optional <caption> (see 3.3.2.2.1 Captions), followed by nested <section> elements or structures (see 3.3.2.3 Document Structures), followed by optionally repeating <coded_entry> elements (see 3.3.2.4.4 Coded entries).

The CDA <non_xml> container represents a document body that is in some format other than XML. CDA's <non_xml> is an encoded data type (ED), which is used only to reference data that is stored externally to the CDA Level One document.

```
=====  
=====  
-->  
<!ELEMENT body (section+ | non_xml)>  
  
<!ATTLIST body %body_atts; >  
<!ELEMENT section (caption? , (%structures; | section)* , coded_entry*)>  
  
<!ATTLIST section %body_atts; >  
<!ELEMENT non_xml %ED-cont.model;>  
  
<!ATTLIST non_xml %common_atts;  
        originator IDREFS #IMPLIED  
        confidentiality IDREFS #IMPLIED  
        %ED-attrib.list; >  
<!--  
=====  
=====  
Entries:  
content, link, coded_entry, observation_media, local_markup  
  
=====  
=====  
-->  
<!--  
=====  
content
```

CDA <content> occurs in <local_markup>, table cells (<td>), <paragraph>, <item>, and nested within <content>. The <content> element contains zero or more entries (see 3.3.2.4 Document Entries).

The `<content>` element can nest recursively, which enables wrapping a string of plain text down to as small a chunk as desired. These `<content>` elements can serve as anchors, and `<coded_entry.value>` elements can reference these anchors to indicate the original text that supports the use of a coded entry. (See 3.3.2.4.4 Coded entries for more detail.)

```
=====-->
<!ELEMENT content (%entries;)*>

<!--
=====
link
```

The CDA `<link>` is a generic referencing mechanism and occurs within `<content>`, `<local_markup>`, table cells (`<td>`), or `<caption>`. A `<link>` contains a single required `<link_html>` element.

The CDA `<link_html>` can only occur within a `<link>`. Each `<link_html>` has an optional local identifier (see 3.3.2.1.1 XML element identification), an optional set of confidentiality status flags (see 3.3.2.1.2 Confidentiality), and an optional set of originators (see 3.3.2.1.3 Originators). The human language of contained character data can be specified using the `xml:lang` attribute (see 3.3.2.1.4 Language).

The CDA link mechanism is based on the HTML anchor tag. Several groups (see 5.4 References) are actively developing formal link specifications. When a suitable open standard is available and implemented, it will be reviewed with the intent to incorporate it into the CDA Level One specification.

Multimedia that is integral to a document, and part of the attestable content of the document requires the use of `<observation_media>` (see 3.3.2.4.5 Observation media). Multimedia that is simply referenced by the document and not an integral part of the document should use `<link>`.

```
=====-->
<!ELEMENT link (link_html)>

<!ATTLIST link %body_atts; >
<!ELEMENT link_html (#PCDATA)>
```

```
<!ATTLIST link_html name      CDATA  #IMPLIED
               href       CDATA  #IMPLIED
               rel       CDATA  #IMPLIED
               rev       CDATA  #IMPLIED
               title     CDATA  #IMPLIED
               %body_atts; >

<!--
=====
coded_entry
```

The CDA element `<coded_entry>` inserts codes from HL7-recognized coding schemes into CDA documents. Where there are no suitable HL7-recognized codes available, locally-defined codes can be used. The use of `<coded_entry>` in CDA Level One is unrestricted, and the primary intent of `<coded_entry>` is to facilitate document indexing, search and retrieval, and to provide a standard convention for insertion

of locally-meaningful codes.

The <coded_entry.value> element can explicitly reference the original text within the document that supports the use of the code.

```
=====
-->
<!ELEMENT coded_entry (coded_entry.id? , coded_entry.value , local_markup*)>

<!ATTLIST coded_entry %body_atts; >
<!ELEMENT coded_entry.id %II-cont.model;>

<!ATTLIST coded_entry.id  %common_atts;
                  %II-attrib.list; >
<!ELEMENT coded_entry.value %CD-cont.model;>

<!ATTLIST coded_entry.value  %CD-attrib.list;
                  %common_atts; >
<!--
=====
observation_media
```

The <observation_media> element represents media that is logically a part of a CDA document, but is stored outside the document and incorporated by reference.

Multimedia that is integral to a document, and part of the attestable content of the document, requires the use of <observation_media>. Multimedia that is simply referenced by the document and not an integral part of the document should use <link> (see 3.3.2.4.3 Links). Note that CDA's <observation_media> is used only to reference data that is stored externally.

The CDA does not take advantage of ED's ability to Base64 encode images and other observation media and include them directly in a document instance file. Several groups (see 5.4 References) are actively developing formal specifications for packaging binary data within XML documents. When a suitable open standard for direct incorporation of binary data is available and implemented, it will be incorporated into the CDA Level One specification.

```
=====
-->
<!ELEMENT observation_media (observation_media.id? , observation_media.value ,
local_markup*)>

<!ATTLIST observation_media %body_atts;
          HL7-NAME CDATA #FIXED 'observation'
          T         CDATA #FIXED 'observation' >
<!ELEMENT observation_media.id %II-cont.model;>

<!ATTLIST observation_media.id  %common_atts;
                  %II-attrib.list;
                  HL7-NAME      CDATA #FIXED 'id' >
<!ELEMENT observation_media.value %ED-cont.model;>

<!ATTLIST observation_media.value  %common_atts;
                  %ED-attrib.list;
                  HL7-NAME      CDATA #FIXED 'value' >
```

```
<!--
=====
local_markup
```

The implementation of localization in the CDA Level One Body using the `<local_markup>` element parallels the implementation described for the CDA Header (see 3.2.2.6 Localization).

The descriptor attribute describes the element, and the value can be drawn from a local vocabulary domain. The ignore attribute tells the receiver to ignore just the `<local_markup>` tag (`ignore="markup"`), or to ignore the `<local_markup>` tag and all contained content (`ignore="all"`). The render attribute indicates how the sender would render the contents. The value can be drawn from a local vocabulary domain. The nested `<local_attr>` element makes it easier to map local XML attribute values into the CDA.

```
=====
-->
<!ELEMENT local_markup (%entries; | local_attr | mm1:docInfo | mm1Pi:PatientModule |
mm1Hi:HealthInsuranceModule | mm1Rd:RegisteredDiagnosisModule |
mm1Ls:LifestyleModule | mm1Bc:BaseClinicModule | mm1Fcl:FirstClinicModule |
mm1Pc:ProgressCourseModule | mm1Sg:SurgeryModule | mm1Sm:SummaryModule |
mm1Lb:TestModule | mm1Rp:ReportModule | mm1Re:ReferralModule | claim:ClaimModule |
claimA:ClaimAmountModule)*>
```

```
<!ATTLIST local_markup ignore      (all | markup )  'markup'
           descriptor   CDATA  #IMPLIED
           render       CDATA  #IMPLIED
           %body_atts; >
```

```
<!--
```

```
=====
```

```
=====
```

Structures:

paragraph, list, table

```
=====
=====
```

```
-->
```

```
<!--
```

```
=====
```

paragraph

The CDA `<paragraph>` can occur in a `<section>`, `<item>`, or table cell (`<td>`). A `<paragraph>` has an optional `<caption>` (see 3.3.2.2.1 Captions), followed by zero or more `<content>` elements (see 3.3.2.4.2 Content).

```
=====
```

```
-->
```

```
<!ELEMENT paragraph (caption? , content*)>
```

```
<!ATTLIST paragraph %body_atts; >
```

```
<!--
```

```
=====
```

list and item

The CDA `<list>` can occur in a `<section>`, `<item>`, or table cell (`<td>`). A `<list>` has an

optional <caption> (see 3.3.2.2.1 Captions), and contains one or more <item> elements. The list_type attribute specifies whether the <list> is ordered or unordered (with unordered being the default). Use an ordered list when the ordering of list items is meaningful.

The CDA <item> only occurs within a <list>. An <item> has an optional <caption> (see 3.3.2.2.1 Captions), and may contain <content> (see 3.3.2.4.2 Content) and nested structures (see 3.3.2.3 Document Structures).

```
=====
```

```
-->
```

```
<!ELEMENT list (caption? , item+)>
```

```
<!ATTLIST list  %body_atts;
              list_type  (ordered | unordered )  'unordered' >
<!ELEMENT item (caption? , (content | %structures;)*)>
```

```
<!ATTLIST item  %body_atts; >
```

```
<!--
```

```
=====
```

```
table
```

In CDA Level One, any information can be presented as a table. The table markup is for presentation purposes only and, unlike a database table, does not possess meaningful field names. The CDA <table> can occur in a <section> or <item>. A <table> has an optional <caption> (see 3.3.2.2.1 Captions).

CDA modifies the strict XHTML table model (see 5.4 References and Appendix 5.3.1 Tables) by removing formatting tags and by setting the content model of cells to be similar to the contents of other CDA containers. The <th> element is modeled analogously to the <caption> element (see 3.3.2.2.1 Captions), and like the <caption> element, the <caption_cd> is optional and non-repeatable, and must occur first.

Changes to the strict XHTML table model in CDA include:

Change this:

```
<!ELEMENT caption  %Inline;>
```

To this:

```
<!ELEMENT caption (#PCDATA | link | caption_cd)*>
```

Change these XML attributes:

```
%attrs;
```

To these:

```
ID ID #IMPLIED
confidentiality IDREFS #IMPLIED
originator IDREFS #IMPLIED
xml:lang NMOKEN #IMPLIED
```

Change this:

```
<!ELEMENT td %Flow;>
```

To this:

```
<!ELEMENT td (#PCDATA | content | link | coded_entry | observation_media | paragraph
| list | local_markup)*>
```

```

change this:
<!ELEMENT th %Flow;>
to this:
<!ELEMENT th (#PCDATA | link | caption_cd)*>
=====
-->
<!-- XHTML entities used in the XHTML table model -->
<!ENTITY % Character "CDATA">

<!-- a single character from [ISO10646] -->
<!ENTITY % Length "CDATA">

<!-- nn for pixels or nn% for percentage length -->
<!ENTITY % MultiLength "CDATA">

<!-- pixel, percentage, or relative -->
<!ENTITY % Number "CDATA">

<!-- one or more digits -->
<!ENTITY % Pixels "CDATA">

<!-- integer representing length in pixels -->
<!ENTITY % Text "CDATA">

<===== Tables =====>
<!-- Derived from IETF HTML table standard, see [RFC1942] -->
<!--
The border attribute sets the thickness of the frame around the
table. The default units are screen pixels.

The frame attribute specifies which parts of the frame around
the table should be rendered. The values are not the same as
CALS to avoid a name clash with the valign attribute.
-->
<!ENTITY % TFrame "(void|above|below|hsides|lhs|rhs|vsides|box|border)">

<!--
The rules attribute defines which rules to draw between cells:

If rules is absent then assume:
"none" if border is absent or border="0" otherwise "all"
-->
<!ENTITY % TRules "(none | groups | rows | cols | all)">

<!-- horizontal alignment attributes for cell contents

char      alignment char, e.g. char=':'
charoff   offset for alignment char
-->

```

```

<!ENTITY % cellhalign " align      (left | center | right | justify | char )  #IMPLIED
   char      %Character;  #IMPLIED
   charoff   %Length;     #IMPLIED">

<!-- vertical alignment attributes for cell contents --&gt;
&lt;!ENTITY % cellvalign " valign   (top | middle | bottom | baseline )  #IMPLIED"&gt;

&lt;!ELEMENT table (caption? , (col* | colgroup*) , thead? , tfoot? , (tbody+ | tr+))&gt;

&lt;!ATTLIST table  %body_atts;
               summary      %Text;      #IMPLIED
               width       %Length;    #IMPLIED
               border      %Pixels;    #IMPLIED
               frame       %TFrame;    #IMPLIED

               rules        %TRules;    #IMPLIED

               cellspacing %Length;   #IMPLIED
               cellpadding %Length;   #IMPLIED &gt;
&lt;!ELEMENT caption (#PCDATA | link | caption_cd)*&gt;

&lt;!ATTLIST caption  %body_atts; &gt;
&lt;!ELEMENT caption_cd %CE-cont.model;&gt;

&lt;!ATTLIST caption_cd  %body_atts;
               %CE-attrib.list; &gt;
&lt;!ELEMENT thead (tr)+&gt;

&lt;!ATTLIST thead  %body_atts;
               %cellhalign;
               %cellvalign; &gt;
&lt;!ELEMENT tfoot (tr)+&gt;

&lt;!ATTLIST tfoot  %body_atts;
               %cellhalign;
               %cellvalign; &gt;
&lt;!ELEMENT tbody (tr)+&gt;

&lt;!ATTLIST tbody  %body_atts;
               %cellhalign;
               %cellvalign; &gt;
&lt;!ELEMENT colgroup (col)*&gt;
&lt;!ATTLIST colgroup %body_atts;&gt;

&lt;!--
colgroup groups a set of col elements. It allows you to group
</pre>

```

```

several semantically related columns together.

-->

<!ATTLIST colgroup span      %Number;      "1">

<!ATTLIST colgroup width      %MultiLength; #IMPLIED>
<!ATTLIST colgroup %cellhalign;>
<!ATTLIST colgroup %cellvalign;>

<!ELEMENT col EMPTY>
<!ATTLIST col %body_atts;>

<!--
col elements define the alignment properties for cells in
one or more columns.

```

The width attribute specifies the width of the columns, e.g.

| | |
|------------|------------------------|
| width=64 | width in screen pixels |
| width=0.5* | relative width of 0.5 |

The span attribute causes the attributes of one col element to apply to more than one column.

```

-->

<!ATTLIST col span      %Number;      "1">

<!ATTLIST col width      %MultiLength; #IMPLIED>
<!ATTLIST col %cellhalign;>
<!ATTLIST col %cellvalign;>

<!ELEMENT tr (th | td)+>

<!ATTLIST tr  %body_atts;
              %cellhalign;
              %cellvalign; >
<!ELEMENT th (#PCDATA | link | caption_cd)*>
<!ATTLIST th %body_atts;>

<!-- th is for headers, td for data and for cells acting as both -->
<!ATTLIST th abbr      %Text;      #IMPLIED>

<!ATTLIST th axis      CDATA      #IMPLIED>

<!ATTLIST th headers    IDREFS     #IMPLIED>

<!ATTLIST th rowspan    %Number;   "1">

<!ATTLIST th colspan    %Number;   "1">
<!ATTLIST th %cellhalign;>
<!ATTLIST th %cellvalign;>
```

```
<!ELEMENT td (%entries; | paragraph | list)*>

<!ATTLIST td  %body_atts;
             abbr      %Text;    #IMPLIED
             axis      CDATA     #IMPLIED
             headers   IDREFS   #IMPLIED >

<!--
  Use thead to duplicate headers when breaking table
  across page boundaries, or for static headers when
  tbody sections are rendered in scrolling panel.

  Use tfoot to duplicate footers when breaking table
  across page boundaries, or for static footers when
  tbody sections are rendered in scrolling panel.

  Use multiple tbody sections when rules are needed
  between groups of table rows.

-->
<!-- Scope is simpler than headers attribute for common tables -->
<!ENTITY % Scope "(row|col|rowgroup|colgroup)">
```

14. Appendix A – OID of MML

The OID of MML is “1.2.392.114319.1.1”.

The OID consists of the following UIDs (Unique Identifiers).

- 1 “1” identifies ISO.
- 2 “2” identifies ANSI Member Body.
- 392 “392” identifies the country code of a specific Member Body (JAPAN for ANSI).
- 114319 “114319” identifies MedXML Consortium (provided by ANSI).
- 1.1 “1.1” signifies that it is reserved in MML.

“1.2.392.114319.1” is MML.

“1.2.392.114319.1.1” is an MML Document.

1.2.392.114319.1.5 is MML facility information

Facility numbers can be obtained at the MedXML consortium web site: <http://www.medxml.net/>.

15. Appendix B – sample instances

15.1. Sample 1

```
<?xml version="1.0" encoding="shift_jis"?>
<!DOCTYPE levelone SYSTEM "MML_3.0_levelone_1.0.dtd">
<levelone xmlns:claim="http://www.medxml.net/claim/claimModule/2.1"
           xmlns:claimA="http://www.medxml.net/claim/claimAmountModule/2.1" xmlns:mml="http://
www.medxml.net/MML" xmlns:mmlAd="http://www.medxml.net/MML/SharedComponent/Address/
1.0" xmlns:mmlBc="http://www.medxml.net/MML/ContentModule/BaseClinic/1.0"
           xmlns:mmlCi="http://www.medxml.net/MML/SharedComponent/CreatorInfo/1.0"
           xmlns:mmlCm="http://www.medxml.net/MML/SharedComponent/Common/1.0"
           xmlns:mmlDp="http://www.medxml.net/MML/SharedComponent/Department/1.0"
           xmlns:mmlFc="http://www.medxml.net/MML/SharedComponent/Facility/1.0"
           xmlns:mmlFc1="http://www.medxml.net/MML/ContentModule/FirstClinic/1.0"
           xmlns:mmlHi="http://www.medxml.net/MML/ContentModule/HealthInsurance/1.1"
           xmlns:mmlLb="http://www.medxml.net/MML/ContentModule/test/1.0" xmlns:mmlLs="http://
www.medxml.net/MML/ContentModule/Lifestyle/1.0" xmlns:mmlNm="http://www.medxml.net/
MML/SharedComponent/Name/1.0" xmlns:mmlPc="http://www.medxml.net/MML/ContentModule/
ProgressCourse/1.0" xmlns:mmlPh="http://www.medxml.net/MML/SharedComponent/Phone/
1.0" xmlns:mmlPi="http://www.medxml.net/MML/ContentModule/PatientInfo/1.0"
           xmlns:mmlPsi="http://www.medxml.net/MML/SharedComponent/PersonalizedInfo/1.0"
           xmlns:mmlRd="http://www.medxml.net/MML/ContentModule/RegisteredDiagnosis/1.0"
           xmlns:mmlRe="http://www.medxml.net/MML/ContentModule/Referral/1.0"
           xmlns:mmlRp="http://www.medxml.net/MML/ContentModule/report/1.0"
           xmlns:mmlSc="http://www.medxml.net/MML/SharedComponent/Security/1.0"
           xmlns:mmlSg="http://www.medxml.net/MML/ContentModule/Surgery/1.0"
           xmlns:mmlSm="http://www.medxml.net/MML/ContentModule/Summary/1.0"
           xmlns:xhtml="http://www.w3.org/1999/xhtml">

<clinical_document_header>
    <id AAN="AVOC Clinic" EX = "12345" RT = "1.2.392.114319.1.5.1.1.1.1.1"/>
    <document_type_cd DN="MML Document" S="1.2.392.114319.1.1" V="0300"/>
    <origination_dttm V="" />
    <provider>
        <provider.type_cd V="CON" />
        <person>
            <id EX="000123" RT="2.16.840.1.113883.5.200" />
        </person>
    </provider>
    <patient>
        <patient.type_cd V="PAT" />
        <person>
            <id EX = "12345" RT = "1.2.392.114319.1.5.1.1.1.1.1" />
            <person_name>
                <nm>
                    <GIV V="James" />
                    <FAM V="Bond" />
                </nm>
                <person_name.type_cd S="2.16.840.1.113883.5.200" V="L" />
            </person_name>
        </person>
    </patient>
</clinical_document_header>
```

```

<local_header descriptor="mmlheader" render="MML">
  <mml:CreatorInfo>
    <mmlCi:PersonalizedInfo>
      <mmlCm:Id mmlCm:tableId="MML0024" mmlCm:type="local">00000002486</mmlCm:Id>
      <mmlPsi:personName>
        <mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
          <mmlNm:fullname>Bob Brown</mmlNm:fullname>
        </mmlNm:Name>
      </mmlPsi:personName>
      <mmlFc:Facility>
        <mmlFc:name mmlFc:repCode="I" mmlFc:tableId="MML0025">Memorial Medicine
          Center</mmlFc:name>
        <mmlCm:Id mmlCm:tableId="MML0027" mmlCm:type="JMARI">JPN452101510001</
          mmlCm:Id>
      </mmlFc:Facility>
      <mmlDp:Department>
        <mmlDp:name mmlDp:repCode="I" mmlDp:tableId="MML0025">internal medicine</
          mmlDp:name>
        <mmlCm:Id mmlCm:tableId="MML0028" mmlCm:type="medical">medical</mmlCm:Id>
      </mmlDp:Department>
      <mmlPsi:addresses>
        <mmlAd:Address mmlAd:repCode="I" mmlAd:tableId="MML0025">
          <mmlAd:full>1101 Atlantic Avenue Long Beach, CA</mmlAd:full>
          <mmlAd:zip>91514</mmlAd:zip>
        </mmlAd:Address>
      </mmlPsi:addresses>
      <mmlPsi:emailAddresses>
        <mmlCm:email>yoshi@dolphin.com</mmlCm:email>
      </mmlPsi:emailAddresses>
      <mmlPsi:phones>
        <mmlPh:Phone>
          <mmlPh:area>0985</mmlPh:area>
          <mmlPh:city>12</mmlPh:city>
          <mmlPh:number>3456</mmlPh:number>
        </mmlPh:Phone>
      </mmlPsi:phones>
    </mmlCi:PersonalizedInfo>
    <mmlCi:creatorLicense mmlCi:tableId="MML0026">doctor</mmlCi:creatorLicense>
  </mmlCi:CreatorInfo>
  <mml:masterId>
    <mmlCm:Id mmlCm:tableId="JPN452101510001" mmlCm:type="facility">P-120</mmlCm:Id>
  </mml:masterId>
  <mml:toc>
    <mml:tocItem>http://www.medxml.net/MML/SharedComponent/Common/1.0</mml:tocItem>
    <mml:tocItem>http://www.medxml.net/MML/SharedComponent/Name/1.0</mml:tocItem>
    <mml:tocItem>http://www.medxml.net/MML/SharedComponent/Facility/1.0</
      mml:tocItem>
    <mml:tocItem>http://www.medxml.net/MML/SharedComponent/Department/1.0</
      mml:tocItem>

```

```

<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Address/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Phone/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/PersonalizedInfo/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/CreatorInfo/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/PatientInfo/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/BaseClinic/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/FirstClinic/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/HealthInsurance/1.1</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/Lifestyle/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/ProgressCourse/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/RegisteredDiagnosis/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/Surgery/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/Summary/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/test/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/report/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/Referral/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Security/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/claim/claimModule/2.1</mml:tocItem>
<mml:tocItem>http://www.medxml.net/claim/claimAmountModule/2.1</mml:tocItem>
</mml:toc>
</mml:MmlHeader>
</local_header>
</clinical_document_header>
<body>
<section>
<paragraph>
<content>
<local_markup descriptor="" render="MML">
<mml:docInfo contentModuleType="claim">
<mml:securityLevel>
<mml:accessRight permit="all">
<mmlSc:facility>
<mmlSc:facilityName mmlSc:facilityCode="creator">creator's facility</
    mmlSc:facilityName>
</mmlSc:facility>
</mml:accessRight>
<mml:accessRight permit="read">
<mmlSc:facility>
<mmlSc:facilityName mmlSc:facilityCode="experience">facilities with
    the experience of medical cares</mmlSc:facilityName>
</mmlSc:facility>
</mml:accessRight>

```

```

<mml:accessRight permit="read">
  <mmlSc:person>
    <mmlSc:personName mmlSc:personCode="patient">Described
      person(patient)</mmlSc:personName>
    </mmlSc:person>
  </mml:accessRight>
</mml:securityLevel>
<mml:title generationPurpose="record">severe cough</mml:title>
<mml:docId>
  <mml:uid>b7ae22_f0651dc6d1_-7fed</mml:uid>
  <mml:groupId groupClass="record">b7ae22_f0651dc6d1_-7fec</mml:groupId>
</mml:docId>
<mml:confirmDate>2002-09-20T11:50:46</mml:confirmDate>
<mmlCi:CreatorInfo>
  <mmlPsi:PersonalizedInfo>
    <mmlCm:Id mmlCm:tableId="MML0024" mmlCm:type="local">00000002486</
      mmlCm:Id>
    <mmlPsi:personName>
      <mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
        <mmlNm:fullname>Bob Brown</mmlNm:fullname>
      </mmlNm:Name>
    </mmlPsi:personName>
    <mmlFc:Facility>
      <mmlFc:name mmlFc:repCode="I" mmlFc:tableId="MML0025">Memorial
        Medicine Center</mmlFc:name>
      <mmlCm:Id mmlCm:tableId="MML0027"
        mmlCm:type="JMARI">JPN452101510001</mmlCm:Id>
    </mmlFc:Facility>
    <mmlDp:Department>
      <mmlDp:name mmlDp:repCode="I" mmlDp:tableId="MML0025">internal
        medicine</mmlDp:name>
      <mmlCm:Id mmlCm:tableId="MML0028" mmlCm:type="medical">medical</
        mmlCm:Id>
    </mmlDp:Department>
    <mmlPsi:addresses>
      <mmlAd:Address mmlAd:repCode="I" mmlAd:tableId="MML0025">
        <mmlAd:full>1101 Atlantic Avenue Long Beach, CA</mmlAd:full>
        <mmlAd:zip>91514</mmlAd:zip>
      </mmlAd:Address>
    </mmlPsi:addresses>
    <mmlPsi:emailAddresses>
      <mmlCm:email>yoshi@dolphin.com</mmlCm:email>
    </mmlPsi:emailAddresses>
    <mmlPsi:phones>
      <mmlPh:Phone>
        <mmlPh:area>0985</mmlPh:area>
        <mmlPh:city>12</mmlPh:city>
        <mmlPh:number>3456</mmlPh:number>
      </mmlPh:Phone>
    </mmlPsi:phones>
  </mmlPsi:PersonalizedInfo>
  <mmlCi:creatorLicense mmlCi:tableId="MML0026">doctor</

```

```

        mmlCi:creatorLicense>
    </mmlCi:CreatorInfo>
    <mml:extRefs/>
</mml:docInfo>
</local_markup>
</content>
</content>
<local_markup>
<claim:ClaimModule>
<claim:information claim:admitFlag="false"
    claim:insuranceUid="b7ae22:f0651dc6d1:-7ffe" claim:orderTime="2002-09-
    20T11:50:46" claim:status="perform">
    <mmlHi:insuranceClass mmlHi:ClassCode="6" mmlHi:tableId="MML0031">union</
        mmlHi:insuranceClass>
</claim:information>
<claim:bundle claim:classCode="120" claim:classCodeId="Claim007">
    <claim:className>revisit (revisit)</claim:className>
    <claim:bundleNumber>1</claim:bundleNumber>
    <claim:item claim:code="112009210" claim:subclassCode="0"
        claim:subclassCodeId="Claim003" claim:tableId="dolphinClaim_2001-10-
        03">
        <claim:name>revisit (clinic) (first time)</claim:name>
    </claim:item>
</claim:bundle>
<claim:bundle claim:classCode="800" claim:classCodeId="Claim007">
    <claim:className>others</claim:className>
    <claim:bundleNumber>1</claim:bundleNumber>
    <claim:item claim:code="113001810" claim:subclassCode="0"
        claim:subclassCodeId="Claim003" claim:tableId="dolphinClaim_2001-10-
        03">
        <claim:name>specified disease treatment fee (clinic)</claim:name>
    </claim:item>
    <claim:item claim:code="120002570" claim:subclassCode="0"
        claim:subclassCodeId="Claim003" claim:tableId="dolphinClaim_2001-10-
        03">
        <claim:name>special disease prescription management fee (prescription
            fee)</claim:name>
    </claim:item>
</claim:bundle>
<claim:bundle claim:classCode="210" claim:classCodeId="Claim007">
    <claim:className>medication (oral/dose/preparation) (other than in-
        patient)</claim:className>
    <claim:administration claim:adminCode="1000107"
        claim:adminCodeId="dolphinAdmin_2001-10-03">oral once daily take
        before breakfast</claim:administration>
    <claim:bundleNumber>14</claim:bundleNumber>
    <claim:item claim:code="612220335" claim:subclassCode="2"
        claim:subclassCodeId="Claim003" claim:tableId="dolphinDrug_2001-10-
        03">
        <claim:name>Procaterol Hydrochloride, 0.05 mg, </claim:name>
    <claim:number claim:numberCode="12" claim:numberCodeId="Claim004">

```

```

        claim:unit="tablet">1 </claim:number>
    </claim:item>
    <claim:memo>outside prescription</claim:memo>
</claim:bundle>
<claim:bundle claim:classCode="210" claim:classCodeId="Claim007">
    <claim:className>medication (oral/dose/preparation) (other than in-
        patient)</claim:className>
    <claim:administration claim:adminCode="1000206"
        claim:adminCodeId="dolphinAdmin_2001-10-03">oral twice daily take
        after breakfast and supper</claim:administration>
    <claim:bundleNumber>14</claim:bundleNumber>
    <claim:item claim:code="612160027" claim:subclassCode="2"
        claim:subclassCodeId="Claim003" claim:tableId="dolphinDrug_2001-10-
        03">
        <claim:name>Midodrine Hydrochloride, 2 mg, </claim:name>
        <claim:number claim:numberCode="12" claim:numberCodeId="Claim004"
            claim:unit="tablet">2 </claim:number>
    </claim:item>
    <claim:memo>outside prescription</claim:memo>
</claim:bundle>
<claim:bundle claim:classCode="210" claim:classCodeId="Claim007">
    <claim:className>medication (oral/dose/preparation) (other than in-
        patient)</claim:className>
    <claim:administration claim:adminCode="1000206"
        claim:adminCodeId="dolphinAdmin_2001-10-03">oral twice daily take
        after breakfast and supper</claim:administration>
    <claim:bundleNumber>7</claim:bundleNumber>
    <claim:item claim:code="612320261" claim:subclassCode="2"
        claim:subclassCodeId="Claim003" claim:tableId="dolphinDrug_2001-10-
        03">
        <claim:name>Marzulen S, granulated</claim:name>
        <claim:number claim:numberCode="12" claim:numberCodeId="Claim004"
            claim:unit="tablet">1</claim:number>
    </claim:item>
    <claim:memo>outside prescription</claim:memo>
</claim:bundle>
</claim:ClaimModule>
</local_markup>
</content>
</paragraph>
</section>
</body>
</levelone>
```

15.2. Sample 2

```
<?xml version="1.0" encoding="shift_jis"?>
<!DOCTYPE levelone SYSTEM "MML_3.0_levelone_1.0.dtd">
<levelone xmlns:claim="http://www.medxml.net/claim/claimModule/2.1"
    xmlns:claimA="http://www.medxml.net/claim/claimAmountModule/2.1" xmlns:mml="http://
    www.medxml.net/MML" xmlns:mmlAd="http://www.medxml.net/MML/SharedComponent/Address/
    1.0" xmlns:mmlBc="http://www.medxml.net/MML/ContentModule/BaseClinic/1.0"
    xmlns:mmlCi="http://www.medxml.net/MML/SharedComponent/CreatorInfo/1.0"
    xmlns:mmlCm="http://www.medxml.net/MML/SharedComponent/Common/1.0"
    xmlns:mmlDp="http://www.medxml.net/MML/SharedComponent/Department/1.0"
    xmlns:mmlFc="http://www.medxml.net/MML/SharedComponent/Facility/1.0"
    xmlns:mmlFcl="http://www.medxml.net/MML/ContentModule/FirstClinic/1.0"
    xmlns:mmlHi="http://www.medxml.net/MML/ContentModule/HealthInsurance/1.1"
    xmlns:mmlLb="http://www.medxml.net/MML/ContentModule/test/1.0" xmlns:mmlLs="http://
    www.medxml.net/MML/ContentModule/Lifestyle/1.0" xmlns:mmlNm="http://www.medxml.net/
    MML/SharedComponent/Name/1.0" xmlns:mmlPc="http://www.medxml.net/MML/ContentModule/
    ProgressCourse/1.0" xmlns:mmlPh="http://www.medxml.net/MML/SharedComponent/Phone/
    1.0" xmlns:mmlPi="http://www.medxml.net/MML/ContentModule/PatientInfo/1.0"
    xmlns:mmlPsi="http://www.medxml.net/MML/SharedComponent/PersonalizedInfo/1.0"
    xmlns:mmlRd="http://www.medxml.net/MML/ContentModule/RegisteredDiagnosis/1.0"
    xmlns:mmlRe="http://www.medxml.net/MML/ContentModule/Referral/1.0"
    xmlns:mmlRp="http://www.medxml.net/MML/ContentModule/report/1.0"
    xmlns:mmlSc="http://www.medxml.net/MML/SharedComponent/Security/1.0"
    xmlns:mmlSg="http://www.medxml.net/MML/ContentModule/Surgery/1.0"
    xmlns:mmlSm="http://www.medxml.net/MML/ContentModule/Summary/1.0"
    xmlns:xhtml="http://www.w3.org/1999/xhtml">

<clinical_document_header>

    <id AAN="AVOC Clinic" EX = "12345" RT = "1.2.392.114319.1.5.1.1.1.1.1"/>
    <document_type_cd DN="MML Document" S="1.2.392.114319.1.1" V="0300"/>
    <origination_dttm V="" />
    <provider>
        <provider.type_cd V="CON" />
        <person>
            <id EX="000123" RT="2.16.840.1.113883.5.200" />
        </person>
    </provider>
    <patient>
        <patient.type_cd V="PAT" />
        <person>
            <id EX = "12345" RT = "1.2.392.114319.1.5.1.1.1.1.1" />
            <person_name>
                <nmm>
                    <GIV V=" " />
                    <FAM V=" " />
                </nmm>
                <person_name.type_cd S="2.16.840.1.113883.5.200" V="L" />
            </person_name>
        </person>
    </patient>

```

```

</patient>

<local_header descriptor="mmlheader" render="MML">

<mml:Header>
<mmlCi:CreatorInfo>
<mmlPsi:PersonalizedInfo>
<mmlCm:Id mmlCm:tableId="MML0024" mmlCm:type="local">00000002486</mmlCm:Id>
<mmlPsi:personName>
<mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
<mmlNm:fullname>Bob Brown</mmlNm:fullname>
</mmlNm:Name>
</mmlPsi:personName>
<mmlFc:Facility>
<mmlFc:name mmlFc:repCode="I" mmlFc:tableId="MML0025">Memorial Medicine
Center</mmlFc:name>
<mmlCm:Id mmlCm:tableId="MML0027" mmlCm:type="JMARI">JPN452101510001</
mmlCm:Id>
</mmlFc:Facility>
<mmlDp:Department>
<mmlDp:name mmlDp:repCode="I" mmlDp:tableId="MML0025">internal medicine</
mmlDp:name>
<mmlCm:Id mmlCm:tableId="MML0028" mmlCm:type="medical">medical</mmlCm:Id>
</mmlDp:Department>
<mmlPsi:addresses>
<mmlAd:Address mmlAd:repCode="I" mmlAd:tableId="MML0025">
<mmlAd:full>1101 Atlantic Avenue Long Beach, CA</mmlAd:full>
<mmlAd:zip>91514</mmlAd:zip>
</mmlAd:Address>
</mmlPsi:addresses>
<mmlPsi:emailAddresses>
<mmlCm:email>yoshi@dolphin.com</mmlCm:email>
</mmlPsi:emailAddresses>
<mmlPsi:phones>
<mmlPh:Phone>
<mmlPh:area>0985</mmlPh:area>
<mmlPh:city>12</mmlPh:city>
<mmlPh:number>3456</mmlPh:number>
</mmlPh:Phone>
</mmlPsi:phones>
</mmlPsi:PersonalizedInfo>
<mmlCi:creatorLicense mmlCi:tableId="MML0026">doctor</mmlCi:creatorLicense>
</mmlCi:CreatorInfo>
<mml:masterId>
<mmlCm:Id mmlCm:tableId="JPN452101510001" mmlCm:type="facility">P-120</mmlCm:Id>
</mml:masterId>
<mml:toc>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Common/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Name/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Facility/1.0</
mml:tocItem>

```

```

<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Department/1.0</
  mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Address/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Phone/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/PersonalizedInfo/1.0</
  mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/CreatorInfo/1.0</
  mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/PatientInfo/1.0</
  mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/BaseClinic/1.0</
  mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/FirstClinic/1.0</
  mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/HealthInsurance/1.1</
  mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/Lifestyle/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/ProgressCourse/1.0</
  mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/RegisteredDiagnosis/1.0</
  mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/Surgery/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/Summary/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/test/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/report/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/Referral/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Security/1.0</
  mml:tocItem>
<mml:tocItem>http://www.medxml.net/claim/claimModule/2.1</mml:tocItem>
<mml:tocItem>http://www.medxml.net/claim/claimAmountModule/2.1</mml:tocItem>
</mml:toc>
</mml:MmlHeader>
</local_header>
</clinical_document_header>
<body>
  <section>
    <paragraph>
      <content>
        <local_markup descriptor="" render="MML">
          <mml:docInfo contentModuleType="progressCourse">
            <mml:securityLevel>
              <mml:accessRight permit="all">
                <mmlSc:facility>
                  <mmlSc:facilityName mmlSc:facilityCode="creator">creator's facility</
                    mmlSc:facilityName>
                </mmlSc:facility>
              </mml:accessRight>
              <mml:accessRight permit="read">
                <mmlSc:facility>
                  <mmlSc:facilityName mmlSc:facilityCode="experience">facilities with
                    the experience of medical cares</mmlSc:facilityName>
                </mmlSc:facility>
              </mml:accessRight>
            </mml:securityLevel>
          </mml:docInfo>
        </local_markup>
      </content>
    </paragraph>
  </section>

```

```

</mml:accessRight>
<mml:accessRight permit="read">
    <mmlSc:person>
        <mmlSc:personName mmlSc:personCode="patient">Described
            person(patient)</mmlSc:personName>
        </mmlSc:person>
    </mml:accessRight>
</mml:securityLevel>
<mml:title generationPurpose="record">S:still coughing</mml:title>
<mml:docId>
    <mml:uid>b7ae22_f0651dc6d1_-7fee</mml:uid>
    <mml:groupId groupClass="record">b7ae22_f0651dc6d1_-7fef</mml:groupId>
</mml:docId>
<mml:confirmDate>2002-09-20T11:50:46</mml:confirmDate>
<mmlCi:CreatorInfo>
    <mmlPsi:PersonalizedInfo>
        <mmlCm:Id mmlCm:tableId="MML0024" mmlCm:type="local">00000002486</
            mmlCm:Id>
        <mmlPsi:personName>
            <mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
                <mmlNm:fullname>Bob Brown</mmlNm:fullname>
            </mmlNm:Name>
        </mmlPsi:personName>
        <mmlFc:Facility>
            <mmlFc:name mmlFc:repCode="I" mmlFc:tableId="MML0025">Memorial
                Medicine Center</mmlFc:name>
            <mmlCm:Id mmlCm:tableId="MML0027"
                mmlCm:type="JMARI">JPN452101510001</mmlCm:Id>
        </mmlFc:Facility>
        <mmlDp:Department>
            <mmlDp:name mmlDp:repCode="I" mmlDp:tableId="MML0025">internal
                medicine</mmlDp:name>
            <mmlCm:Id mmlCm:tableId="MML0028" mmlCm:type="medical">medical</
                mmlCm:Id>
        </mmlDp:Department>
        <mmlPsi:addresses>
            <mmlAd:Address mmlAd:repCode="I" mmlAd:tableId="MML0025">
                <mmlAd:full>1101 Atlantic Avenue Long Beach, CA</mmlAd:full>
                <mmlAd:zip>91514</mmlAd:zip>
            </mmlAd:Address>
        </mmlPsi:addresses>
        <mmlPsi:emailAddresses>
            <mmlCm:email>yoshi@dolphin.com</mmlCm:email>
        </mmlPsi:emailAddresses>
        <mmlPsi:phones>
            <mmlPh:Phone>
                <mmlPh:area>0985</mmlPh:area>
                <mmlPh:city>12</mmlPh:city>
                <mmlPh:number>3456</mmlPh:number>
            </mmlPh:Phone>
        </mmlPsi:phones>
    </mmlPsi:PersonalizedInfo>

```

```

<mmlCi:creatorLicense mmlCi:tableId="MML0026">doctor</
    mmlCi:creatorLicense>
</mmlCi:CreatorInfo>
<mml:extRefs/>
</mml:docInfo>
</local_markup>
</content>
</paragraph>
<paragraph>
    <content>
        <local_markup>
            <mmlPc:ProgressCourseModule>
                <mmlPc:FreeExpression>
                    S:still coughing<xhtml:br/>
                    stomachache as well<xhtml:br/>
                    first consultation, revisit<xhtml:br/>
                    • revisit (clinic) (first time)<xhtml:br/>
                    multipurpose<xhtml:br/>
                    • specified disease treatment fee (clinic)<xhtml:br/>
                    • special disease prescription management fee (prescription fee)<xhtml:br/>
                    RP<xhtml:br/>
                    • Procaterol Hydrochloride, 0.05 mg, 1tablet<xhtml:br/>
                    oral once daily take before breakfast for 14 days<xhtml:br/>
                    outside prescription<xhtml:br/>
                    RP<xhtml:br/>
                    • Midodrine Hydrochloride, 2 mg , 2tablets<xhtml:br/>
                    oral twice daily take after breakfast for 14 days<xhtml:br/>
                    outside prescription<xhtml:br/>
                    RP<xhtml:br/>
                    • Marzulen S, granulated 1g<xhtml:br/>
                    oral twice daily take after breakfast for 7 days<xhtml:br/>
                    outside prescription<xhtml:br/>
                </mmlPc:FreeExpression>
                </mmlPc:ProgressCourseModule>
            </local_markup>
        </content>
    </paragraph>
</section>
</body>
</levelone>

```

15. 3. Sample 3

```

<?xml version="1.0" encoding="shift_jis"?>
<!DOCTYPE levelone SYSTEM "MML_3.0_levelone_1.0.dtd">
<levelone xmlns:claim="http://www.medxml.net/claim/claimModule/2.1"
    xmlns:claimA="http://www.medxml.net/claim/claimAmountModule/2.1" xmlns:mml="http://
    www.medxml.net/MML" xmlns:mmlAd="http://www.medxml.net/MML/SharedComponent/Address/
    1.0" xmlns:mmlBc="http://www.medxml.net/MML/ContentModule/BaseClinic/1.0"
    xmlns:mmlCi="http://www.medxml.net/MML/SharedComponent/CreatorInfo/1.0"
    xmlns:mmlCm="http://www.medxml.net/MML/SharedComponent/Common/1.0"
    xmlns:mmlDp="http://www.medxml.net/MML/SharedComponent/Department/1.0"
    xmlns:mmlFc="http://www.medxml.net/MML/SharedComponent/Facility/1.0"
    xmlns:mmlFcl="http://www.medxml.net/MML/ContentModule/FirstClinic/1.0"
    xmlns:mmlHi="http://www.medxml.net/MML/ContentModule/HealthInsurance/1.1"
    xmlns:mmlLb="http://www.medxml.net/MML/ContentModule/test/1.0" xmlns:mmlLs="http://
    www.medxml.net/MML/ContentModule/Lifestyle/1.0" xmlns:mmlNm="http://www.medxml.net/
    MML/SharedComponent/Name/1.0" xmlns:mmlPc="http://www.medxml.net/MML/ContentModule/
    ProgressCourse/1.0" xmlns:mmlPh="http://www.medxml.net/MML/SharedComponent/Phone/
    1.0" xmlns:mmlPi="http://www.medxml.net/MML/ContentModule/PatientInfo/1.0"
    xmlns:mmlPsi="http://www.medxml.net/MML/SharedComponent/PersonalizedInfo/1.0"
    xmlns:mmlRd="http://www.medxml.net/MML/ContentModule/RegisteredDiagnosis/1.0"
    xmlns:mmlRe="http://www.medxml.net/MML/ContentModule/Referral/1.0"
    xmlns:mmlRp="http://www.medxml.net/MML/ContentModule/report/1.0"
    xmlns:mmlSc="http://www.medxml.net/MML/SharedComponent/Security/1.0"
    xmlns:mmlSg="http://www.medxml.net/MML/ContentModule/Surgery/1.0"
    xmlns:mmlSm="http://www.medxml.net/MML/ContentModule/Summary/1.0"
    xmlns:xhtml="http://www.w3.org/1999/xhtml">

<clinical_document_header>

    <id AAN="Test Hospital" EX="12345" RT="1.2.392.114319.1.5.1.1.1.1.1.1"/>
    <document_type_cd DN="MML Document" S="1.2.392.114319.1.1" V="0300"/>
    <origination_dttm V="" />

    <provider>
        <provider.type_cd V="CON" />
        <person>
            <id EX="000123" RT="2.16.840.1.113883.5.200" />
        </person>
    </provider>

    <patient>
        <patient.type_cd V="PAT" />
        <person>
            <id EX="12345" RT="1.2.392.114319.1.5.1.1.1.1.1.1" />
            <person_name>
                <nmm>
                    <GIV V="Taro" />
                    <FAM V="Yamada" />
                </nmm>
                <person_name.type_cd S="2.16.840.1.113883.5.200" V="L" />
            </person_name>
        </person>
    </patient>

```

```

</patient>

<local_header descriptor="mmlheader" render="MML">

<mml:Header>
<mmlCi:CreatorInfo>
<mmlPsi:PersonalizedInfo>
<mmlCm:Id mmlCm:tableId="JPN432101234567" mmlCm:type="facility">12345678</
    mmlCm:Id>
<mmlPsi:personName>
<mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
    <mmlNm:fullname>Mike White</mmlNm:fullname>
</mmlNm:Name>
</mmlPsi:personName>
<mmlFc:Facility>
<mmlFc:name mmlFc:repCode="I" mmlFc:tableId="MML0025">Seaside Hospital</
    mmlFc:name>
<mmlCm:Id mmlCm:tableId="MML0027" mmlCm:type="JMARI">JPN432101234567</
    mmlCm:Id>
</mmlFc:Facility>
<mmlDp:Department>
<mmlDp:name mmlDp:repCode="I" mmlDp:tableId="MML0025">urology</mmlDp:name>
<mmlCm:Id mmlCm:tableId="MML0029" mmlCm:type="facility">21</mmlCm:Id>
</mmlDp:Department>
</mmlPsi:PersonalizedInfo>
<mmlCi:creatorLicense mmlCi:tableId="MML0026">doctor</mmlCi:creatorLicense>
</mmlCi:CreatorInfo>
<mml:masterId>
<mmlCm:Id mmlCm:tableId="MML0024" mmlCm:type="local">43210123451</mmlCm:Id>
</mml:masterId>
<mml:toc>
<mml:tocItem>http://www.w3.org/1999/xhtml</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Common/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Name/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Facility/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Department/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Address/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Phone/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/PersonalizedInfo/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/CreatorInfo/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Security/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/PatientInfo/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/BaseClinic/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/FirstClinic/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/HealthInsurance/1.1</
    mml:tocItem>

```

```

        <mml:tocItem>
            <mml:tocItem>http://www.medxml.net/MML/ContentModule/Lifestyle/1.0</mml:tocItem>
            <mml:tocItem>http://www.medxml.net/MML/ContentModule/ProgressCourse/1.0</
                mml:tocItem>
            <mml:tocItem>http://www.medxml.net/MML/ContentModule/RegisteredDiagnosis/1.0</
                mml:tocItem>
            <mml:tocItem>http://www.medxml.net/MML/ContentModule/Surgery/1.0</mml:tocItem>
            <mml:tocItem>http://www.medxml.net/MML/ContentModule/Summary/1.0</mml:tocItem>
            <mml:tocItem>http://www.medxml.net/MML/ContentModule/test/1.0</mml:tocItem>
            <mml:tocItem>http://www.medxml.net/MML/ContentModule/report/1.0</mml:tocItem>
            <mml:tocItem>http://www.medxml.net/MML/ContentModule/Referral/1.0</mml:tocItem>
            <mml:tocItem>http://www.medxml.net/claim/claimAmountModule/2.1</mml:tocItem>
            <mml:tocItem>http://www.medxml.net/claim/claimModule/2.1</mml:tocItem>
        </mml:toc>
    </mml:MmlHeader>
</local_header>
</clinical_document_header>
<body>
    <section>
        <paragraph>
            <content>
                <local_markup descriptor="" render="MML">
                    <mml:docInfo contentModuleType="patientInfo">
                        <mml:securityLevel>
                            <mml:accessRight permit="all">
                                <mmlSc:facility>
                                    <mmlSc:facilityName mmlSc:facilityCode="creator"
                                        mmlSc:tableId="MML0035">creator's facility</mmlSc:facilityName>
                                </mmlSc:facility>
                            </mml:accessRight>
                            <mml:accessRight permit="read">
                                <mmlSc:facility>
                                    <mmlSc:facilityName mmlSc:facilityCode="experience"
                                        mmlSc:tableId="MML0035">facilities with the experience of medical
                                        cares</mmlSc:facilityName>
                                </mmlSc:facility>
                            </mml:accessRight>
                            <mml:accessRight permit="read">
                                <mmlSc:person>
                                    <mmlSc:personName mmlSc:personCode="patient"
                                        mmlSc:tableId="MML0036">Described person (patient)</
                                        mmlSc:personName>
                                </mmlSc:person>
                            </mml:accessRight>
                        </mml:securityLevel>
                        <mml:title generationPurpose="SummaryDischarge">Doctor's Discharge Summary</
                            mml:title>
                        <mml:docId>
                            <mml:uid>JPN432101234567-DRDTGPI0001-01101809200208190846</mml:uid>
                            <mml:groupId groupClass="summary">JPN432101234567-DRDTGGD0001-
                                01101809200208190846</mml:groupId>
                        </mml:docId>
                    </mml:docInfo>
                </local_markup>
            </content>
        </paragraph>
    </section>

```

```

</mml:docId>
<mml:confirmDate end="2002-08-23" start="2002-08-19">2002-08-23</
    mml:confirmDate>
<mmlCi:CreatorInfo>
    <mmlPsi:PersonalizedInfo>
        <mmlCm:Id mmlCm:tableId="JPN432101234567" mmlCm:type="facility"/>
        <mmlPsi:personName>
            <mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
                <mmlNm:fullname>Charlie Watson</mmlNm:fullname>
            </mmlNm:Name>
        </mmlPsi:personName>
        <mmlFc:Facility>
            <mmlFc:name mmlFc:repCode="I" mmlFc:tableId="MML0025">Seaside
                Hospital</mmlFc:name>
            <mmlCm:Id mmlCm:tableId="MML0027"
                mmlCm:type="JMARI">JPN432101234567</mmlCm:Id>
        </mmlFc:Facility>
        <mmlDp:Department>
            <mmlDp:name mmlDp:repCode="I" mmlDp:tableId="MML0025">urology</
                mmlDp:name>
            <mmlCm:Id mmlCm:tableId="MML0029" mmlCm:type="facility">21</mmlCm:Id>
        </mmlDp:Department>
        <mmlPsi:PersonalizedInfo>
            <mmlCi:creatorLicense mmlCi:tableId="MML0026">doctor</
                mmlCi:creatorLicense>
        </mmlCi:CreatorInfo>
        <mml:extRefs/>
    </mml:docInfo>
</local_markup>
</content>
</paragraph>
<paragraph>
    <content>
        <local_markup>
            <mmlPi:PatientModule>
                <mmlPi:uniqueInfo>
                    <mmlPi:masterId>
                        <mmlCm:Id mmlCm:tableId="MML0024" mmlCm:type="local">43210123451</
                            mmlCm:Id>
                    </mmlPi:masterId>
                    <mmlPi:otherId mmlPi:type="temporaryPatientId">
                        <mmlCm:Id mmlCm:tableId="JPN432101234567"
                            mmlCm:type="facility">87654321</mmlCm:Id>
                    </mmlPi:otherId>
                </mmlPi:uniqueInfo>
                <mmlPi:personName>
                    <mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
                        <mmlNm:fullname>Tom Austin</mmlNm:fullname>
                    </mmlNm:Name>
                    <mmlNm:Name mmlNm:repCode="P" mmlNm:tableId="MML0025">
                        <mmlNm:fullname>Tom Austin</mmlNm:fullname>

```

```

        </mmlNm:Name>
        </mmlPi:personName>
        <mmlPi:birthday>1994-12-31</mmlPi:birthday>
        <mmlPi:sex>male</mmlPi:sex>
        <mmlPi:marital>single</mmlPi:marital>
        <mmlPi:addresses>
            <mmlAd:Address mmlAd:repCode="I" mmlAd:tableId="MML0025">
                <mmlAd:full>900 North Avenue, Sacramento, CA</mmlAd:full>
                <mmlAd:zip>95826</mmlAd:zip>
            </mmlAd:Address>
        </mmlPi:addresses>
        <mmlPi:phones>
            <mmlPh:Phone>
                <mmlPh:area>024</mmlPh:area>
                <mmlPh:city>680</mmlPh:city>
                <mmlPh:number>2468</mmlPh:number>
                <mmlPh:memo>home</mmlPh:memo>
            </mmlPh:Phone>
        </mmlPi:phones>
        <mmlPi:death>false</mmlPi:death>
    </mmlPi:PatientModule>
    </local_markup>
</content>
</paragraph>
</section>
<section>
    <paragraph>
        <content>
            <local_markup descriptor="" render="MML">
                <mml:docInfo contentModuleType="baseClinic">
                    <mml:securityLevel>
                        <mml:accessRight permit="all">
                            <mmlSc:facility>
                                <mmlSc:facilityName mmlSc:facilityCode="creator"
                                    mmlSc:tableId="MML0035">creator's facility</mmlSc:facilityName>
                            </mmlSc:facility>
                        </mml:accessRight>
                        <mml:accessRight permit="read">
                            <mmlSc:facility>
                                <mmlSc:facilityName mmlSc:facilityCode="experience"
                                    mmlSc:tableId="MML0035">facilities with the experience of medical
                                    cares</mmlSc:facilityName>
                            </mmlSc:facility>
                        </mml:accessRight>
                        <mml:accessRight permit="read">
                            <mmlSc:person>
                                <mmlSc:personName mmlSc:personCode="patient"
                                    mmlSc:tableId="MML0036">Described person (patient)</
                                    mmlSc:personName>
                            </mmlSc:person>
                        </mml:accessRight>
                    </mml:docInfo>
                </local_markup>
            </content>
        </paragraph>
    </section>

```

```

        </mml:accessRight>
    </mml:securityLevel>
<mml:title generationPurpose="SummaryDischarge">Doctor's Discharge Summary</
    mml:title>
<mml:docId>
    <mml:uid>JPN432101234567-DRDTGBC0001-01101809200208190846</mml:uid>
    <mml:groupId groupClass="summary">JPN432101234567-DRDTGGD0001-
        01101809200208190846</mml:groupId>
</mml:docId>
<mml:confirmDate end="2002-08-23" start="2002-08-19">2002-08-23</
    mml:confirmDate>
<mmlCi:CreatorInfo>
    <mmlPsi:PersonalizedInfo>
        <mmlCm:Id mmlCm:tableId="JPN432101234567" mmlCm:type="facility"/>
        <mmlPsi:personName>
            <mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
                <mmlNm:fullname>Charlie Watson</mmlNm:fullname>
            </mmlNm:Name>
        </mmlPsi:personName>
        <mmlFc:Facility>
            <mmlFc:name mmlFc:repCode="I" mmlFc:tableId="MML0025">Seaside
                Hospital</mmlFc:name>
            <mmlCm:Id mmlCm:tableId="MML0027"
                mmlCm:type="JMARI">JPN432101234567</mmlCm:Id>
        </mmlFc:Facility>
        <mmlDp:Department>
            <mmlDp:name mmlDp:repCode="I" mmlDp:tableId="MML0025">urology</
                mmlDp:name>
            <mmlCm:Id mmlCm:tableId="MML0029" mmlCm:type="facility">21</mmlCm:Id>
        </mmlDp:Department>
    </mmlPsi:PersonalizedInfo>
    <mmlCi:creatorLicense mmlCi:tableId="MML0026">doctor</
        mmlCi:creatorLicense>
    </mmlCi:CreatorInfo>
    <mml:extRefs/>
</mml:docInfo>
</local_markup>
</content>
</content>
</content>
</local_markup>
<mmlBc:BaseClinicModule>
    <mmlBc:allergy>
        <mmlBc:allergyItem>
            <mmlBc:factor>medicines, others</mmlBc:factor>
            <mmlBc:memo>partial tetter</mmlBc:memo>
        </mmlBc:allergyItem>
    </mmlBc:allergy>
    <mmlBc:bloodtype>
        <mmlBc:abo>o</mmlBc:abo>

```

```

        <mmlBc:rh>rhD+</mmlBc:rh>
        </mmlBc:bloodtype>
    </mmlBc:BaseClinicModule>
</local_markup>
</content>
</paragraph>
</section>
<section>
<paragraph>
<content>
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<mml:docInfo contentModuleType="summary">
<mml:securityLevel>
    <mml:accessRight permit="all">
        <mmlSc:facility>
            <mmlSc:facilityName mmlSc:facilityCode="creator"
                mmlSc:tableId="MML0035">creator's facility</mmlSc:facilityName>
        </mmlSc:facility>
    </mml:accessRight>
    <mml:accessRight permit="read">
        <mmlSc:facility>
            <mmlSc:facilityName mmlSc:facilityCode="experience"
                mmlSc:tableId="MML0035">facilities with the experience of medical
                cares</mmlSc:facilityName>
        </mmlSc:facility>
    </mml:accessRight>
    <mml:accessRight permit="read">
        <mmlSc:person>
            <mmlSc:personName mmlSc:personCode="patient"
                mmlSc:tableId="MML0036">Described person (patient)</
                mmlSc:personName>
        </mmlSc:person>
    </mml:accessRight>
</mml:securityLevel>
<mml:title generationPurpose="SummaryDischarge">Doctor's Discharge Summary</
    mml:title>
<mml:docId>
    <mml:uid>JPN432101234567-DRDTGSM0001-01101809200208190846</mml:uid>
    <mml:groupId groupClass="summary">JPN432101234567-DRDTGGD0001-
        01101809200208190846</mml:groupId>
</mml:docId>
<mml:confirmDate end="2002-08-23" start="2002-08-19">2002-08-23</
    mml:confirmDate>
<mmlCi:CreatorInfo>
    <mmlPsi:PersonalizedInfo>
        <mmlCm:Id mmlCm:tableId="JPN432101234567" mmlCm:type="facility"/>
        <mmlPsi:personName>
            <mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
                <mmlNm:fullname>Charlie Watson</mmlNm:fullname>
            </mmlNm:Name>
        </mmlPsi:personName>
    </mmlPsi:PersonalizedInfo>

```

```

<mmlFc:Facility>
    <mmlFc:name mmlFc:repCode="I" mmlFc:tableId="MML0025">Seaside
        Hospital</mmlFc:name>
    <mmlCm:Id mmlCm:tableId="MML0027"
        mmlCm:type="JMARI">JPN432101234567</mmlCm:Id>
</mmlFc:Facility>
<mmlDp:Department>
    <mmlDp:name mmlDp:repCode="I" mmlDp:tableId="MML0025">urology</
        mmlDp:name>
    <mmlCm:Id mmlCm:tableId="MML0029" mmlCm:type="facility">21</mmlCm:Id>
</mmlDp:Department>
</mmlPsi:PersonalizedInfo>
<mmlCi:creatorLicense mmlCi:tableId="MML0026">doctor</
    mmlCi:creatorLicense>
</mmlCi:CreatorInfo>
<mml:extRefs/>
</mml:docInfo>
</local_markup>
</content>
</paragraph>
<paragraph>
    <content>
        <local_markup>
            <mmlSm:SummaryModule>
                <mmlSm:serviceHistory mmlSm:end="2002-08-23" mmlSm:start="2002-08-19">
                    <mmlSm:inPatient>
                        <mmlSm:inPatientItem>
                            <mmlSm:admission>
                                <mmlSm:date>2002-08-19</mmlSm:date>
                                <mmlSm:admissionCondition mmlSm:emergency="true"/>
                                <mmlSm:referFrom>
                                    <mmlPsi:PersonalizedInfo>
                                        <mmlCm:Id mmlCm:tableId="MML0024" mmlCm:type="local"/>
                                        <mmlPsi:personName>
                                            <mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
                                                <mmlNm:fullname/>
                                            </mmlNm:Name>
                                        </mmlPsi:personName>
                                    </mmlPsi:PersonalizedInfo>
                                </mmlSm:referFrom>
                            </mmlSm:admission>
                            <mmlSm:discharge>
                                <mmlSm:date>2002-08-23</mmlSm:date>
                                <mmlSm:dischargeCondition mmlSm:outcome="recovering"/>
                                <mmlSm:referTo>
                                    <mmlPsi:PersonalizedInfo>
                                        <mmlCm:Id mmlCm:tableId="MML0024" mmlCm:type="local"/>
                                        <mmlPsi:personName>
                                            <mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
                                                <mmlNm:fullname/>
                                            </mmlNm:Name>

```

```

        </mmlPsi:personName>
        </mmlPsi:PersonalizedInfo>
        </mmlSm:referTo>
        </mmlSm:discharge>
<mmlSm:staffs>
        <mmlSm:staffInfo>
            <mmlPsi:PersonalizedInfo>
                <mmlCm:Id mmlCm:tableId="JPN432101234567"
                    mmlCm:type="facility"/>
                <mmlPsi:personName>
                    <mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
                        <mmlNm:fullname>Charlie Watson</mmlNm:fullname>
                    </mmlNm:Name>
                </mmlPsi:personName>
                <mmlFc:Facility>
                    <mmlFc:name mmlFc:repCode="I"
                        mmlFc:tableId="MML0025">Seaside Hospital</mmlFc:name>
                    <mmlCm:Id mmlCm:tableId="MML0027"
                        mmlCm:type="JMARI">JPN432101234567</mmlCm:Id>
                </mmlFc:Facility>
                <mmlDp:Department>
                    <mmlDp:name mmlDp:repCode="I"
                        mmlDp:tableId="MML0025">urology</mmlDp:name>
                    <mmlCm:Id mmlCm:tableId="JPN432101234567"
                        mmlCm:type="facility">21</mmlCm:Id>
                </mmlDp:Department>
            </mmlPsi:PersonalizedInfo>
            <mmlCi:creatorLicense mmlCi:tableId="MML0026">doctor</
                mmlCi:creatorLicense>
        </mmlSm:staffInfo>
        </mmlSm:staffs>
        </mmlSm:inPatientItem>
    </mmlSm:inPatient>
</mmlSm:serviceHistory>
<mmlSm:chiefComplaints>right side lumbar pain</mmlSm:chiefComplaints>
<mmlSm:patientProfile>patient profile: natural delivery 2292 G</
    mmlSm:patientProfile>
<mmlSm:history>At the last admission to hospital due to nephrolithiasis
    (right kidney), DJcatheter was indwelled, and ESWL was performed. Most of
    the stones had been removed and he entered the hospital this time to
    remove the DJ and for RP.</mmlSm:history>
<mmlSm:physicalExam>Physical examination: height 115.8 cm, weight 19.1
    kg, BMI 14.24, temperature 36.4 °C, pulse rate 56/min., respiratory rate
    20/min., blood pressure (right) 86/38 mmHg<xhtml:br/>
</mmlSm:physicalExam>
<mmlSm:clinicalCourse>
    <mmlSm:clinicalRecord>On Aug. 21, DJ removed and R Pperformed. He
        discharged from the hospital on Aug. 23 in good condition.</
            mmlSm:clinicalRecord>
    </mmlSm:clinicalCourse>
    <mmlSm:dischargeFindings>He has a pain on urination.</
        mmlSm:dischargeFindings>
    <mmlSm:medication>none</mmlSm:medication>
    <mmlSm:testResults>

```

```

        <mmlSm:testResult>Ureterostenosis was found in RP</mmlSm:testResult>
    </mmlSm:testResults>
    <mmlSm:plan>During winter vacation, he has a plan for DIPand lasix renogram
        as an outpatient.</mmlSm:plan>
    <mmlSm:remarks>To consult the pediatrics is being considered.</
        mmlSm:remarks>
    </mmlSm:SummaryModule>
</local_markup>
</content>
</paragraph>
</section>
<section>
<paragraph>
<content>
<local_markup descriptor="" render="MML">
    <mml:docInfo contentModuleType="registeredDiagnosis">
        <mml:securityLevel>
            <mml:accessRight permit="all">
                <mmlSc:facility>
                    <mmlSc:facilityName mmlSc:facilityCode="creator"
                        mmlSc:tableId="MML0035">creator's facility</mmlSc:facilityName>
                </mmlSc:facility>
            </mml:accessRight>
            <mml:accessRight permit="read">
                <mmlSc:facility>
                    <mmlSc:facilityName mmlSc:facilityCode="experience"
                        mmlSc:tableId="MML0035">facilities with the experience of medical
                        cares</mmlSc:facilityName>
                </mmlSc:facility>
            </mml:accessRight>
            <mml:accessRight permit="read">
                <mmlSc:person>
                    <mmlSc:personName mmlSc:personCode="patient"
                        mmlSc:tableId="MML0036">Described person (patient)</
                        mmlSc:personName>
                </mmlSc:person>
            </mml:accessRight>
        </mml:securityLevel>
        <mml:title generationPurpose="SummaryDischarge">Doctor's Discharge Summary</
            mml:title>
        <mml:docId>
            <mml:uid>JPN432101234567-DRDTGRD0001-01101809200208190846</mml:uid>
            <mml:groupId groupClass="summary">JPN432101234567-DRDTGGD0001-
                01101809200208190846</mml:groupId>
        </mml:docId>
        <mml:confirmDate end="2002-08-23" start="2002-08-19">2002-08-23</
            mml:confirmDate>
        <mmlCi:CreatorInfo>
            <mmlPsi:PersonalizedInfo>
                <mmlCm:Id mmlCm:tableId="JPN432101234567" mmlCm:type="facility"/>
                <mmlPsi:personName>

```

```

<mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
    <mmlNm:fullname>Charlie Watson</mmlNm:fullname>
</mmlNm:Name>
</mmlPsi:personName>
<mmlFc:Facility>
    <mmlFc:name mmlFc:repCode="I" mmlFc:tableId="MML0025">Seaside
        Hospital</mmlFc:name>
    <mmlCm:Id mmlCm:tableId="MML0027"
        mmlCm:type="JMARI">JPN432101234567</mmlCm:Id>
</mmlFc:Facility>
<mmlDp:Department>
    <mmlDp:name mmlDp:repCode="I" mmlDp:tableId="MML0025">urology</
        mmlDp:name>
    <mmlCm:Id mmlCm:tableId="MML0029" mmlCm:type="facility">21</mmlCm:Id>
</mmlDp:Department>
</mmlPsi:PersonalizedInfo>
<mmlCi:creatorLicense mmlCi:tableId="MML0026">doctor</
    mmlCi:creatorLicense>
</mmlCi:CreatorInfo>
<mml:extRefs/>
</mml:docInfo>
</local_markup>
</content>
</paragraph>
<paragraph>
    <content>
        <local_markup>
            <mmlRd:RegisteredDiagnosisModule>
                <mmlRd:diagnosisContents>
                    <mmlRd:dxItem>
                        <mmlRd:name mmlRd:code="37751" mmlRd:system="N200">nephrolithiasis,
                            right kidney</mmlRd:name>
                    </mmlRd:dxItem>
                </mmlRd:diagnosisContents>
                <mmlRd:categories>
                    <mmlRd:category mmlRd:tableId="MML0012">mainDiagnosis</mmlRd:category>
                    <mmlRd:category mmlRd:tableId="MML0013"/>
                    <mmlRd:category mmlRd:tableId="MML0015">confirmedDiagnosis</
                        mmlRd:category>
                </mmlRd:categories>
                <mmlRd:startDate>2001-12-27</mmlRd:startDate>
                <mmlRd:outcome/>
                <mmlRd:firstEncounterDate>2001-12-27</mmlRd:firstEncounterDate>
            </mmlRd:RegisteredDiagnosisModule>
            </local_markup>
        </content>
    </paragraph>
</section>
<section>
    <paragraph>

```

```

<content>
  <local_markup descriptor="" render="MML">
    <mml:docInfo contentModuleType="surgery">
      <mml:securityLevel>
        <mml:accessRight permit="all">
          <mmlSc:facility>
            <mmlSc:facilityName mmlSc:facilityCode="creator"
              mmlSc:tableId="MML0035">creator's facility</mmlSc:facilityName>
          </mmlSc:facility>
        </mml:accessRight>
        <mml:accessRight permit="read">
          <mmlSc:facility>
            <mmlSc:facilityName mmlSc:facilityCode="experience"
              mmlSc:tableId="MML0035">facilities with the experience of medical
              cares</mmlSc:facilityName>
          </mmlSc:facility>
        </mml:accessRight>
        <mml:accessRight permit="read">
          <mmlSc:person>
            <mmlSc:personName mmlSc:personCode="patient"
              mmlSc:tableId="MML0036">Described person (patient)</
              mmlSc:personName>
          </mmlSc:person>
        </mml:accessRight>
      </mml:securityLevel>
      <mml:title generationPurpose="SummaryDischarge">Doctor's Discharge Summary</
        mml:title>
      <mml:docId>
        <mml:uid>JPN432101234567-DRDTGSG0001-01101809200208190846</mml:uid>
        <mml:groupId groupClass="summary">JPN432101234567-DRDTGGD0001-
          01101809200208190846</mml:groupId>
      </mml:docId>
      <mml:confirmDate end="2002-08-23" start="2002-08-19">2002-08-23</
        mml:confirmDate>
      <mmlCi:CreatorInfo>
        <mmlPsi:PersonalizedInfo>
          <mmlCm:Id mmlCm:tableId="JPN432101234567" mmlCm:type="facility"/>
          <mmlPsi:personName>
            <mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
              <mmlNm:fullname>Charlie Watson</mmlNm:fullname>
            </mmlNm:Name>
          </mmlPsi:personName>
        <mmlFc:Facility>
          <mmlFc:name mmlFc:repCode="I" mmlFc:tableId="MML0025">Seaside
            Hospital</mmlFc:name>
          <mmlCm:Id mmlCm:tableId="MML0027"
            mmlCm:type="JMARI">JPN432101234567</mmlCm:Id>
        </mmlFc:Facility>
        <mmlDp:Department>
          <mmlDp:name mmlDp:repCode="I" mmlDp:tableId="MML0025">urology</
            mmlDp:name>
          <mmlCm:Id mmlCm:tableId="MML0029" mmlCm:type="facility">21</mmlCm:Id>
        </mmlDp:Department>
      </mmlCi:CreatorInfo>
    </mml:docInfo>
  </local_markup>

```

```

        </mmlPsi:PersonalizedInfo>
        <mmlCi:creatorLicense mmlCi:tableId="MML0026">doctor</
            mmlCi:creatorLicense>
    </mmlCi:CreatorInfo>
    <mml:extRefs/>
</mml:docInfo>
</local_markup>
</content>
</paragraph>
<paragraph>
<content>
<local_markup>
<mmlSg:SurgeryModule>
    <mmlSg:surgeryItem>
        <mmlSg:surgicalInfo>
            <mmlSg:date>2002-08-21</mmlSg:date>
            <mmlSg:startTime>08:15</mmlSg:startTime>
            <mmlSg:duration>PT01H35M</mmlSg:duration>
            <mmlSg:surgicalDepartment>
                <mmlDp:Department>
                    <mmlDp:name mmlDp:repCode="I" mmlDp:tableId="MML0025">urology</
                        mmlDp:name>
                </mmlDp:Department>
            </mmlSg:surgicalDepartment>
            <mmlSg:patientDepartment>
                <mmlDp:Department>
                    <mmlDp:name mmlDp:repCode="I" mmlDp:tableId="MML0025">urology</
                        mmlDp:name>
                </mmlDp:Department>
            </mmlSg:patientDepartment>
        </mmlSg:surgicalInfo>
        <mmlSg:surgicalDiagnosis>
            <mmlRd:RegisteredDiagnosisModule>
                <mmlRd:diagnosisContents>
                    <mmlRd:dxItem>
                        <mmlRd:name>Rt. renal stone</mmlRd:name>
                    </mmlRd:dxItem>
                </mmlRd:diagnosisContents>
            </mmlRd:RegisteredDiagnosisModule>
        </mmlSg:surgicalDiagnosis>
        <mmlSg:surgicalProcedure>
            <mmlSg:procedureItem>
                <mmlSg:operationElement>
                    <mmlSg:operationElementItem>
                        <mmlSg:title mmlSg:system="ICD10">ureteral catheter removed and
                            RP</mmlSg:title>
                    </mmlSg:operationElementItem>
                </mmlSg:operationElement>
            </mmlSg:procedureItem>
        </mmlSg:surgicalProcedure>
        <mmlSg:anesthesiaProcedure>

```

```
    <mmlSg:title>general anesthesia</mmlSg:title>
    </mmlSg:anesthesiaProcedure>
    <mmlSg:referenceInfo>
        <mmlCm:extRef mmlCm:contentType="" mmlCm:href="" />
    </mmlSg:referenceInfo>
    </mmlSg:surgeryItem>
    </mmlSg:SurgeryModule>
    </local_markup>
</content>
</paragraph>
</section>
</body>
</levelone>
```

15. 4. Sample 4

```

<?xml version="1.0" encoding="shift_jis"?>
<!DOCTYPE levelone SYSTEM "MML_3.0_levelone_1.0.dtd">
<levelone xmlns:claim="http://www.medxml.net/claim/claimModule/2.1"
    xmlns:claimA="http://www.medxml.net/claim/claimAmountModule/2.1" xmlns:mml="http://
    www.medxml.net/MML" xmlns:mmlAd="http://www.medxml.net/MML/SharedComponent/Address/
    1.0" xmlns:mmlBc="http://www.medxml.net/MML/ContentModule/BaseClinic/1.0"
    xmlns:mmlCi="http://www.medxml.net/MML/SharedComponent/CreatorInfo/1.0"
    xmlns:mmlCm="http://www.medxml.net/MML/SharedComponent/Common/1.0"
    xmlns:mmlDp="http://www.medxml.net/MML/SharedComponent/Department/1.0"
    xmlns:mmlFc="http://www.medxml.net/MML/SharedComponent/Facility/1.0"
    xmlns:mmlFcl="http://www.medxml.net/MML/ContentModule/FirstClinic/1.0"
    xmlns:mmlHi="http://www.medxml.net/MML/ContentModule/HealthInsurance/1.1"
    xmlns:mmlLb="http://www.medxml.net/MML/ContentModule/test/1.0" xmlns:mmlLs="http://
    www.medxml.net/MML/ContentModule/Lifestyle/1.0" xmlns:mmlNm="http://www.medxml.net/
    MML/SharedComponent/Name/1.0" xmlns:mmlPc="http://www.medxml.net/MML/ContentModule/
    ProgressCourse/1.0" xmlns:mmlPh="http://www.medxml.net/MML/SharedComponent/Phone/
    1.0" xmlns:mmlPi="http://www.medxml.net/MML/ContentModule/PatientInfo/1.0"
    xmlns:mmlPsi="http://www.medxml.net/MML/SharedComponent/PersonalizedInfo/1.0"
    xmlns:mmlRd="http://www.medxml.net/MML/ContentModule/RegisteredDiagnosis/1.0"
    xmlns:mmlRe="http://www.medxml.net/MML/ContentModule/Referral/1.0"
    xmlns:mmlRp="http://www.medxml.net/MML/ContentModule/report/1.0"
    xmlns:mmlSc="http://www.medxml.net/MML/SharedComponent/Security/1.0"
    xmlns:mmlSg="http://www.medxml.net/MML/ContentModule/Surgery/1.0"
    xmlns:mmlSm="http://www.medxml.net/MML/ContentModule/Summary/1.0"
    xmlns:xhtml="http://www.w3.org/1999/xhtml">

<clinical_document_header>

    <id AAN="Test Hospital" EX="12345" RT="1.2.392.114319.1.5.1.1.1.1.1.1"/>
    <document_type_cd DN="MML Document" S="1.2.392.114319.1.1" V="0300"/>
    <origination_dttm V="" />

    <provider>
        <provider.type_cd V="CON" />
        <person>
            <id EX="000123" RT="2.16.840.1.113883.5.200" />
        </person>
    </provider>

    <patient>
        <patient.type_cd V="PAT" />
        <person>
            <id EX="12345" RT="1.2.392.114319.1.5.1.1.1.1.1.1" />
            <person_name>
                <nmm>
                    <GIV V="Taro" />
                    <FAM V="Yamada" />
                </nmm>
                <person_name.type_cd S="2.16.840.1.113883.5.200" V="L" />
            </person_name>
        </person>
    </patient>

```

```

</patient>

<local_header descriptor="mmlheader" render="MML">

<mml:Header>
<mmlCi:CreatorInfo>
<mmlPsi:PersonalizedInfo>
<mmlCm:Id mmlCm:tableId="JPN432101234567" mmlCm:type="facility">12345678</
    mmlCm:Id>
<mmlPsi:personName>
<mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
    <mmlNm:fullname>Mike White</mmlNm:fullname>
</mmlNm:Name>
</mmlPsi:personName>
<mmlFc:Facility>
<mmlFc:name mmlFc:repCode="I" mmlFc:tableId="MML0025">Seaside Hospital</
    mmlFc:name>
<mmlCm:Id mmlCm:tableId="MML0027" mmlCm:type="JMARI">JPN432101234567</
    mmlCm:Id>
</mmlFc:Facility>
<mmlDp:Department>
<mmlDp:name mmlDp:repCode="I" mmlDp:tableId="MML0025">test department</
    mmlDp:name>
<mmlCm:Id mmlCm:tableId="MML0029" mmlCm:type="facility">51</mmlCm:Id>
</mmlDp:Department>
</mmlPsi:PersonalizedInfo>
<mmlCi:creatorLicense mmlCi:tableId="MML0026">lab</mmlCi:creatorLicense>
</mmlCi:CreatorInfo>
<mml:masterId>
<mmlCm:Id mmlCm:tableId="MML0024" mmlCm:type="local">43210123451</mmlCm:Id>
</mml:masterId>
<mml:toc>
<mml:tocItem>http://www.w3.org/1999/xhtml</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Common/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Name/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Facility/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Department/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Address/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Phone/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/PersonalizedInfo/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/CreatorInfo/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Security/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/PatientInfo/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/BaseClinic/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/FirstClinic/1.0</
    mml:tocItem>

```

```

<mml:tocItem>http://www.medxml.net/MML/ContentModule/HealthInsurance/1.1</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/Lifestyle/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/ProgressCourse/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/RegisteredDiagnosis/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/Surgery/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/Summary/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/test/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/report/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/Referral/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/claim/claimAmountModule/2.1</mml:tocItem>
<mml:tocItem>http://www.medxml.net/claim/claimModule/2.1</mml:tocItem>
</mml:toc>
</mml:MmlHeader>
</local_header>
</clinical_document_header>
<body>
    <section>
        <paragraph>
            <content>
                <local_markup descriptor="" render="MML">
                    <mml:docInfo contentModuleType="test">
                        <mml:securityLevel>
                            <mml:accessRight permit="all">
                                <mmlSc:facility>
                                    <mmlSc:facilityName mmlSc:facilityCode="individual"
                                        mmlSc:facilityId="JPN432101234567" mmlSc:facilityIdType="JMARI"
                                        mmlSc:tableId="MML0035">Test Hospital</mmlSc:facilityName>
                                </mmlSc:facility>
                            </mml:accessRight>
                            <mml:accessRight permit="read">
                                <mmlSc:facility>
                                    <mmlSc:facilityName mmlSc:facilityCode="experience"
                                        mmlSc:tableId="MML0035">facilities with the experience of medical
                                        cares</mmlSc:facilityName>
                                </mmlSc:facility>
                            </mml:accessRight>
                            <mml:accessRight permit="read">
                                <mmlSc:person>
                                    <mmlSc:personName mmlSc:personCode="patient"
                                        mmlSc:tableId="MML0036">Described person (patient)</
                                        mmlSc:personName>
                                </mmlSc:person>
                            </mml:accessRight>
                        </mml:securityLevel>
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</mmlLb:item>
<mmlLb:item>
  <mmlLb:itemName mmlLb:itCode="639" mmlLb:itCodeId="KRTKC">A/Gfq</
    mmlLb:itemName>
  <mmlLb:value>1.57</mmlLb:value>
  <mmlLb:numValue mmlLb:out="L">1.57</mmlLb:numValue>
</mmlLb:item>
<mmlLb:item>
  <mmlLb:itemName mmlLb:itCode="950" mmlLb:itCodeId="KRTKC">HCV</
    mmlLb:itemName>
  <mmlLb:value>negative</mmlLb:value>
  <mmlLb:numValue mmlLb:out="N" />
</mmlLb:item>
<mmlLb:item>
  <mmlLb:itemName mmlLb:itCode="954" mmlLb:itCodeId="KRTKC">HCVCI</
    mmlLb:itemName>
  <mmlLb:value>0.22</mmlLb:value>

```

```

<mmlLb:numValue mmlLb:out="N">0.22</mmlLb:numValue>
</mmlLb:item>
<mmlLb:item>
  <mmlLb:itemName mmlLb:itCode="913" mmlLb:itCodeId="KRTKC">HBsAg</
    mmlLb:itemName>
  <mmlLb:value>negative</mmlLb:value>
  <mmlLb:numValue mmlLb:out="N"/>
</mmlLb:item>
<mmlLb:item>
  <mmlLb:itemName mmlLb:itCode="914" mmlLb:itCodeId="KRTKC">sAgCI</
    mmlLb:itemName>
  <mmlLb:value>0.00</mmlLb:value>
  <mmlLb:numValue mmlLb:out="N">0</mmlLb:numValue>
</mmlLb:item>
<mmlLb:item>
  <mmlLb:itemName mmlLb:itCode="915" mmlLb:itCodeId="KRTKC">HBsAb</
    mmlLb:itemName>
  <mmlLb:value>positive</mmlLb:value>
  <mmlLb:numValue mmlLb:out="N"/>
</mmlLb:item>
<mmlLb:item>
  <mmlLb:itemName mmlLb:itCode="916" mmlLb:itCodeId="KRTKC">mIUml</
    mmlLb:itemName>
  <mmlLb:value>42.9</mmlLb:value>
  <mmlLb:numValue mmlLb:out="N">42.9</mmlLb:numValue>
</mmlLb:item>
<mmlLb:item>
  <mmlLb:itemName mmlLb:itCode="921" mmlLb:itCodeId="KRTKC">HBcAb</
    mmlLb:itemName>
  <mmlLb:value>positive</mmlLb:value>
  <mmlLb:numValue mmlLb:out="N"/>
</mmlLb:item>
<mmlLb:item>
  <mmlLb:itemName mmlLb:itCode="922" mmlLb:itCodeId="KRTKC">cAb%I</
    mmlLb:itemName>
  <mmlLb:value>68.03</mmlLb:value>
  <mmlLb:numValue mmlLb:out="N">68.03</mmlLb:numValue>
</mmlLb:item>
<mmlLb:item>
  <mmlLb:itemName mmlLb:itCode="923" mmlLb:itCodeId="KRTKC">cAb20</
    mmlLb:itemName>
  <mmlLb:value>0.00</mmlLb:value>
  <mmlLb:numValue mmlLb:out="N">0</mmlLb:numValue>
</mmlLb:item>
<mmlLb:item>
  <mmlLb:itemName mmlLb:itCode="931" mmlLb:itCodeId="KRTKC">IgG</
    mmlLb:itemName>
  <mmlLb:value>1030</mmlLb:value>
  <mmlLb:numValue mmlLb:out="N">1030</mmlLb:numValue>
</mmlLb:item>
<mmlLb:item>
  <mmlLb:itemName mmlLb:itCode="932" mmlLb:itCodeId="KRTKC">IgA</

```

```
    <mmlb:itemName>
    <mmlb:value>667</mmlb:value>
    <mmlb:numValue mmlb:out="H">667</mmlb:numValue>
  </mmlb:item>
  <mmlb:item>
    <mmlb:itemName mmlb:itCode="933" mmlb:itCodeId="KRTKC">IgM</
      mmlb:itemName>
    <mmlb:value>44</mmlb:value>
    <mmlb:numValue mmlb:out="L">44</mmlb:numValue>
  </mmlb:item>
  <mmlb:item>
    <mmlb:itemName mmlb:itCode="1021" mmlb:itCodeId="KRTKC">PIVKA2</
      mmlb:itemName>
    <mmlb:value>11</mmlb:value>
    <mmlb:numValue mmlb:out="N">11</mmlb:numValue>
  </mmlb:item>
</mmlb:laboTest>
</mmlb:TestModule>
</local_markup>
</content>
</paragraph>
</section>
</body>
</levelone>
```

15.5. Sample 5

```
<?xml version="1.0" encoding="shift_jis"?>
<!DOCTYPE levelone SYSTEM "MML_3.0_levelone_1.0.dtd">
<levelone xmlns:claim="http://www.medxml.net/claim/claimModule/2.1"
    xmlns:claimA="http://www.medxml.net/claim/claimAmountModule/2.1" xmlns:mml="http://
    www.medxml.net/MML" xmlns:mmlAd="http://www.medxml.net/MML/SharedComponent/Address/
    1.0" xmlns:mmlBc="http://www.medxml.net/MML/ContentModule/BaseClinic/1.0"
    xmlns:mmlCi="http://www.medxml.net/MML/SharedComponent/CreatorInfo/1.0"
    xmlns:mmlCm="http://www.medxml.net/MML/SharedComponent/Common/1.0"
    xmlns:mmlDp="http://www.medxml.net/MML/SharedComponent/Department/1.0"
    xmlns:mmlFc="http://www.medxml.net/MML/SharedComponent/Facility/1.0"
    xmlns:mmlFcl="http://www.medxml.net/MML/ContentModule/FirstClinic/1.0"
    xmlns:mmlHi="http://www.medxml.net/MML/ContentModule/HealthInsurance/1.1"
    xmlns:mmlLb="http://www.medxml.net/MML/ContentModule/test/1.0" xmlns:mmlLs="http://
    www.medxml.net/MML/ContentModule/Lifestyle/1.0" xmlns:mmlNm="http://www.medxml.net/
    MML/SharedComponent/Name/1.0" xmlns:mmlPc="http://www.medxml.net/MML/ContentModule/
    ProgressCourse/1.0" xmlns:mmlPh="http://www.medxml.net/MML/SharedComponent/Phone/
    1.0" xmlns:mmlPi="http://www.medxml.net/MML/ContentModule/PatientInfo/1.0"
    xmlns:mmlPsi="http://www.medxml.net/MML/SharedComponent/PersonalizedInfo/1.0"
    xmlns:mmlRd="http://www.medxml.net/MML/ContentModule/RegisteredDiagnosis/1.0"
    xmlns:mmlRe="http://www.medxml.net/MML/ContentModule/Referral/1.0"
    xmlns:mmlRp="http://www.medxml.net/MML/ContentModule/report/1.0"
    xmlns:mmlSc="http://www.medxml.net/MML/SharedComponent/Security/1.0"
    xmlns:mmlSg="http://www.medxml.net/MML/ContentModule/Surgery/1.0"
    xmlns:mmlSm="http://www.medxml.net/MML/ContentModule/Summary/1.0"
    xmlns:xhtml="http://www.w3.org/1999/xhtml">

<clinical_document_header>
    <id AAN="" EX="" RT="" />
    <document_type_cd DN="MML Document" S="1.2.392.114319.1.1" V="0300" />
    <origination_dttm V="" />
    <provider>
        <provider.type_cd V="CON" />
        <person>
            <id EX="000123" RT="2.16.840.1.113883.5.200" />
        </person>
    </provider>
    <patient>
        <patient.type_cd V="PAT" />
        <person>
            <id EX="" RT="" />
            <person_name>
                <nme>
                    <GIV V="" />
                    <FAM V="" />
                </nme>
            </person_name>
        </patient>
    </patient>
</clinical_document_header>
```

```

<person_name.type_cd S="2.16.840.1.113883.5.200" V="L"/>
</person_name>
</person>
</patient>
<local_header descriptor="mmlheader" render="MML">
<mml:MmlHeader>
<mmlCi:CreatorInfo>
<mmlPsi:PersonalizedInfo>
<mmlCm:Id mmlCm:tableId="JPN432101234567" mmlCm:type="local">12345678</
mmlCm:Id>
<mmlPsi:personName>
<mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
<mmlNm:fullname>Mike White</mmlNm:fullname>
</mmlNm:Name>
</mmlPsi:personName>
<mmlFc:Facility>
<mmlFc:name mmlFc:repCode="I" mmlFc:tableId="MML0025">Seaside Hospital</
mmlFc:name>
<mmlCm:Id mmlCm:tableId="MML0027" mmlCm:type="JMARI">JPN432101234567</
mmlCm:Id>
</mmlFc:Facility>
</mmlPsi:PersonalizedInfo>
<mmlCi:creatorLicense mmlCi:tableId="MML0026">doctor</mmlCi:creatorLicense>
</mmlCi:CreatorInfo>
<mml:masterId>
<mmlCm:Id mmlCm:tableId="MML0024" mmlCm:type="local">43210123451</mmlCm:Id>
</mml:masterId>
<mml:toc>
<mml:tocItem>http://www.w3.org/1999/xhtml</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Common/1.0</
mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Name/1.0</
mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Facility/1.0</
mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Department/1.0</
mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Address/1.0</
mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Phone/1.0</
mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/PersonalizedInfo/
1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/CreatorInfo/1.0</

```

```

    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/SharedComponent/Security/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/PatientInfo/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/BaseClinic/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/FirstClinic/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/HealthInsurance/1.1</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/Lifestyle/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/ProgressCourse/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/RegisteredDiagnosis/
    1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/Surgery/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/Summary/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/test/1.0</mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/report/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/MML/ContentModule/Referral/1.0</
    mml:tocItem>
<mml:tocItem>http://www.medxml.net/claim/claimAmountModule/2.1</mml:tocItem>
<mml:tocItem>http://www.medxml.net/claim/claimModule/2.1</mml:tocItem>
</mml:toc>
</mml:MmlHeader>
</local_header>
</clinical_document_header>
<body>
<section>
<paragraph>
<content>
<local_markup descriptor="" render="MML">
<mml:docInfo contentModuleType="report" moduleVersion="http://
    www.medxml.net/MML/ContentModule/report/1.0">
<mml:securityLevel>
<mml:accessRight permit="all">
<mmlSc:facility>
<mmlSc:facilityName mmlSc:facilityCode="individual"
    mmlSc:facilityId="JPN432101234567"
    mmlSc:facilityIdType="JMARI" mmlSc:tableId="MML0035">Test

```

```

        Hospital</mmlSc:facilityName>
    </mmlSc:facility>
</mml:accessRight>
<mml:accessRight permit="read">
    <mmlSc:facility>
        <mmlSc:facilityName mmlSc:facilityCode="experience"
            mmlSc:tableId="MML0035">facilities with the experience of
            medical cares</mmlSc:facilityName>
    </mmlSc:facility>
</mml:accessRight>
<mml:accessRight permit="read">
    <mmlSc:person>
        <mmlSc:personName mmlSc:personCode="patient"
            mmlSc:tableId="MML0036">Described person (patient)</
            mmlSc:personName>
    </mmlSc:person>
</mml:accessRight>
</mml:securityLevel>
<mml:title generationPurpose="reportRadiology">CT scan Report</
    mml:title>
<mml:docId>
    <mml:uid>JPN432101234567RR20020823_CT_20020851501</mml:uid>
</mml:docId>
<mml:confirmDate>2002-08-23</mml:confirmDate>
<mmlCi:CreatorInfo>
    <mmlPsi:PersonalizedInfo>
        <mmlCm:Id mmlCm:tableId="JPN432101234567"
            mmlCm:type="local">12345678</mmlCm:Id>
        <mmlPsi:personName>
            <mmlNm:Name mmlNm:repCode="I" mmlNm:tableId="MML0025">
                <mmlNm:fullname>Mike White</mmlNm:fullname>
            </mmlNm:Name>
        </mmlPsi:personName>
        <mmlFc:Facility>
            <mmlFc:name mmlFc:repCode="I" mmlFc:tableId="MML0025">Seaside
                Hospital</mmlFc:name>
            <mmlCm:Id mmlCm:tableId="MML0027"
                mmlCm:type="JMARI">JPN432101234567</mmlCm:Id>
        </mmlFc:Facility>
    </mmlPsi:PersonalizedInfo>
    <mmlCi:creatorLicense mmlCi:tableId="MML0026">doctor</
        mmlCi:creatorLicense>
</mmlCi:CreatorInfo>
<mml:extRefs>
    <mmlCm:extRef mmlCm:contentType="image/jpeg"
        mmlCm:href="JPN432101234567RR20020823_CT_20020851501.0001.jpg"
        mmlCm:medicalRole="ctScan" mmlCm:title="plain"/>
    <mmlCm:extRef mmlCm:contentType="image/jpeg"
        mmlCm:href="JPN432101234567RR20020823_CT_20020851501.0002.jpg"
        mmlCm:medicalRole="ctScan" mmlCm:title="dynamic-early"/>
</mml:extRefs>
</mml:docInfo>
</local_markup>
```

```

</content>
</paragraph>
<paragraph>
<content>
<local_markup>
<mmlRp:ReportModule>
<mmlRp:information mmlRp:performTime="2002-08-23T00:00:00"
mmlRp:reportTime="2002-08-23T00:00:00">
<mmlRp:reportStatus mmlRp:statusCode="final"
mmlRp:statusCodeId="mmlLb0001">final report</mmlRp:reportStatus>
<mmlRp:testClass mmlRp:testClassCode="ctscan"
mmlRp:testClassCodeId="MML0033">CT scan</mmlRp:testClass>
<mmlRp:organ>abdominal</mmlRp:organ>
<mmlRp:consultFrom>
<mmlRp:conFacility mmlRp:facilityCode="JPN432101234567"
mmlRp:facilityCodeId="JMARI">Test Hospital</mmlRp:conFacility>
<mmlRp:conDepartment mmlRp:depCode="01" mmlRp:depCodeId="requesting
department">First surgery</mmlRp:conDepartment>
<mmlRp:client mmlRp:clientCode="facility"
mmlRp:clientCodeId="MML0024">Hanako Ishi</mmlRp:client>
</mmlRp:consultFrom>
<mmlRp:perform>
<mmlRp:pFacility mmlRp:facilityCode="JPN432101234567"
mmlRp:facilityCodeId="JMARI">Test Hospital</mmlRp:pFacility>
<mmlRp:pDepartment mmlRp:depCode="30"
mmlRp:depCodeId="MML0028">radiology</mmlRp:pDepartment>
<mmlRp:performer mmlRp:performerCode="password"
mmlRp:performerCodeId="userId">Jiro Gishi</mmlRp:performer>
</mmlRp:perform>
</mmlRp:information>
<mmlRp:reportBody>
<mmlRp:chiefComplaints>nothing in particular HCC</
mmlRp:chiefComplaints>
<mmlRp:testPurpose>(CT scanning)I would like to ask for evaluation
after treatment. On March 28, 2002, SMANCS was injected at S5 and
S8. On April 8, 19, June 22, and July 2, RFA was performed. It was
confirmed that viable lesion was left. On July 17, PEIT was
performed under CT guide. On August 1 and August 16, TACE was
performed.</mmlRp:testPurpose>
<mmlRp:testDx>HCC, post TACE</mmlRp:testDx>
<mmlRp:testNotes>Around hepatic anterior post TACE
lipiodol accumulation was observed.<xhtml:br/>
<xhtml:br/>Since abnormal enhancement and lipiodol accumulation
exist as a result of the treatment, it is hard to evaluate
whether there is viability or not, but there is a possibility of
a lesion because nodular pigment is partially found. Follow-up
evaluation is appreciated.<xhtml:br/>
<xhtml:br/>An obvious new lesion can not be pointed out.<xhtml:br/>
<xhtml:br/>No ascites. <mmlCm:extRef mmlCm:contentType="image/jpeg"
mmlCm:href="JPN432101234567RR20020823_CT_20020851501.0001.jpg"
mmlCm:medicalRole="ctScan" mmlCm:title="plain"/>
<mmlCm:extRef mmlCm:contentType="image/jpeg"
mmlCm:href="JPN432101234567RR20020823_CT_20020851501.0002.jpg"
mmlCm:medicalRole="ctScan" mmlCm:title="dynamic-early"/>

```

```
</mmlRp:testNotes>
</mmlRp:reportBody>
</mmlRp:ReportModule>
</local_markup>
</content>
</paragraph>
</section>
</body>
</levelone>
```

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Non-Profit Organization
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MML -Medical Markup Language-
Specification Version 3.0

First Printing, January 5, 2003

Published by The MedXML Consortium
 Non-Profit Organization

Edited by TechMatrix Corporation
 Shuwa-Yanagibashi Bldg. 2-19, Yanagibashi, Taito-ku, Tokyo
 TEL: 03-3864-7740 Fax: 03-3864-7566

Printed by CAI System Corporation
 3-5, Nibancho, Tokuyama-shi, Yamaguchi-ken
 TEL: 0834-32-7667 Fax: 0834-32-7655
