Healthcare Professional Profile Specifications

Version History

Version No.	Date	Changed By	Changes Made
1.0	27 June 2008		
1.1	3 May 2010	Valerie Smothers	Added MOC as value to CertificationDuration element, added CertificationReverificationDate to Certificate Issuance, added ClinicalStatus under Member.
1.2	13 May 2010	Valerie Smothers	Added expectedOrActual attribute to GraduationDate and CompletionDate, added ClassLevel to EducationalInfo. Refined definition of id.
1.21	3 September 2010	Valerie Smothers	Deleted the Maintenance of Certification value from the Certification Occurrence element, Added No Longer Active as a value to Education Status element.
1.22	28 April –	Valerie Smothers	Added CertificationFocus element to Certificate Issuance.
1.3	8 September 2011	Valerie Smothers	Added support for attachments to Member, EducationInfo, License, BoardOrder, CertificationInfo, TrainingInfo.
1.4	10 November 2011	Valerie Smothers	Added Continuous as a value for CertificationDuration, added definitions for clinical status values, added use of idd for domain attribute of UniqueID, InstitutionID, ProgramID
1.41	8 December 2011	Valerie Smothers	Added Scheduled Update to Certificate Issuance, changed email address to string, permit extensibility at the Member level.

Version No.	Date	Changed By	Changes Made
1.42	31 Jan 2012	Valerie Smothers	Added xsd:any to CertificateIssuance; deprecated XtensibleInfo; added CertificationMaintenance; indicated board order is for actions against licenses by licensing boards, made dual citizenship explicitly allowed.
1.5	17 Apr 2012	Valerie Smothers	Added: a label attribute to the degree element, examples fo faculty track, DiplomaIssuedDate to EducationInfo, Adjunct Professor and Demonstrator as valid values for Rank under FacultyAppointment. Updated degree example to use abbreviations. Updated the licensure entity domain attribute to use the idd format. Updated ChairAppointment to indicate that it also includes Department Head. Change the attribute value for Citizenship pointInTime to Entry to professional school and create an enumerated list in the schema.
1.6	24 Aug 2012	Valerie Smothers	Profession and Jurisdiction added to License element; TrainingInfo eliminated, new model for EducationInfo with the following new elements: Accreditation, ProgramName, ProgramID, DisciplineOrSpecialty. EducationStatus changed to Status and valid values expanded. GraduationDate changed to CompletionDate. DiplomaIssuesDate changed to CompletionDocumentIssuesDate.
1.61	27 Sep 2012	Valerie Smothers	Jurisdiction StateOrProvince changed to indicate a name or abbreviation is valid. Certificate element under EducationalInfo changed back to EducationalCertificate. Status changed back to EducationStatus.
1.62	4 January 2013	Valerie Smothers	Maintenance of Certification removed from CertificationOccurrenceType in XSD schema (previously removed from documentation); Added NationalID element.

Version No.	Date	Changed By	Changes Made
1.67	14 February 2013	Valerie Smothers	Added Not required value to CertificationMaintenance and allowed for multiplicity of 2; Added changes to OccupationInfo & AcademicAppointment for review, incorporating academic appointments within OccupationInfo.
1.71	26 March 2013	Valerie Smothers	PROPOSAL: Removed not required value from CertificationMaintenance and allowed for multiplicity of 0 or 1. Added MaintenanceRequired element with Boolean value.
1.72	28 March 2013	Valerie Smothers	PROPOSAL: Changed MaintenanceRequired to CertificationMaintenanceRequired, valid values Required and Not Required.
1.73	26 june 2013	Valerie Smothers	Proposals from 26 and 28 March accepted. Not Maintained value of Certification Maintenance Type capitalized.
1.74	24 July 2913	Valerie Smothers	Added Lapsed as a value to CertificateStatus and CertificationStatus and provided examples.
1.8	6 August 2013	Valerie Smothers	PROPOSAL: add the following global attributes: id, validityDate, restrictions. Add a source attribute to leaf nodes. Add CountryOfBirth element to PersonalInfo, SuspendedUntilDate to CertificationInfo. Add nativeLanguage to Language element and changed data type to xsd:language. Added NotCertified as valid value for CertificationStatus and CertificateStatus (may need to create new type). Changed date elements to allow for optional accuracy element. NOTE: All diagrams must be updated to reflect the new common attributes. That is in progress.

Version No.	Date	Changed By	Changes Made
1.81	16 August 2013	Valerie Smothers	Made source a common attribute. Made the following elements unbounded: Name, ClinicalStatus, and all PersonalInfo subelements.Changed existing id attribute on BoardNotice to boardNoticeID and added domain attribute and CommonAttributes. Changed existing id attribute on BoardAction to boardActionID and added code attribute and CommonAtributes.
1.82	7 April 2014	Valerie Smothers and Prasad Chowdavarapu	Corrected example of domain attribute for InstitutionID. Added StatusValidUntilDate to CertificationInfo. Modified Common Data Types section to reflect dependence on common.xsd
1.83	14 August 2014	Valerie Smothers and Prasad Chowdavarapu	Changed datatype of CountryOfResidence and CountryOfBirth to CountryTypeWithAttributes.
1.84 proposed	25 Sep 2014	Valerie Smothers and Prasad Chowdavarapu	CertificateStatus changed to CertificationStatus. StatusValidUntilDate changed to CertificationStatusValidUntilDate. CertificationMaintenance and CertificationMaintenanceRequired were added to CertificationInfoType. The following added to CertificateInfoType: CertificateFocus, CertificateStatus, CertificateMaintenance and CertificateMaintenanceRequired. Changed the names of CertificateIssuance sub-elements to begin with CertificateIssuance. Two exceptions: CertificateIssueDate and CertificateExpireDate. Definition of CertificateIssuanceID updated.

Version No.	Date	Changed By	Changes Made
1.9	21 January 2015	Valerie Smothers and Prasad Chowdavarapu	For CertificationStatus and CertificateStatus, added Certified and removed Active as valid values. For CertificateIssuanceStatus, removed Not Certified as valid value. Added the following to License: LicenseNumberAvailability, LicenseCategory, LicenseNotices, LicenseNotice. Made LicenseNumber optional. Defined CodeDescription as a common datatype. Added DiscplinaryCodeEntity to DisciplinaryEntity. Removed code and domain attributes from DisciplinaryEntityName and added abbreviation attribute. Added to BoardOrder: BoardOrderBasis, BoardActions, and BoardAppeals. Removed NoticeOrAction from BoardOrder. Renamed BoardOrderAppeal BoardAppeal. Renamed its id attribute appealed. Removed code attribute as documented for BoardAction. Added the following elements to BoardAction: ActionCategory and Prejudicial. RemovedBoardNotice.
1.91	12 March 2015	Valerie Smothers and Prasad Chowdavarapu	Added Certifed but Clinically Inactive to list of valid values for CertificationStatus and Certificate Status. Changes CertificationOrganization ro RecognitionOrganization and modified definition.
1.92	25 August 2015	Valerie Smothers and Prasad Chowdavarapu	Generalization of licensure language (license or registration); correction of examples in RecognitionOrganization and CertificationBoard.
1.93	23 Sep 2015	Valerie Smothers and Prasad Chowdavarapu	Corrected LicenseCategory definition to indicate that it is optional.

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Table of Contents

1   Acknowledgements

The MedBiquitous Consortium wishes to acknowledge the help of the MedBiquitous Consortium Professional Profile Working Group members, staff, and other individuals that contributed to the creation of this document, including:

Chair:

- Mike Zarski, American Oseopathic Association

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- Mike Dugan, Federation of State Medical Boards
- James Fiore, American Board of Surgery
- Annette Gippe, American Osteopathic Association
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Invited Expert

- Toby Vandemark

The MedBiquitous Consortium Technical Steering Committee contributed their expertise to ensure that this specification is well-designed and interoperable with related industry standards.

- Joel Farrell, IBM, Chair
- Dan Rehak, Learning Technologies Architect
- James Fiore, American Board of Surgery
- Steve Kenney, American Osteopathic Association

- Andy Rabin, CECity
- Carl Singer, CECity
- Dan White, American Board of Internal Medicine

2   Documentation Conventions

This document uses the following conventions:

Convention	Description
Bold Text	When used with an XML element name, indicates that the element contains sub-elements.
Italics	When used in an XML element description, an attribute of the XML element.
`Monospaced type`	Sample XML tags, code, schema, or portion thereof.

The document uses graphics generated by Altova XML Spy® software, which uses the following graphical conventions.

Generated by XMLSpy   www.altova.com
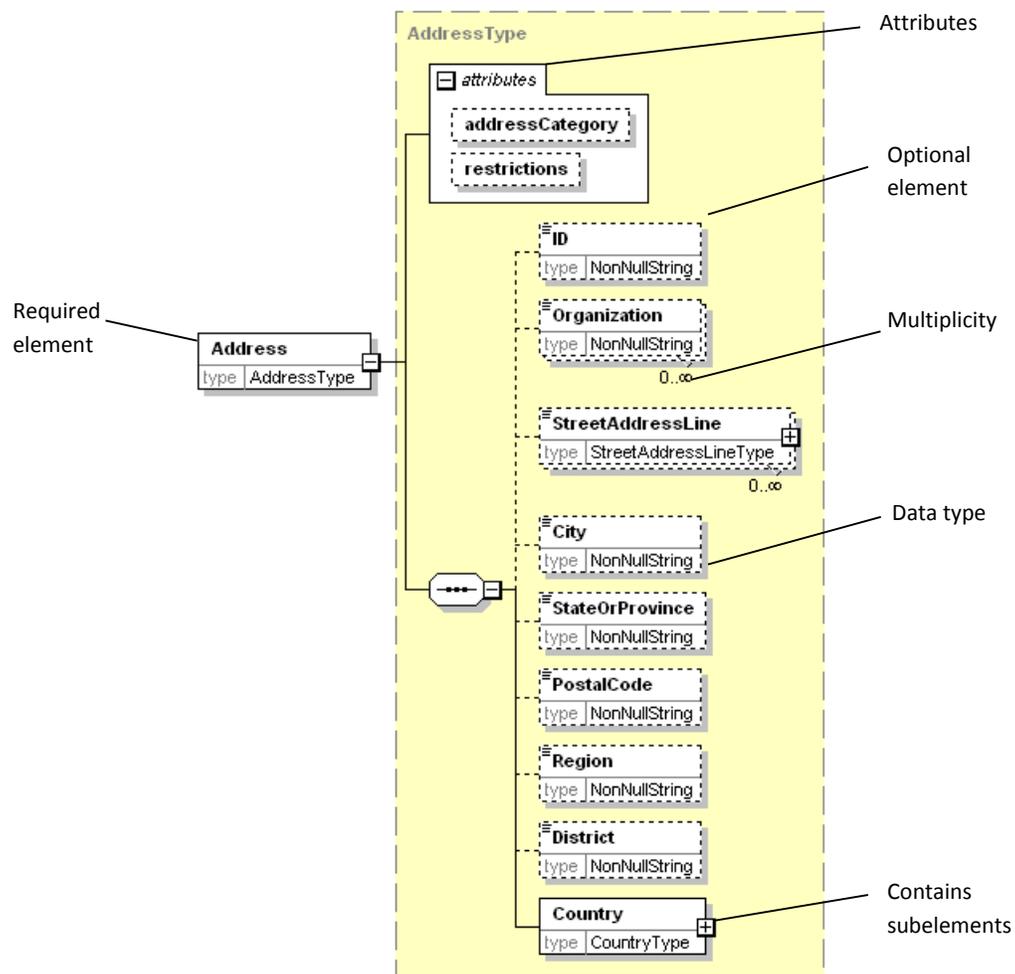
3   Conformance

To be a conformant instance of the MedBiquitous Healthcare Professional Profile specification, an XML document:

- Shall validate against the XML Schema available at:
  http://ns.medbiq.org/member/v2/member.xsd
- Shall conform to any additional requirements stated in this specification.
- May include elements not defined in this document in permitted areas and only if those elements are namespace qualified.

4   Common Data Types

Most of the elements and attributes in MedBiquitous XML documents use the data types defined by the W3C XML schema definition [XML]. In some cases MedBiquitous creates its own datatypes as part of its best practices or to meet a specific requirement. Several commonly used datatypes are defined in the common.xsd file. For more information about common.xsd, see (add link, create reference).

In addition, the professional profile defines a CodeDescriptionType datatype for describing code-description pairs. The full definition of CodeDescription follows.

4.1   CodeDescriptionType

CodeDescriptionType is used for elements that use a code and a description of the code to convey meaning. The Code and Description elements are defined below. Note that CodeDescription elements use the CommonAttributes defined in the section "Common Attributes."

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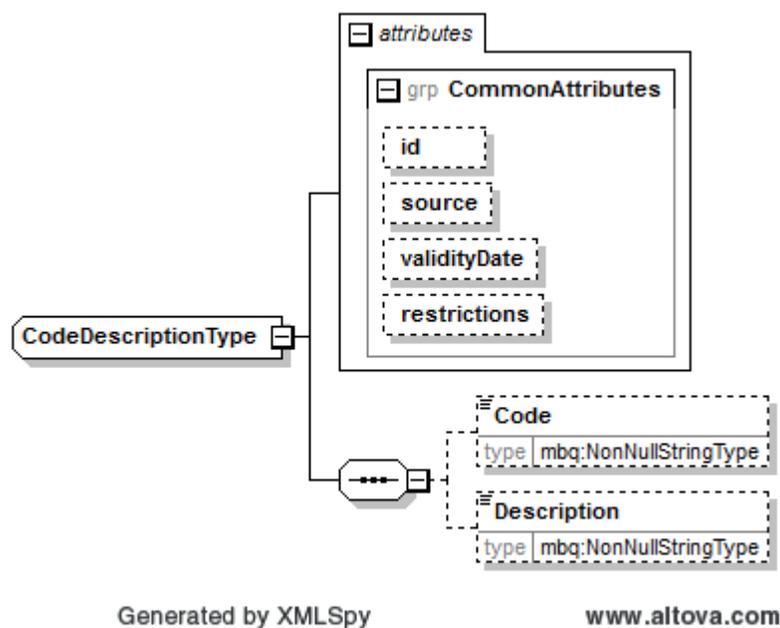
Element	Description	Required	Multiplicity	Datatype
Code	A code defining the value of the data element.	No	0 or 1	Non-null String
Description	A descrption of the code or the value of the data element.	No	0 or 1	Non-null String

5   Common Attributes

MedBiquitous has defined common attributes that are applied globally across Healthcare Professional Profile elements. Use of these attributes is optional. They are designed to facilitate the transition to data compilation and linked data approaches to data use.

The following attributes may be applied to all Healthcare Professional Profile elements.

Global Attribute Information

Attribute	Description	Multiplicity	Datatype
id	A unique identifier for this piece of data. The identifier must be unique within the scope of the Healthcare Professional Profile document.	0 or 1	ID
validityDate	The date this piece of data was deemed valid. For example, the date of entry.	0 or 1	date
restrictions	Indicates whether this piece of information is to be unrestricted, restricted, or confidential when sharing information with partner organizations or the general public. Valid values are: Unrestricted, Restricted, Confidential. Unrestricted indicates that a piece of data may be shared or published. Restricted indicates that a piece of data may be shared in some instances, but not	0 or 1	Restricted

	published. Policies must be defined surrounding the use of restricted data.		
	Confidential indicates that a piece of data may not be shared or published.		
source	The source of this piece of data.	0 or 1	string
	[What should we recommend for a value? Domain name? Are codes being established by data partners?]		

6   Introduction (rewrite)

This document describes the MedBiquitous Healthcare Professional Profile XML Schema in detail. It is intended for use by any one who wants to create, implement, or create interoperable tools for XML profiles based on this specification. The status of the document is indicated at the bottom of the page; draft documents are subject to review and approval through the MedBiquitous Standards Program Operating Procedures (see

http://www.medbiq.org/working_groups/consortium_process/MedBiquitousANSIProcess.pdf).

The objective of this Healthcare Professional Profile Schema is to provide a data structure that allows one to represent one or more healthcare professionals or members of professional medical societies in a standard format. This structure then enables the exchange of profile information between related business systems and over the Web.

The MedBiquitous Consortium is charged with creating an XML framework for professional medical societies that will enable them to collaborate to advance medical education and professional competence assessment. Societies are based on the concept of membership; it touches every aspect of their business. Societies often exchange member information with third-party vendors and publishers. In addition, many certifying and licensing boards need to communicate clinician profile information with their umbrella entities or partner organizations. The Professional Profile facilitates these transactions as well.

Many societies are coming together into web community portals around a single medical specialty. Within each community, a user may belong to one or more professional medical societies. The Professional Profile reflects this view of membership: an individual may be a member of multiple organizations.

7   Other Standards, Specifications, or Schemas Referenced

This Professional Profile schema imports and refers to the MedBiquitous Name Schema [Name] and the MedBiquitous Address Schema [Address], which are a part of this standard. Both are available from the MedBiquitous XML Repository at http://ns.medbiq.org .

8 Professional Profile XML Schema Grammar

The following sections explain the Professional Profile XML Schema grammar. Values in **bold** under XML Tags column indicate that the element has sub-elements.

All the elements having sub-elements will be defined in separate sections. All elements without sub-elements will be defined within the appropriate element sections that use them.

8.1 Members

Members is the root element. It contains professional profile information for one or more members of a community. Members must occur once within a professional profile.

Members has the sub-element Member, which describes professional profile information for a single person.

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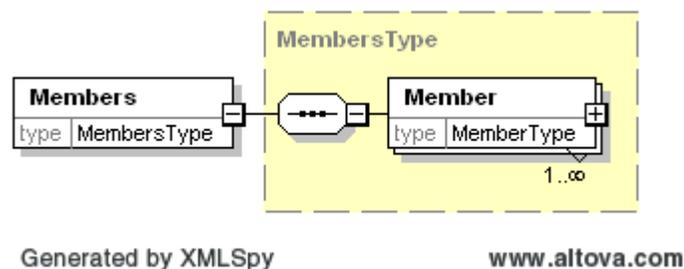
Example:

```
<Members>
  <Member>
   ...
  </Member>
  <Member>
   ...
  </Member>
</Members>
```

8.2 Member

Member is the subelement of Members that contains all member profile information elements for a single user within a community. Member must occur at least once within a member profile.

Member has a series of sub-elements that are defined in this document.

MemberType

attributes
- id
- source
- validityDate
- restrictions

Member
type | MemberType
1..∞

UniqueID
type | UniqueIDType
0..∞

Name
type | n:NameType
0..∞

Address
type | a:AddressType
0..∞

EducationInfo
type | EducationInfoType
0..∞

CertificationInfo
type | CertificationInfoType
0..∞

LicenseInfo
type | LicenseInfoType

DisciplinaryInfo
type | DisciplinaryInfoType

ClinicalStatus
type | ClinicalStatusType
0..∞

OccupationInfo
type | OccupationInfoType
0..∞

PersonalInfo
type | PersonalInfoType

MembershipInfo
type | MembershipInfoType
0..∞

Attachment
type | mbq:AttachmentType
0..∞

ModifiedDate
type | DateAndAccuracyType

XtensibleInfo
type | XtensibleInfoType

any ##other
0..∞

Member Information

Element	Description	Required	Multiplicity	Datatype
Member	Member is the subelement of Members. It contains sub-elements that define profile information for a single user or healthcare professional within a community. Member has the following attribute:	Required	1 or more	Container
UniqueID	UniqueID is the subelement of Member. It defines a unique alphanumeric identifier for the member. UniqueID has the following attribute: *domain* Defines provides a unique identifier describing the type of ID described by UniqueID. Domain has the following format: idd:*domainname*:*localidentifier* Where: *domainname* is an internet domain name owned by the organization issuing the unique ID and *localidentifer* is a local identifier for the type of unique ID.	Optional	0 or more	Non-null String

Element	Description	Required	Multiplicity	Datatype
	For example: idd:aamc.org:famous Use of the domain attribute is required when using the UniqueID element.			
Name	Name is the subelement of Member. Name contains elements that define a person's name in detail. For more information, see the MedBiquitous Name Specifications and Description Document [Name].	Optional	0 or more	Container
Address	Address is the subelement of Member. Address contains elements that define an address in detail. For more information, see the MedBiquitous Address Specifications and Description Document [Address].	Optional	0 or more	Container
EducationInfo	EducationInfo is the subelement of Member. EducationInfo contains elements that define the educational background for a member, including bachelor's degree and medical degree. See section EducationInfo for more information.	Optional	0 or more	Container
CertificationInfo	CertificationInfo is the subelement of Member.	Optional	0 or more	Container

Element	Description	Required	Multiplicity	Datatype
	CertificationInfo contains elements that define a medical professional's certification from a medical specialty board, such as the American Board of Internal Medicine. See section CertificationInfo for more information.			
LicenseInfo	LicenseInfo is the subelement of Member. LicenseInfo contains elements that describe the professional licenses helf by an individual. See section LicenseInfo for more information.	Optional	0 or 1	Container
DisciplinaryInfo	DisciplinaryInfo is the subelement of Member. DisciplinaryInfo contains elements that describe any licensing board actions or notices for an individual. See section DisciplinaryInfo for more information.	Optional	0 or 1	Container
ClinicalStatus	ClinicalStatus is the subelement of Member. It describes whether or not the professional is clinically active. Valid values are: Active, Inactive, Unknown. Definitions follow. Active – Maintaining a clinical practice. Clinicians on temporary sabbatical should be marked as Active.	Optional	0 or more	Restricted

Element	Description	Required	Multiplicity	Datatype
	Inactive – Retired from all clinical practice. Unknown – the clinician's clinical status is not known.			
OccupationInfo	OccupationInfo is the subelement of Member. OccupationInfo contains elements that define a medical professional's occupation, including academic appointments.. See section OccupationInfo for more information.	Optional	0 or more	Container
PersonalInfo	PersonalInfo is the subelement of Member. PersonalInfo contains elements that define personal information about a member. See section PersonalInfo for more information.	Optional	0 or 1	Container
MembershipInfo	MembershipInfo is the subelement of Member. MembershipInfo contains elements that define a user's membership in professional medical societies and related organizations. See section MembershipInfo for more information.	Optional	0 or more	Container
Attachment	The subelements of attachment reference or include an attachment	Optional	0 or more	Container

Element	Description	Required	Multiplicity	Datatype
	supporting the accompanying data. For more information, see MedBiquitous Guidelines for Transmitting Binary Attachments, http://www.medbiq.org/sites/ default/files/files/ Attachment_guidelines_v1.pdf			
ModifiedDate	ModifiedDate is the subelement of Member and defines the date that this member record was last updated. ModifiedDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	Optional	0 or 1	Date
XtensibleInfo	XtensibleInfo is the subelement of Member. XtensibleInfo contains sub-elements defined by the organization implementing the schema. See section XtensibleInfo for more information. XtensibleInfo is included for backward compatibility and is not the preferred method of extension.	Optional	0 or 1	Container

Element	Description	Required	Multiplicity	Datatype
Any	The Member element may contain any elements defined by the organization implementing the schema provided those elements are defined in another namespace. This is the preferred method of extension.	Optional	0 or more	Any datatype

Example: UPDATE

```
<Member restrictions = "Unrestricted">
    <UniqueID domain = "American College of Surgeons">21556222</UniqueID>
    <Name>
        <n:GivenName>Percy</n:GivenName>
        <n:GivenName>Bysshe</n:GivenName>
        <n:FamilyName>Shelley</n:FamilyName>
        <n:Degree>MD</n:Degree>
    </Name>
    <Address>
        <a:StreetAddressLine>Department of Surgery</a:StreetAddressLine>
        <a:StreetAddressLine>600 N. Wolfe Street</a:StreetAddressLine>
        <a:City>Baltimore</a:City>
        <a:StateOrProvince>MD</a:StateOrProvince>
        <a:PostalCode>21287</a:PostalCode>
        <a:Country>
            <a:CountryCode>US</a:CountryCode>
        </a:Country>
    </Address>
    <EducationInfo>
        . . .
    </EducationInfo>
    <TrainingInfo>
        . . .
    </TrainingInfo>
    <CertificationInfo>
        . . .
    </CertificationInfo>
    <OccupationInfo>
        . . .
    </OccupationInfo>
    <PersonalInfo>
        . . .
    </PersonalInfo>
```

```
    <MembershipInfo>
       . . .
    </MembershipInfo>
    <ModifiedDate>2003-12-04</ModifiedDate>
</Member>
```

8.3 EducationInfo

The EducationInfo element defines the educational background for a user, including bachelor's degree, health professions degree, and post graduate training. This element breaks educational information into more detail. EducationInfo is a sub-element of Member.

EducationInfoType

EducationInfo
type | EducationInfoType
0..∞

Degree
type | DegreeType

EducationalCertificate
type | EducationalCertificateType

InstitutionInfo
type | InstitutionInfoType

Accreditation
type | NonNullStringType

ProgramName
type | ProgramNameType

ProgramID
type | UniqueIDType

DisciplineOrSpecialty
type | NonNullStringType

Distinction
type | NonNullStringType

Status
type | StatusType

ClassLevel
type | NonNullStringType

StartDate
type | DateAndAccuracyType

EndDate
type | DateAndAccuracyType

CompletionDate
type | CompletionDateType

CompletionDocumentIssuedDa...
type | DateAndAccuracyType

Attachment
type | mbq:AttachmentType
0..∞

EducationInfo Element Information

Element	Description	Required	Multiplicity	Datatype
EducationInfo	This is the sub-element of the root element Member. This element has sub-elements that define the user's degrees and certifications.	Optional	0 or more	Container
Degree	This is the sub-element of the EducationInfo element. It defines the degree received. For example, BA, MD. This is not a controlled list. This element provides the following attributes: discipline Defines the academic discipline for the degree received. For example, Engineering, Chemistry, etc. label A label describing the degree. The label may contain the full title of the degree.	Optional	0 or 1	Non-null String
EducationalCertificate	This is the sub-element of the EducationInfo element. It defines the certificate received. For example, Perfusionist. This is not a controlled list. This element provides the following attributes: type Defines the type of certificate.	Optional	0 or 1	Non-null String

Element	Description	Required	Multiplicity	Datatype
	For example, Professional, HighSchool, etc.			
InstitutionInfo	This is the sub-element of the EducationInfo element. This element has sub-elements that define the certificate or degree-granting institution in detail. See section InstitutionInfo for more information.	Optional	0 or 1	Container
Accreditation	Defines the accrediting organization for this program. For example, ACGME.	Optional	0 or 1	Non-null String
ProgramName	The name of the education or training program. For example, Johns Hopkins Emergency Medicine Residency Program. This element provides the following attribute: *type* Defines the type of program. Possible values are: Residency, Fellowship, Other. NEEDS EXPANSION What would the group think of using the following (aligns with healthcare lom)? • vocational training • undergraduate education • undergraduate professional education	Optional	0 or 1	Non-null String

Element	Description	Required	Multiplicity	Datatype
	• graduate professional education			
ProgramID	A unique alphanumeric identifier for the program. This element has one attribute: *domain* Defines defines the organization that is the source of the unique identifier. Domain has the following format: idd:*domainname*:*localidentifier* Where: *domainname* is an internet domain name owned by the organization issuing the unique ID and *localidentifer* is a local identifier for the type of unique ID. For example: idd:acgme.org:12345	Optional	0 or 1	Non-null String
DisciplineOrSpecialty	The academic discipline or medical specialty of the program. For example, Cardiology.	Optional	0 or 1	Non-null String

Element	Description	Required	Multiplicity	Datatype
Distinction	This is the sub-element of the EducationInfo element. This element defines any distinctions received. For example, CumLaude, Honors, etc.	Optional	0 or 1	Non-null String
EducationStatus	This is the sub-element of the EducationInfo element. It defines that staus of the individual in relation to the educational program. Valid values include: Year X (where X is a valid digit), Active, Graduated, Completed Preliminary Training, Completed Specialty Training, Leave of Absence, Withdrawn, Dismissed, No Longer Active, and Deceased.	Optional	0 or 1	Restricted
ClassLevel	This is the sub-element of the EducationInfo element. It defines the year, month, or week of study, or the general class level of the user. For example, Year 2, Freshman, etc.	Optional	0 or 1	Non-null string
StartDate	This is the sub-element of the EducationInfo element and defines the date the user started this degree or certificate program. StartDate has the following attribute: accuracy defines which parts of a date	Optional	0 or 1	Date

Element	Description	Required	Multiplicity	Datatype
	are accurate. Valid values are: DayMonthYear, MonthYear, and Year.			
EndDate	This is the sub-element of the EducationInfo element and defines the date the user completed or ended this degree or certificate program. EndDate has the following attribute: accuracy defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	Optional	0 or 1	Date
CompletionDate	The individual's scheduled completion date for this program. CompletionDate has the following attributes: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year. *expectedOrActual* defines whether the completion date is an expected date of completion or the date the user actually completed the program. Valid values are: Expected, Actual.	Optional	0 or 1	Date

Element	Description	Required	Multiplicity	Datatype
CompletionDocumentIssuedDate	The date the physical diploma or other official documentof completion was issued. CompletionDocumentIssuedDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	Optional	0 or 1	Date
Attachment	The subelements of attachment reference or include an attachment supporting the accompanying data. For more information, see MedBiquitous Guidelines for Transmitting Binary Attachments, http://www.medbiq.org/sites/ default/files/files/ Attachment_guidelines_v1.pdf	Optional	0 or more	Container

Example:

```
<EducationInfo>UPDATE
   <Degree>M.D.</Degree>
   <InstitutionInfo>
      <InstitutionName>Johns Hopkins University</InstitutionName>
   </InstitutionInfo>
   <EducationStatus>Withdrawn</EducationStatus>
   <StartDate>1980-08-01</StartDate>
   <EndDate>1982-07-31</EndDate>
   <GraduationDate>1984-07-31</GraduationDate>
</EducationInfo>
```

8.3.1   InstitutionInfo

The InstitutionInfo element defines the name and address for a medical or educational institution. This element breaks institution information into more detail. InstitutionInfo is a sub-element of EducationInfo and ProgramInfo.
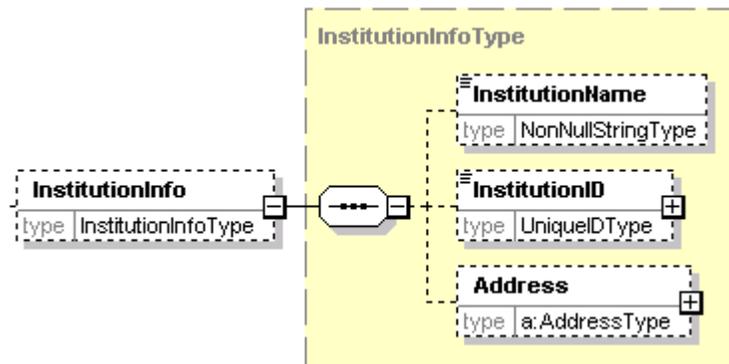
InstitutionInfo Element Information

Element	Description	Required	Multiplicity	Datatype
InstitutionInfo	This is the sub-element of the EducationInfo and ProgramInfo elements. It contains elements that define an institution's name and address.	Optional	0 or 1	Container
InstitutionName	This is the sub-element of the InstitutionInfo element. It defines the name of a medical or educational institution. For example, Johns Hopkins School of Medicine.	Optional	0 or 1	Non-null String
InstitutionID	This is the sub-element of the InstitutionInfo element. It defines a unique alphanumeric identifier for the institution.	Optional	0 or 1	Non-null string

Element	Description	Required	Multiplicity	Datatype
	This element has one attribute: *domain* Defines defines the organization that is the source of the unique identifier. Domain has the following format: *idd:domainname:localidentifier* Where: *domainname* is an internet domain name owned by the organization issuing the unique ID and *localidentifer* is a local identifier for the type of unique ID. For example: `idd:faimer.org:imed`			
Address	This is the sub-element of the InstitutionInfo element. It defines the institution address. See the MedBiquitous Address Specifications and Description Document for more information [Address].	Optional	0 or 1	Container

Example:

```
<InstitutionInfo>
   <InstitutionName>
   Johns Hopkins University School of Medicine
   </InstitutionName>
   <InstitutionID domain="AAMC">133</InstitutionID>
   <Address>
      <a:StreetAddressLine>720 Rutland Avenue</a:StreetAddressLine>
      <a:City>Baltimore</a:City>
```

```
        <a:StateOrProvince>MD</a:StateOrProvince>
        <a:PostalCode>21205</a:PostalCode>
        <a:Country>
            <a:CountryCode>US</a:CountryCode>
        </a:Country>
    </Address>
 </InstitutionInfo>
```

8.4 CertificationInfo

The CertificationInfo element defines a medical professional's certification from a medical specialty board, such as the American Board of Internal Medicine. This element breaks certification information into more detail. CertificationInfo is a sub-element of Member.

CertificationInfo Element Information

Elements	Description	Required	Multiplicity	Datatype
CertificationInfo	This is the sub-element of Member. This element has sub-elements that define the user's medical specialty certification.	Optional	0 or more	Container
RecognitionOrganization	This is the sub-element of CertificationInfo. RecongitionOrganization defines the organization accrediting, certifying, or otherwise recognizing the certifying board or exam.. For example, American Board of Medical Specialties, National Commission for Certifying Agencies, etc.	Optional	0 or 1	Non-null String
CertificationBoard	This is the sub-element of CertificationInfo. CertificationBoard defines the board certifying the medical professional. For example, American Board of Pediatrics, American Nurses Credentialing Center, etc.	Optional	0 or 1	Non-null String
CertificationStatus	This subelement of CertificationInfo identifies the current status of the individual's specialty certification. Valid values are: Inactive, Lapsed, Expired, Revoked, Suspended, Surrendered, Certified, Certified but Clinically Inactive, and Not Certified. Lapsed may be used, for example, if the certification board provides a grace period following the expiration date of an individual's certificate.	Optional	0 or 1	Restricted
CertificationStatusValidUntilDate	This subelement of CertificationInfo defines a date until which the certificate status (as defined in CertificateStatus) is valid. StatusValidUntilDate has the following attribute:	Optional	0 or 1	Date

	accuracy defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.			
CertificationMaintenance	This is the sub-element of CertificationInfo and defines whether or not the individual has a certificate that is maintained. Valid values are Maintained and Not Maintained.	Optional	0 to 1	Restricted
CertificationMaintenanceRequired	This is the sub-element of CertificationInfo and defines whether or not certification maintenance is required for any of the certificates held by this individual. Valied values are Required and Not Required.	Optional	0 or 1	Restricted
CertificateInfo	This is the sub-element of CertificationInfo. CertificateInfo contains subelements that define a particular certification held by the medical professional.	Optional	0 or more	Container
Attachment	The subelements of attachment reference or include an attachment supporting the accompanying data. For more information, see MedBiquitous Guidelines for Transmitting Binary Attachments, http://www.medbiq.org/sites/ default/files/files/ Attachment_guidelines_v1.pdf	Optional	0 or more	Container

Example:

```
<CertificationInfo> UPDATE
   <CertificationOrganization>
   American Board of Medical Specialties
   </CertificationOrganization>
   <CertificationBoard>American Board of Surgery</CertificationBoard>
   <CertificateStatus>Active</CertificateStatus>
   <CertificateInfo>
   . . .
   </CertificateInfo>
   <CertificateInfo>
   . . .
   </CertificateInfo>
</CertificationInfo>
```

8.4.1   CertificateInfo

CertificateInfo contains subelements that define a particular certification held by the medical professional. For example, Internal Medicine or Geriatric Medicine are both certifications issued by the American Board of Internal Medicine.
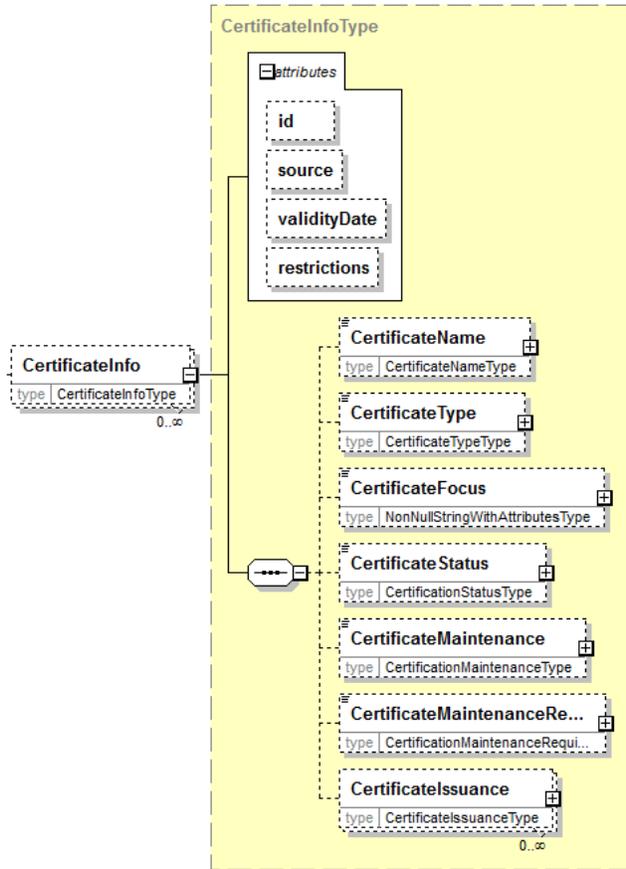
CertificateInfo Element Information

Elements	Description	Required	Multiplicity	Datatype
CertificateInfo	CertificateInfo contains subelements that define a particular certification held by the medical professional.	Optional	0 or more	Container
CertificateName	This is the sub-element of the CertificationInfo element and defines the name of the certificate. For example, General Surgery.	Optional	0 or 1	Non-null String

Elements	Description	Required	Multiplicity	Datatype
	CertificateName has the following attribute: CertificateID defines the identifier for a type of certificate issued by a specific specialty board. For example, the Sports Medicine Certificate issued by the American Board of Family Practice has a unique identifier distinct from the identifier for the Sport Medicine Certificate issued by the American Board of Emergency Medicine. The Certificate ID is assigned by the Certification Organization, for example, the American Board of Medical Specialties.			
CertificateType	This subelement of CertificationInfo defines the type of certificate. Valid values are: General Certificate, Subcertificate.	Optional	0 or 1	Restricted
CertificateFocus	Defines any focus area associated with this certificate. For example, Hospital Medicine.	Optional	0 or 1	Non-null String
CertificateStatus	Defines whether or not a certificate is active. Valid values are Inactive, Lapsed, Expired, Revoked, Suspended, Surrendered, Certified, Certified but	Optional	0 or 1	Restricted

Elements	Description	Required	Multiplicity	Datatype
	Clinically Inactive, and Not Certified. Lapsed may be used, for example, if the certification board provides a grace period following the expiration date of an individual's certificate.			
CertificateMaintenance	Defines whether or not the certificate is maintained. Valid values are: Maintained, Not Maintained.	Optional	0 to 1	Restricted
CertificateMaintenanceRequired	Defines whether or not maintenance for this certificate is required. Valid values are Required and Not Required.	Optional	0 or 1	Restricted
CertificateIssuance	This is the subelement of CertificationInfo. CertificateIssuance contains elements that define a specific issuance of a certification.	Optional	0 or more	Container

Example:

```
<CertificateInfo> UPDATE
   <CertificateName certificateID = "44444">
   General Surgery
   </CertificateName>
   <CertificateType>General Certificate</CertificateType>
   <CertificateIssuance>
      . . .
   </CertificateIssuance>
   <CertificateIssuance>
```

```
        .  .  .
     </CertificateIssuance>
   </CertificateInfo>
```

8.4.2   CertificateIssuance

CertificateIssuance provides details about specific issuances of a certification. For example, an internist will receive multiple certificates from the American Board of Internal Medicine over the course of his or her career in accordance with the Board's Maintenance of Certification program.
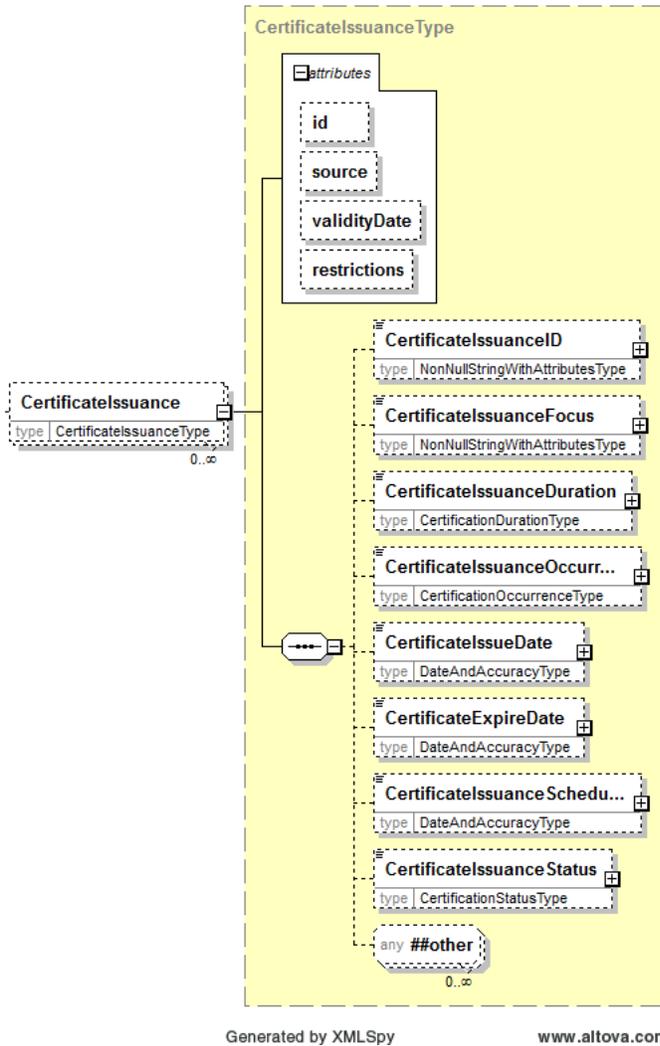
CertificateIssuance Element Information

Elements	Description	Required	Multiplicity	Datatype
CertificateIssuance	This is the subelement of CertificateInfo. CertificateIssuance contains elements that define a specific issuance of certifications for the certificate defined by CertificateName. A physician may have several certifications in the same field, including their initial certifications and recertifications.	Optional	0 or more	Container
CertificateIssuanceID	This sub-element of CertificateIssuance. CertificationID defines a unique identifier for an issuance of a certificate to an individual. CertificateIssuanceID may or may not be unique to the specific issuance (ie John Doe's initial certification in ophthalmology could have one certificate issuance ID; his recertification in ophthalmology could have a different certificate issuance ID).	Optional	0 or 1	Non-null String
CertificateIssuanceFocus	Defines any focus area associated with this issuance of the	Optional	0 or 1	Non-null String

Elements	Description	Required	Multiplicity	Datatype
	certificate. For example, Hospital Medicine.			
CertificateIssuanceDuration	Defines the duration of the certificate. Valid values include: Lifetime, Time-limited, Continuous.	Optional	0 or 1	Restricted
CertificateIssuanceOccurrence	Describes whether the certificate is an initial certificate or one issued through a recertification process. Valid values are: Initial and Recertification.	Optional	0 or 1	Restricted
CertificateIssueDate	Specifies the date the certificate was issued. CertificateIssueDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	Optional	0 or 1	Date
CertificateExpireDate	Specifies the date the certificate will expire. CertificateExpireDate has the following attribute:	Optional	0 or 1	Date

Elements	Description	Required	Multiplicity	Datatype
	accuracy defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.			
CertificateIssuanceScheduledUpdate	Defines a date that the certifying board will update data for this certificate. CertificateIssuance ScheduledUpdate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	Optional	0 or 1	Date
CertificateIssuanceStatus	CertificateIssuanceStatus is the subelement of CertificateIssuance and defines whether or not a specific issuance of a certificate is active. Valid values are Active, Inactive, Lapsed, Expired, Revoked, Suspended, and Surrendered,. Lapsed may be used, for example, if the certification board provides a grace period following the expiration	Optional	0 or 1	Restricted

Elements	Description	Required	Multiplicity	Datatype
	date of an individual's certificate.			
Any	The CertificateIssuance element may contain any elements defined by the organization implementing the schema provided those elements are defined in another namespace.	Optional	0 or more	Any datatype

Example:

TBD UPDATE

8.5   LicenseInfo

The LicenseInfo element describes the professional licenses or registrations held by a healthcare professional. This element contains other elements that provide details on each license or registration held. LicenseInfo is a subelement of Member.
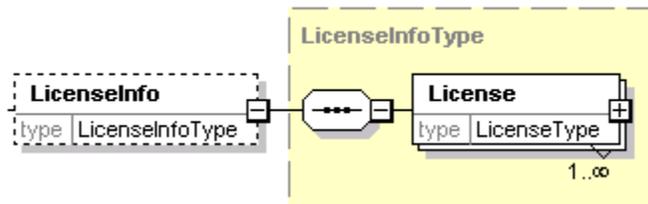
LicenseInfo Element Information

Elements	Description	Required	Multiplicity	Datatype
LicenseInfo	This is the subelement of Member. LicenseInfo	Optional	0 or more	Container

	contains elements that describe the professional licenses or registrations held by a healthcare professional.			
License	This is the subelement of LicenseInfo. License contains subelements that describe a health professions license or registration issued by a government board. For information, see section License.	Required	1 or more	Container

Example:

```
    <LicenseInfo>
        <License>
            <LicensureEntity code = "MD01">
  Maryland Board of Physicians
</LicensureEntity>
            <LicenseNumber>12345654123</LicenseNumber>
            <LicenseStatus>Active</LicenseStatus>
        </License>
    </LicenseInfo>
```

8.5.1   License

License describes a health professions license or registration issued by a government board.
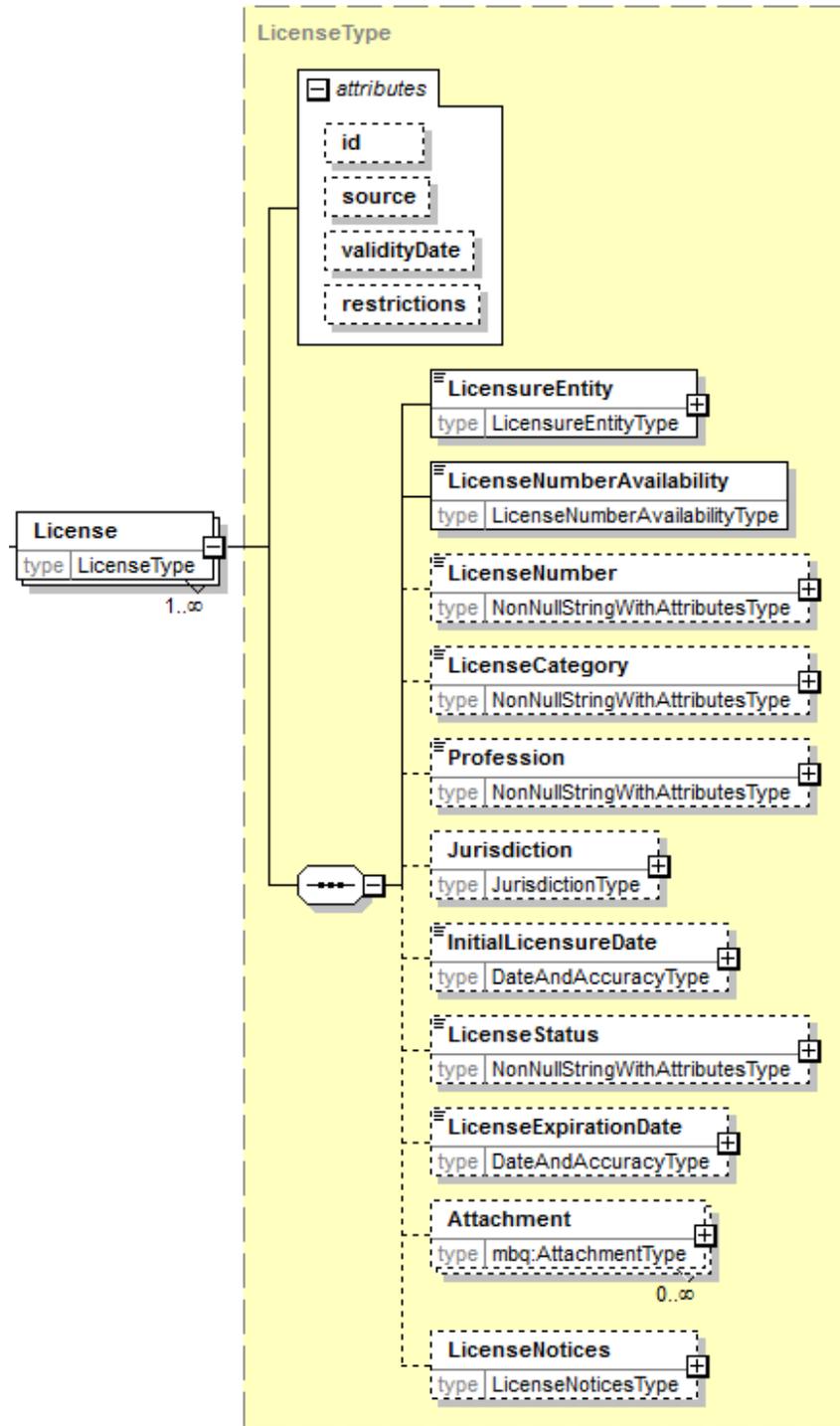
Generated by XMLSpy   www.altova.com

License Element Information

Elements	Description	Required	Multiplicity	Datatype
License	This is the subelement of LicenseInfo. License contains subelements that describe a health professions license or registration issued by a government board.	Yes	1 or more	Container
LicensureEntity	This is the subelement of License. LicensureEntity defines the government entity issuing the license or registration. LicensureEntity has the following attributes: *code* A code defining the licensure entity. *Domain* Defines the community, society, or organization that is the source of the code. Domain has the following format: idd:*domainname*:*localidentifier* Where: *domainname* is an internet domain name owned by the organization issuing the code and *localidentifer* is a local identifier for the type of code. For example: idd:fsmb.org:docinfo	Yes	1	Non-null String

Elements	Description	Required	Multiplicity	Datatype
LicenseNumberAvailability	Describes the availability of the license or registration number. Valid values are Available, Confidential, Unknown.	Yes	1	Restricted
LicenseNumber	This is the subelement of License. LicenseNumber is the alphanumeric string that identifies this issuance of the license or registration.	No	0 or 1	Non-null String
LicenseCategory	A category applicable to this license or registration. Certain restrictions or permissions may be inherent in a license or registration category. For example, Full, Temporary, Training.	No	0 or 1	Non-null string
Profession	The profession for which the license or registration entitles practice. See ANSI/MEDBIQ LO.10.1-2008 Healthcare Learning Object Metadata Specifications and Description Document Appendix 2 for a hierarchical list of recommended values [Healthcare LOM].	No	0 or 1	Non-null String
Jurisdiction	Jurisdiction contains subelements that define the country, state, or province in which the license or registration entitles practice. See section Jursidiction for more information.	No	0 or 1	Container

Elements	Description	Required	Multiplicity	Datatype
InitialLicensureDate	This is the subelement of License. InitialLicensureDate defines the date that this individual was initially licensed or registered by this licensing entity. InitialLicensureDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	No	0 or 1	Date
LicenseStatus	This is the subelement of License. LicenseStatus defines the current status of the license or registration. For example, Active, Inactive.	No	0 or 1	Non null string
LicenseExpirationDate	This is the subelement of License. LicenseExpirationDate defines the date the current license or registration will expire. LicenseExpirationDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	No	0 or 1	Date
Attachment	The subelements of attachment reference or include an attachment	Optional	0 or more	Container

Elements	Description	Required	Multiplicity	Datatype
	supporting the accompanying data. For more information, see MedBiquitous Guidelines for Transmitting Binary Attachments, http://www.medbiq.org/sites/default/files/files/Attachment_guidelines_v1.pdf			
LicenseNotices	LicenseNotices contains sub-elements that define the notices regarding a license or registration. For more information, see section "LicenseNotices."	No	0-1	Container

Example UPDATE:

```
        <License>
            <LicensureEntity code = "MD01">
 Maryland Board of Physicians
</LicensureEntity>
            <LicenseNumber>12345654123</LicenseNumber>
            <InitialLicensureDate>1995-06-30</InitialLicensureDate>
            <LicenseStatus>Active</LicenseStatus>
            <LicenseExpirationDate>2010-06-30</LicenseExpirationDate>
        </License>
```

8.5.2 Jurisdiction

Jurisdiction defines subelements that identify the country, state, or province in which the license entitles practice. Jurisdiction is a subelement of License.
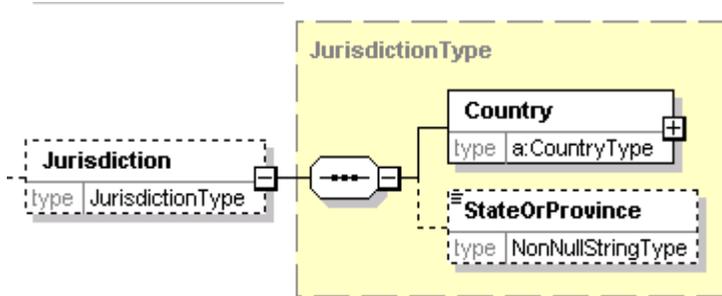
Elements	Description	Required	Multiplicity	Datatype
Jurisdiction	The country, state, or province in which the license or registration entitles practice.	No	0 or 1	Container
Country	Country contains subelements that define the country name and coutry code. See the MedBiquitous Address Specifications and Description Document for more information [Address].	Yes	1	Container
StateOrProvince	The name or abbreviation of the state, province, or territorial division within a country. For example, PA.	No	0 or 1	Non-null string

8.5.3   LicenseNotices

LicenseNotices contains sub-elements that define the notices regarding a license. LicenseNotices is a sub-element of License.
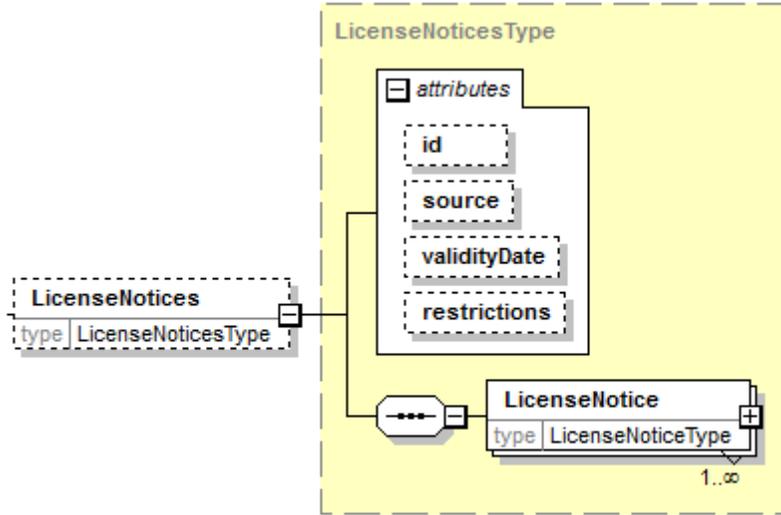
Generated by XMLSpy   www.altova.com

LicenseNotices Element Information

Elements	Description	Required	Multiplicity	Datatype
LicenseNotices	Contains sub-elements that define the notices regarding a license.	No	0 or 1	Container
LicenseNotice	Contains sub-elements that define a single notice in detail. For more information, see section "LicenseNotice."	Yes	1 or more	Container

Example:

```
<LicenseNotices>
   <LicenseNotice>
   . . .
   </LicenseNotice>
   <LicenseNotice>
   . . .
   </LicenseNotice>
</LicenseNotices>
```

8.5.4   LicenseNotice

LicenseNotice contains sub-elements that define a single notice in detail.
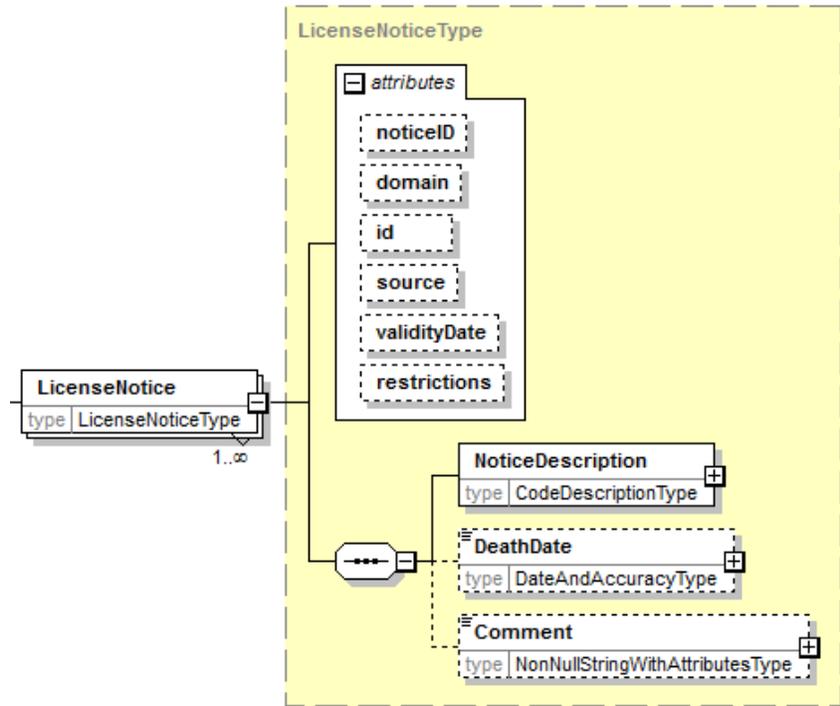
Generated by XMLSpy   www.altova.com

Elements	Description	Required	Multiplicity	Datatype
LicenseNotice	Contains sub-elements that define a single notice in detail.	Yes	1 or more	Container
NoticeDescription	Contains sub-elements that define the nature of the notice using a code and description. For more information, see section "CodeDescriptionType."	Yes	0 or 1	CodeDescriptionType

Elements	Description	Required	Multiplicity	Datatype
DeathDate	The date of death for the individual holding the license or registration. DeathDate has the following attribute: *accuracy* Defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	No	0-1	Date
Comment	A comment regarding this notice.	No	0-1	Non-null String

Example:

TBD

8.6   DisciplinaryInfo

The DisciplinaryInfo element describes any disciplinary actions or notices for the healthcare professional issued by a licensing board. DisciplinaryInfo contains subelements that describe this information in detail. DisciplinaryInfo is a subelement of Member.

DisciplinaryInfo Element Information

Elements	Description	Required	Multiplicity	Datatype
DisciplinaryInfo	DisciplinaryInfo is the subelement of Member. DisciplinaryInfo contains elements that describe any licensing board actions or notices for an individual.	No	0 or 1	Container
BoardOrder	BoardOrder is the subelement of DisciplinaryInfo. BoardOrder contains detailed information about a board notice or action. See section BoardOrder for more information.	Yes	1 or more	Date

Example:

```
<DisciplinaryInfo>
   <BoardOrder>
      ...
   </BoardOrder>
   <BoardOrder>
      ...
   </BoardOrder>
</DisciplinaryInfo>
```

8.6.1   BoardOrder

BoardOrder describes a board notice or disciplinary action in detail. It is intended for actions against licenses by licensing boards.
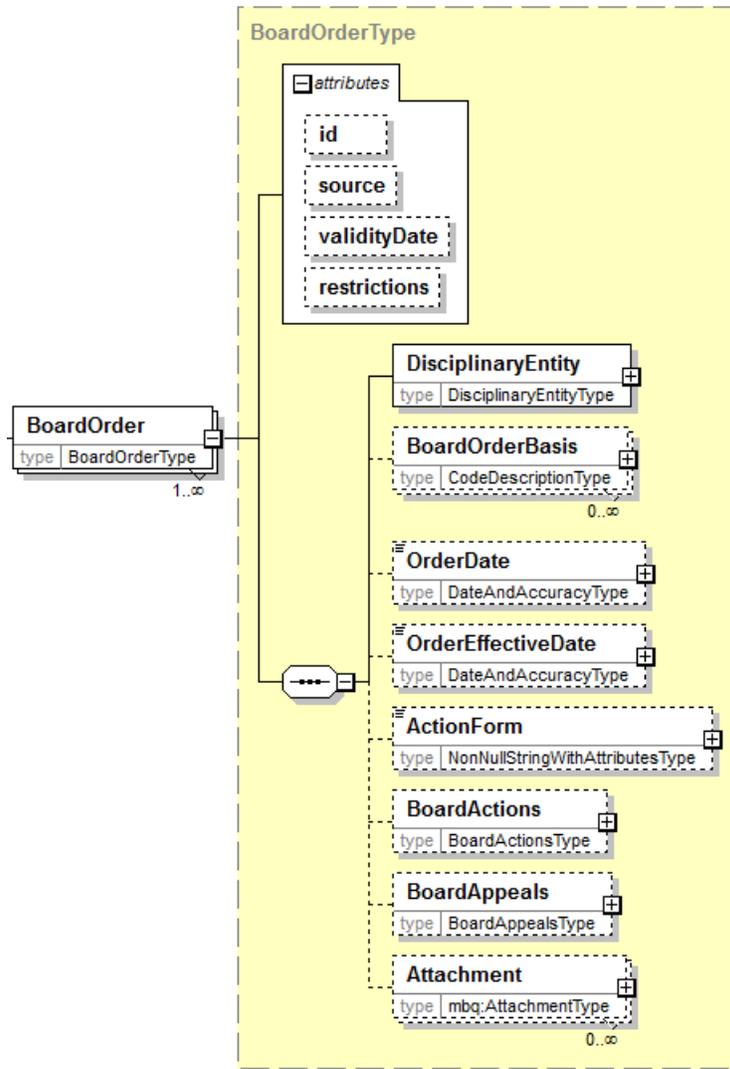
Generated by XMLSpy　　　　www.altova.com

BoardOrder Element Information

Elements	Description	Required	Multiplicity	Datatype
BoardOrder	BoardOrder is the subelement of DisciplinaryInfo. BoardOrder contains detailed information about a board notice or action.	Yes	1 or more	Container

| Elements	Description	Required	Multiplicity	Datatype
DisciplinaryEntity	DisciplinaryEntity is the subelement of BoardOrder. It contains subelements that define the entity issuing the board notice or action. For more information, see the section DisciplinaryEntity.	Yes	1	Container
BoardOrderBasis	The basis for the board action. BoardOrderBasis uses the CodeDescriptionType. See section CodeDescriptionType for more information.	No	0 or more	CodeDescriptionType
OrderDate	The date the order was issued. OrderDate is the subelement of BoardOrder. has the following attribute: *accuracy* OrderDate defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	No	0 or 1	Date
OrderEffectiveDate	The date the order is effective. OrderEffectiveDate OrderDate is the subelement of BoardOrder. OrderEffectiveDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are:	No	0 or 1	Date

Elements	Description	Required	Multiplicity	Datatype
	DayMonthYear, MonthYear, and Year.			
ActionForm	The type of legal form consitituting the notice or action. For example: Affadavit, Death notice, etc. ActionForm is the subelement of BoardOrder.	No	0 or 1	Non null string
BoardActions	Contains details on one or more board actions. For more information, see section BoardActions.	No	0 or 1	Container
BoardAppeals	Contains details on one or more board appeals. For more information, see section BoardAppeals	No	0 or 1	Container
Attachment	The subelements of attachment reference or include an attachment supporting the accompanying data. For more information, see MedBiquitous Guidelines for Transmitting Binary Attachments, http://www.medbiq.org/sites / default/files/files/ Attachment_guidelines_v1.pd f	Optional	0 or more	Container

Example:

```
<BoardOrder>
        <DisciplinaryEntity>
            <DisciplinaryEntityName code = "PA01">Pennsylvania State Board
of Medicine</DisciplinaryEntityName>
        </DisciplinaryEntity>
        <OrderDate>2005-10-15</OrderDate>
        <ActionForm>Death notice</ActionForm>
        <NoticeOrAction>
            <BoardNotice>
                <NoticeDescription>Deceased</NoticeDescription>
                <DeathDate>2005-10-05</DeathDate>
            </BoardNotice>
        </NoticeOrAction>
    </BoardOrder>
```

8.6.2   DisciplinaryEntity

DisciplinaryEntity describes the disciplinary entity in detail.
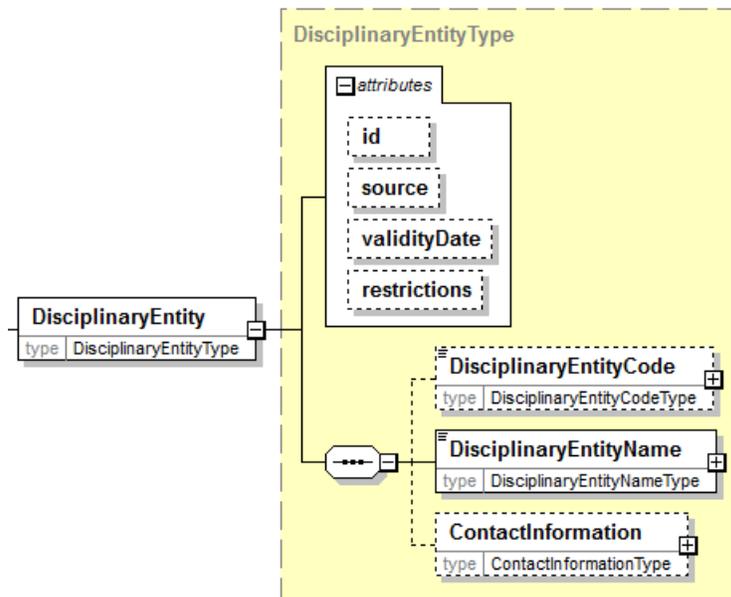
DisciplinaryEntity Element Information

Elements	Description	Required	Multiplicity	Datatype
DisciplinaryEntity	DisciplinaryEntity is the subelement of BoardOrder. It contains subelements that define the entity issuing the board notice or action.	Yes	1	Container
DiscinplinaryEntityCode	A code identifying the disciplinary entity. DisciplinaryEntityCode has the following attribute: *source* The source of the DisciplinaryEntityCode	No	0 or 1	Non null string
DisciplinaryEntityName	Name is a subelement of DisciplinaryEntity. It defines the name of the entity issuing the board notice or action. Name has the following attribute in addition to the common attributes: *abbreviation* An abbreviation for the discsiplinary entity name.	Yes	1	Non null string
ContactInformation	ContactInformation is the subelement of DisciplinaryEntity. It provides detailed contact information for th disciplinary entity. For more information, see section ContactInformation.	No	0 to 1	Container

Example:

```
        <DisciplinaryEntity>
            <DisciplinaryEntityName code = "PA01">
  Pennsylvania State Board of Medicine
</DisciplinaryEntityName>
<ContactInformation>
    <Address>
<StreetAddressLine>
  2601 North 3rd Street
</StreetAddressLine>
      <City>Harrsiburg</City>
      <StateOrProvince>PA</StateOrProvince>
    </Address>
</ContactInformation>
        </DisciplinaryEntity>
```

8.6.3   ContactInformation

ContactInformation provides detailed contact information for the disciplinary entity.
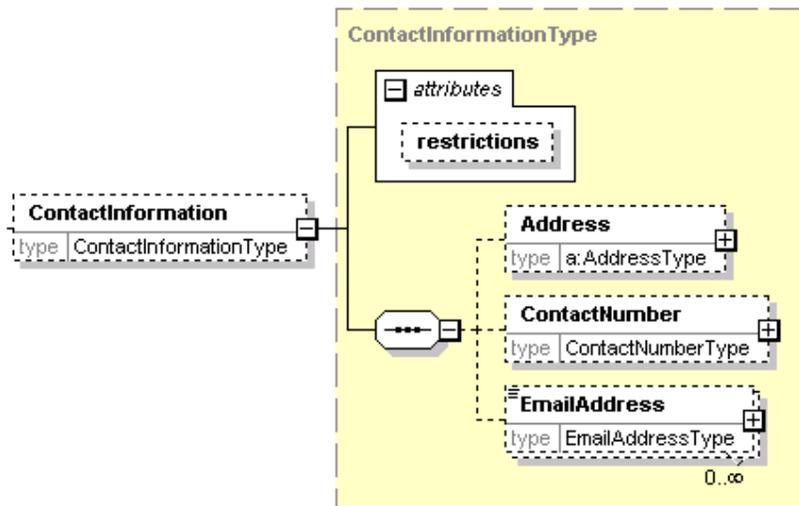
Generated by XMLSpy   www.altova.com

ContactInformation Element Information

Elements	Description	Required	Multiplicity	Datatype
ContactInformation	ContactInformation is the subelement of DisciplinaryEntity. It provides detailed contact information for th disciplinary entity. ContactInformation has the following attribute:	No	0 or 1	Container
Address	Address is the subelement of ContactInformation. Address contains elements that define an address in detail. For more information, see the MedBiquitous Address Specifications and Description Document [Address].	No	0 or 1	Container
ContactNumber	ContactNumber is the subelement ofContactInformation. ContactNumber contains elements that define a person's telephone, fax, and pager numbers. For more information, see section ContactNumber.	No	0 or 1	Container
EmailAddress	This element is the sub-element of the ContactInformation element. EmailAddress defines a person's email address.	Optional	0 or more	Email address (string@ string.string or string <string@string.string>)

Elements	Description	Required	Multiplicity	Datatype

	Email addresses must conform with the IETF RFC 2822 standard. For example:
	
	`pshelley@nosuchmail.com`
	
	`Percy Shelley <pshelley@nosuchmail.com >`
	
	EmailAddress has one attribute:			

Example:

```
<ContactInformation>
<Address>
<a:StreetAddressLine> 2601 North 3rd Street</a:StreetAddressLine>
<a:City>Harrsiburg</a:City>
<a:StateOrProvince>PA</a:StateOrProvince>
<a:Country>
                <a:CountryCode>US</a:CountryCode>
            </a:Country>
</Address>
<ContactNumber>
            <CountryCode>1</CountryCode>
            <TelephoneNumber>7177871212</TelephoneNumber>
            <Description>Office</Description>
</ContactNumber>
<EmailAddress>ST-MEDICINE@state.pa.us</EmailAddress>
</ContactInformation>
```

8.6.4   BoardActions

BoardActions contains sub-elements that describe one or more BoardActions.
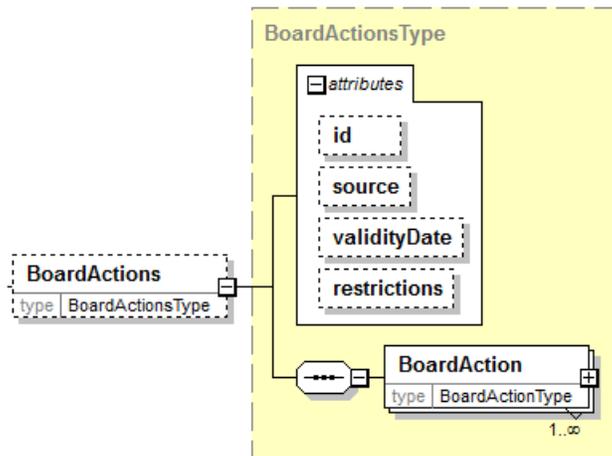
*BoardActions Element Information*

Elements	Description	Required	Multiplicity	Datatype
BoardActions	Contains details on one or more board actions.	No	0 or 1	Container

BoardAction	Defines a board action in detail. For more information, see section BoardAction.	Yes	1 or more	Container

Example:

TBD

8.6.5   BoardAppeals

BoardAppeals contains sub-elements that describe one or more board appeals.
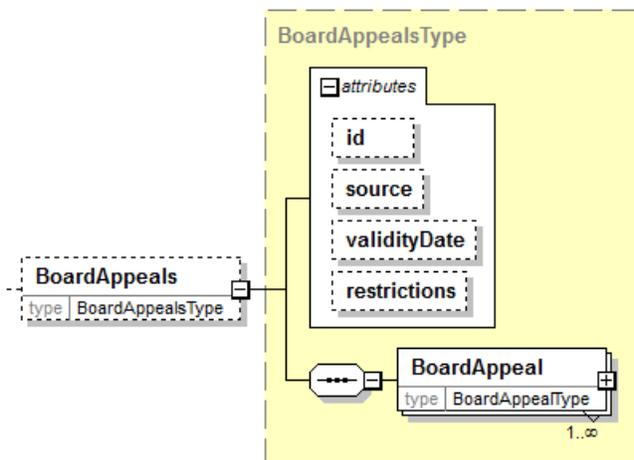
BoardAppeals Element Information

| Elements	Description	Required	Multiplicity	Datatype
BoardAppeals	Contains details on one or more board appeals.	No	0 or 1	Container
BoardAppeal	Defines a board appeal in detail. For more information, see section BoardAppeal.	Yes	1 or more	Container

Example:

TBD

8.6.6

8.6.7   BoardAction

BoardAction has subelements that describe a disciplinary action in detail.
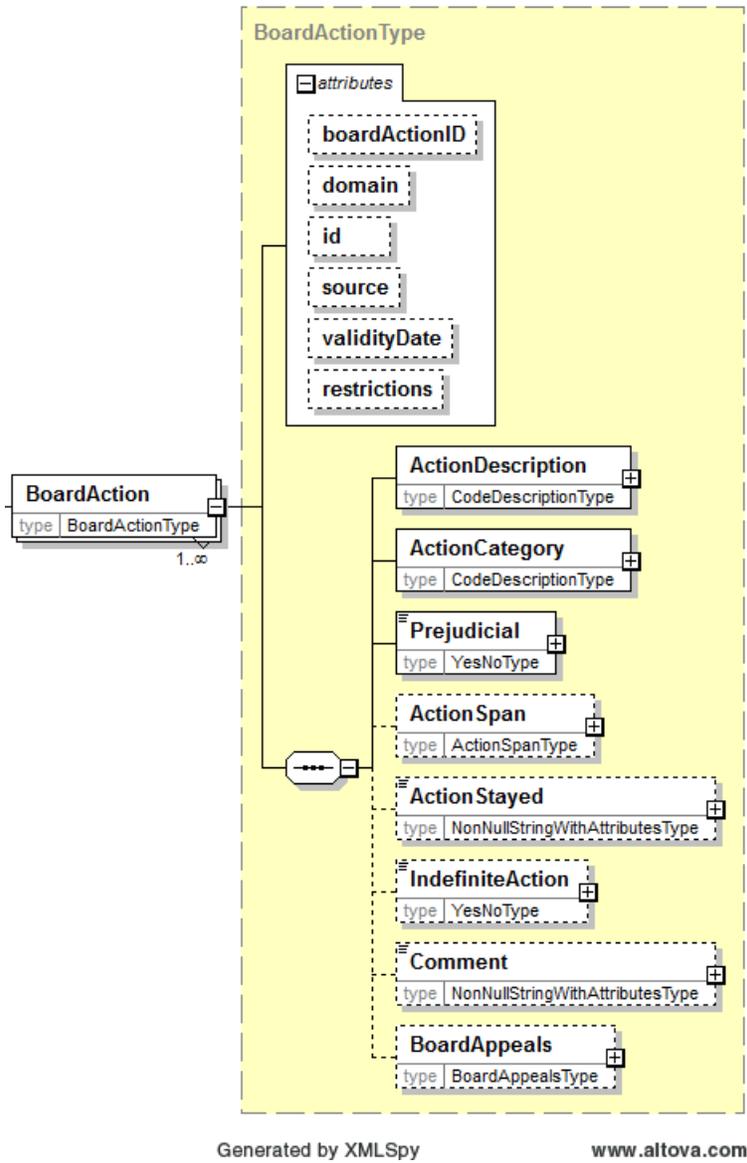
BoardAction Element Information

Elements	Description	Required	Multiplicity	Datatype
BoardAction	Defines a board action in detail. In addition to the Common Attributes, BoardAction has the following attributes: *boardActionID* A unique identifier describing the action. *domain* Defines the community, society, or organization that is the source of the boardActionID.	Either BoardNotice or BoardAction is required	0 or 1	Container
ActionDescription	A description of the board action issued. ActionDescription uses the CodeDescriptionsType. See section CodeDescriptionsType for more information.	Yes	1	CodeDescriptionType
ActionCategory	A category associated with this action. ActionCategory uses the CodeDescriptionsType. See section CodeDescriptionsType for more information.	Yes	1	CodeDescriptionType
Prejudicial	Indicates whether or not the action is prejudicial, resulting in loss or restriction of license. Valid values are Yes and No.	Yes	1	Restricted

Elements	Description	Required	Multiplicity	Datatype
ActionSpan	ActionSpan is a subelement of BoardAction. It defines the effective dates or term of the action. For more information, see section ActionSpan.	No	1	Container
ActionStayed	ActionStayed is a subelement of BoardAction. It indicates whether the action has been stayed.	No	0 or 1	Non null string (change to non null in schema)
IndefiniteAction	IndefiniteAction is a subelement of BoardAction. It indicates whether the action has been deemed indefinite.	No	0 or 1	Restricted (Yes or No)
Comment	Comment is the subelement of BoardAction. It provides additional commentary on the action.	No	0 or 1	Non null string
BoardAppeals	BoardAppeals defines any appeals proceeding brought against the action. For more information, see section BoardAppeals.	No	0 or 1	Container

Example:

```
        <BoardAction>
            <ActionDescription>
  License suspended based on felony drug conviction.
</ActionDescription>
            <ActionSpan>
```

```
        <ActionEffectiveDate>2005-11-30</ActionEffectiveDate>
        <ActionExpirationDate>2015-11-30</ActionExpirationDate>
    </ActionSpan>
</BoardAction>
```

8.6.8   ActionSpan

ActionSpan defines the effective dates or term of a disciplinary action.
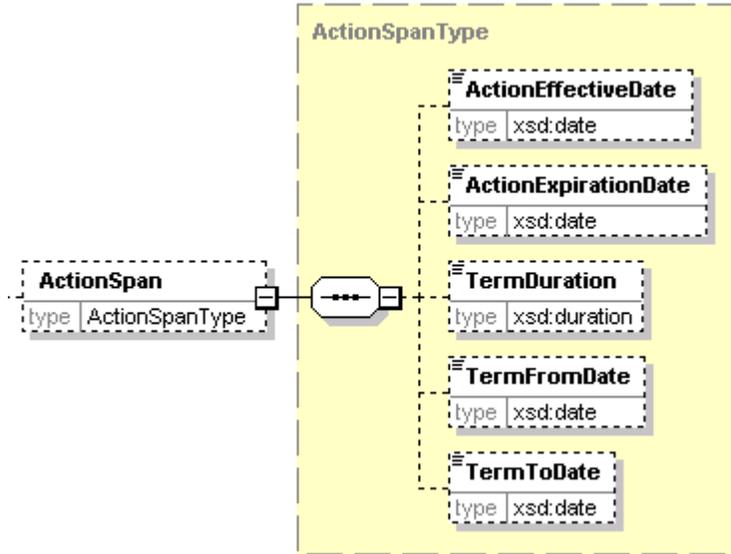
ActionSpan Element Information

Elements	Description	Required	Multiplicity	Datatype
ActionSpan	ActionSpan is a subelement of BoardAction. It defines the effective dates or term of the action.	Yes	1	Container
ActionEffectiveDate	ActionEffectiveDate is a subelement of Expiration. It defines the date the action is effective. ActionEffectiveDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid	Yes	1	Date

Elements	Description	Required	Multiplicity	Datatype
	values are: DayMonthYear, MonthYear, and Year.			
ActionExpirationDate	ActionExpirationDate is a subelement of Expiration. It defines the date the action expires. ActionExpirationDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	Yes	1	Date
TermDuration	TermDuration is the subelement of Term. It defines the duration of the action term.	Yes	1	Duration
TermFromDate	TermFromDate is the subelement of Term. It defines the date the term of the action begins. TermFromDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	Yes	1	Date
TermToDate	TermToDate is the subelement of Term. It defines the date the term of the action ends.	Yes	1	Date

Elements	Description	Required	Multiplicity	Datatype
	TermToDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.			

Example:

```
<ActionSpan>
    <TermDuration>P10Y</TermDuration>
    <TermFromDate>2006-04-15</TermFromDate>
    <TermToDate>2016-04-14</TermToDate>
</ActionSpan>
```

8.6.9   BoardAppeal

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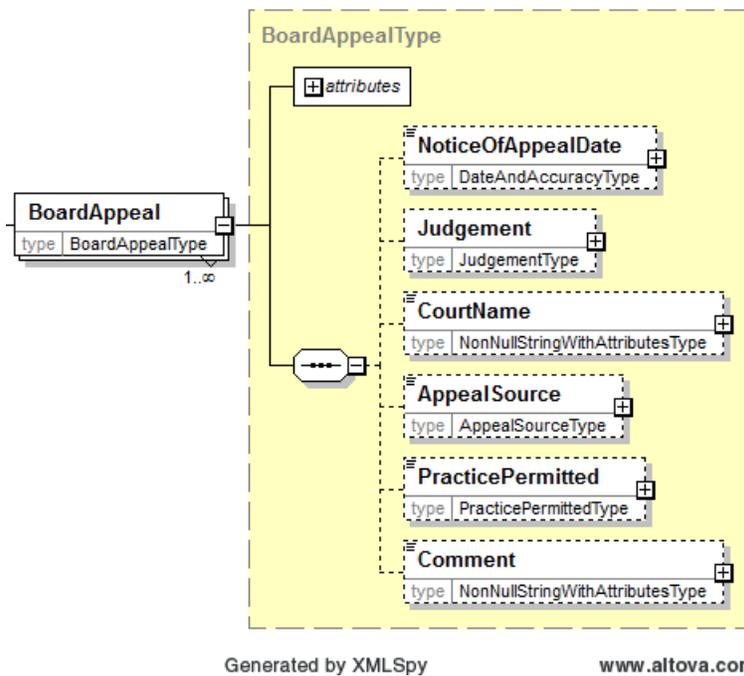
BoardAppeal Element Information

Elements	Description	Required	Multiplicity	Datatype
BoardAppeal	BoardAppeal contains subelements that define any appeals proceeding brought against an action.	No	0 or 1	Container

Elements	Description	Required	Multiplicity	Datatype
	appealid A unique identifier for the appeal. *domain* Defines the community, society, or organization that is the source of the appealid.			
NoticeOfAppealDate	NoticeOfAppealDate is the subelement of BoardOrderAppeal. It indicates the date of the appeal notice. NotivceOfAppealDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	No	0 or 1	Date
Judgement	Judgement is the subelement of BoardOrderAppeal. It contains subelements that provide detailed information about the appeal judgement. For more information, see section Judgement.	No	0 or 1	Container
CourtName	CourtName is the subelement of BoardOrderAppeal. It indicates the name of the court hearing the appeal and providing the judgement.	No	0 or 1	Non null string
AppealSource	AppealSource is the subelement of BoardOrderAppeal. It	No	0 or 1	Non null string

Elements	Description	Required	Multiplicity	Datatype
	indicates the source of the appeal. AppealSource has the following attribute: *code* A code defining the type of entity appealing the action. *domain* Defines the community, society, or organization that is the source of the code.			
PracticePermitted	PracticePermitted is the subelement of BoardOrderAppeal. It indicates whether the individual is permitted to practice under the terms of the appeal. *code* A code defining the type of practice permitted. *domain* Defines the community, society, or organization that is the source of the code.	No	0 or 1	Non null string
Comment	Comment is the subelement of BoardOrderAppeal. It provides additional commentary on the appeal.	No	0 or 1	Non null string

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Example:

```
<BoardOrderAppeal>
    <NoticeOfAppealDate>2005-10-15</NoticeOfAppealDate>
    <Judgement>
        <JudgementDate>2005-10-15</JudgementDate>
        <JudgementDescription>
            Physician was assessed a civil penalty of $1,000 for
            failing to submit proof of continuing medical education.
        </JudgementDescription>
    </Judgement>
    <CourtName>Pennsylvania Circuit Court</CourtName>
    <AppealSource>State Board of Medicine</AppealSource>
    <PracticePermitted>
        Practice is permitted upon payment of the penalty.
    </PracticePermitted>
</BoardOrderAppeal>
```

8.6.10 Judgement

Judgement provides detailed information about the appeal judgement.
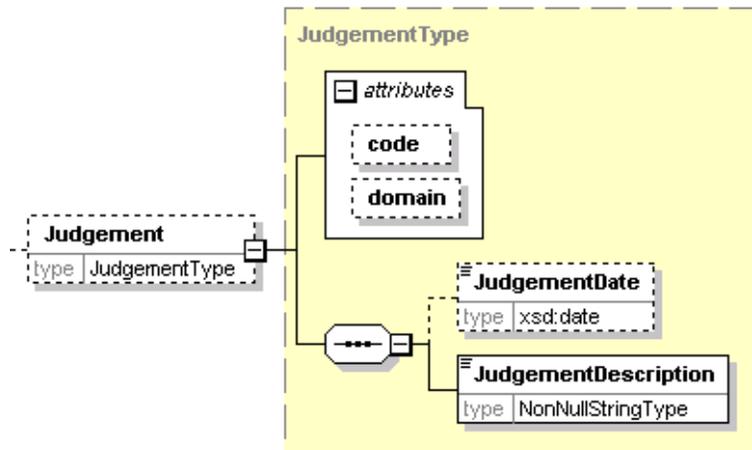
Judgement Element Information

Elements	Description	Required	Multiplicity	Datatype
Judgement	Judgement is the subelement of BoardOrderAppeal. It	No	0 or 1	Container

Elements	Description	Required	Multiplicity	Datatype
	contains subelements that provide detailed information about the appeal judgement. *code* A code defining the type of judgement. *domain* Defines the community, society, or organization that is the source of the code.			
JudgementDate	JudgementDate is the subelement of Judgement. It provides the date of the judgement. JudgementDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	No	0 or 1	Date
JudgementDescription	JudgementDescription is the subelement of Judgement. It provides a text description of the judgement.	Yes	0 or 1	Non null string

Example:

```
<Judgement>
    <JudgementDate>2005-10-15</JudgementDate>
    <JudgementDescription>
        Physician was assessed a civil penalty of $1,000 for failing
        to submit proof of continuing medical education.
    </JudgementDescription>
</Judgement>
```

8.7   OccupationInfo

The OccupationInfo element defines a medical professional's occupation, including academic appointments. This element breaks occupation information into more detailed elements. OccupationInfo is a sub-element of Member.
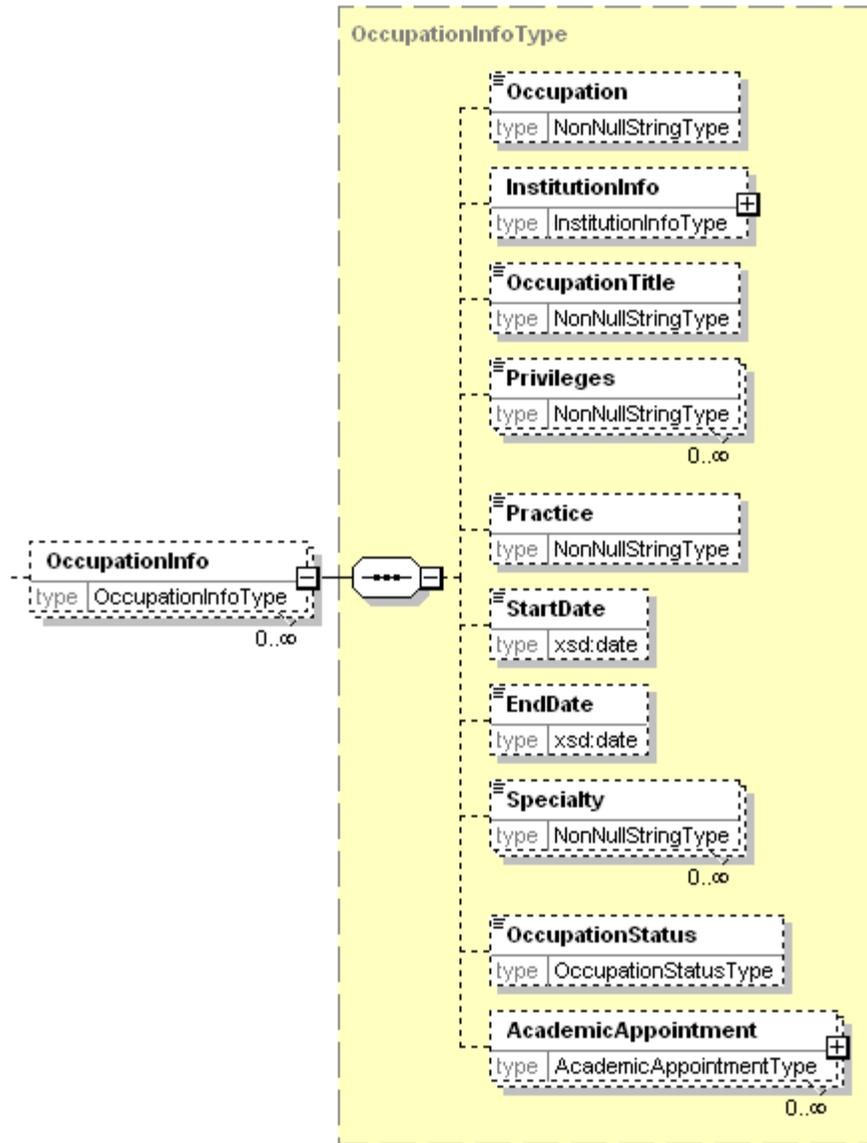
OccupationInfo Element Information

Elements	Description	Required	Multiplicity	Datatype
OccupationInfo	This is the sub-element of the Member element. This element has sub-elements that define a user's occupation with specific	Optional	0 or more	Container

| Elements	Description	Required	Multiplicity	Datatype
	elements for physician occupations.			
Occupation	This is the sub-element of the OccupationInfo element. This element defines a user's occupation as a free-format text field.	Optional	0 or 1	Non-null string
InstitutionInfo	This is the sub-element of the OccupationInfo element. This element has sub-elements that define the user's institution in detail. See section InstitutionInfo for more information.	Optional	0 or 1	Container
OccupationTitle	This is the sub-element of the OccupationInfo element. It defines the user's official title within the institution or practice.	Optional	0 or 1	Non-null String
Privileges	This is the sub-element of the OccupationInfo element. It defines the privileges that a user has at the institution listed.	Optional	0 or more	Non-null String
Practice	This is the sub-element of the OccupationInfo element. It defines the name of a medical professional's practice. For example, Doyle Eye Associates.	Optional	0 or 1	Non-null String
StartDate	This is the sub-element of the OccupationInfo element and defines the date the user started working in this practice or institution.	Optional	0 or 1	Date

Elements	Description	Required	Multiplicity	Datatype
	StartDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.			
EndDate	This is the sub-element of the OccupationInfo element and defines the date the user stopped working at this practice or institution. EndDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	Optional	0 or 1	Date
Specialty	This is the sub-element of the OccupationInfo element and defines the medical specialty of the user. For example, Cardiology.	Optional	0 or more	Non-null String
OccupationStatus	This is the sub-element of the OccupationInfo element; the status element may occur once and is optional. Valid values are: retired, active.	Optional	0 or 1	Restricted
AcademicAppointment	AcademicAppointment contains subelements that describe any academic appointments.	Optional	0 or more	Container

Elements	Description	Required	Multiplicity	Datatype
	See section AcademicAppointment for more information.			

Example:

```
<OccupationInfo>
    <Occupation>Family Physician</Occupation>
    <OccupationTitle>Director</OccupationTitle>
    <Practice>Springfield Family Practice</Practice>
    <Specialty>Family Practice</Specialty>
    <OccupationStatus>Active</OccupationStatus>
</OccupationInfo>
```

8.7.1   AcademicAppointmentInfo

The AcademicAppointmentInfo element defines any academic appointments held by a healthcare professional. I

*AcademicAppointmentInfo Element Information*

Elements	Description	Required	Multiplicity	Datatype
AcademicAppointmentInfo	AcademicAppointmentInfo icontains elements that describe any academic appointments held by an individual.	No	0 or 1	Container
FacultyAppointment	FacultyAppointment is the subelement of AcademicAppointmentInfo. It contains subelements that describe an individual's faculty appointments in detail. For more information, see section FacultyAppointment.	No	0 or more	Container
ChairAppointment	ChairAppointment is the subelement of AcademicAppointmentInfo. It contains subelements that describe an individual's appointment as chair of a department or chief of a division or section in detail. For more information, see section ChairAppointment.	No	0 or more	Container
DivisionOrSectionAppointment	DivisionOrSectionAppointment is the subelement of AcademicAppointmentInfo. It contains subelements that describe an individual's appointment within a division or section of an academic department in detail. For more information, see section DivisionOrSectionAppointment.	No	0 or more	Container

Elements	Description	Required	Multiplicity	Datatype
AdministrativeAppointment	AdministrativeAppointment is the subelement of AcademicAppointmentInfo. It contains subelements that describe an individual's administrative appointment within a school, hospital, or Veterans Administration organization in detail. For more information, see section AdministrativeAppointment.	No	0 or more	Container

Example:

```
<AcademicAppointmentInfo>
    <FacultyAppointment>
        ...
    </FacultyAppointment>
    <FacultyAppointment>
        ...
    </FacultyAppointment>
    <ChairAppointment>
        ...
    </ChairAppointment>
    <AdministrativeAppointment>
        ...
    </AdministrativeAppointment>
</AcademicAppointmentInfo>
```

8.7.2   FacultyAppointment

FacultyAppointment contains subelements that describe a single faculty appointment in detail.

FacultyAppointment Element Information

Elements	Description	Required	Multiplicity	Datatype
FacultyAppointment	FacultyAppointment is the subelement of AcademicAppointmentInfo. It contains subelements that describe a single faculty appointment in detail.	No	0 or more	Container
AdministrativeUnit	AdministrativeUnit is the subelement of FacultyAppointment. AdministrativeUnit identifies the academic department for this appointment. For example, Department of Surgery.	No	0 or 1	NonNull String
EffectiveDate	EffectiveDate is the subelement of FacultyAppointment. It defines the start date for this appointment. EffectiveDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	No	0 or 1	Date
EndDate	EndDate is the subelement of FacultyAppointment. It defines the end date for this appointment. EndDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are:	No	0 or 1	Date

Elements	Description	Required	Multiplicity	Datatype
	DayMonthYear, MonthYear, and Year.			
Title	Title is the subelement of FacultyAppointment. It defines the official title of the academic appointment at the institution. For example, Professor.	Yes	1	NonNull String
DivisionOrSection	DivisionOrSection is the subelement of FacultyAppointment. It identifies the academic division or section within the department applicable for this appointment. For example, Cardiology.	No	0 or 1	NonNull String
Rank	Rank is the subelement of FacultyAppointment. It defines an academic rank associated with this appointment. The Rank element may be repeated to describe a rank progression related to this appointment. If more than one rank is specified, list the current rank first. Valid values are: Professor, Associate Professor, Assistant Professor, Instructor, Lecturer Adjunct Professor, Demonstrator. Rank has the following attribute: *effectiveDate* The date the the rank described became effective.	No	0 or 1	Restricted
PrimaryOrJoint	PrimaryOrJoint is the subelement of FacultyAppointment. It indicates whether the appointment is a	No	0 or 1	Restricted

Elements	Description	Required	Multiplicity	Datatype
	primary appointment or joint appointment. Valid values are: Primary, Joint.			
FacultyTrack	FacultyTrack is the subelement of FacultyAppointment. It describes the faculty track for this appointment. For example, Traditional Tenure, Research, Clinical, Clinician Educator and Clinical Scholar.	No	0 or 1	NonNull String
TenureStatus	TenureStatus is the subelement of FacultyAppointment. It describes a current or past tenure status of the individual as related to this appointment. The TenureStatus element may be repeated to describe a progression in tenure status related to this appointment. If more than one tenure status is specified, list the current tenure status first.Valid values are: Tenured, Tenure Eligible Track, Not Tenure Eligible Track, Tenure Not Available. TenureStatus has the following attribute: *effectiveDate* The date the tenure status described became effective.	No	0 or more	Restricted
AppointmentType	AppointmentType is the subelement of FacultyAppointment. It describes the nature of the appointment.	No	0 or 1	Restricted

Elements	Description	Required	Multiplicity	Datatype
	Valid values are: Full-time, Part-time, Volunteer, and Emeritus.			
PercentEffort	PercentEffort is the subelement of FacultyAppointment. It describes the percentage of time for appointments that require part-time effort. Valid values are integers between 1 and 100.	No	0 or 1	Integer 1-100
LocationType	LocationType is the subelement of FacultyAppointment. It describes the type of location for this faculty appointment. Valid values are: School-based, Hospital-based, VA-based.	No	0 or 1	Restricted
Endowed	Endowed is the subelement of FacultyAppointment. Endowed indicates whether or not this appointment is an endowed appointment. Valid Values are Yes and No.	No	0 or 1	Restricted
EndowedTitle	EndowedTitle is the subelement of FacultyAppointment. It defines the title of the endowed appointment. For example, William Stewart Halsted Professor of Surgery.	No	0 or 1	NonNull String

Example:

```
<FacultyAppointment>
    <AdministrativeUnit>Department of Surgery</AdministrativeUnit>
    <EffectiveDate>2001-01-30</EffectiveDate>
    <Title>Assistant Professor of Medicine</Title>
    <Rank>Assistant Professor</Rank>
    <PrimaryOrJoint>Primary</PrimaryOrJoint>
    <TenureStatus>Tenure Eligible Track</TenureStatus>
```

```
        <AppointmentType>Full-time</AppointmentType>
        <LocationType>School-based</LocationType>
        <Endowed>No</Endowed>
    </FacultyAppointment>
```

8.7.3   ChairAppointment

ChairAppointment describes an individual's appointment as chair of a department or chief of a division or section in detail.
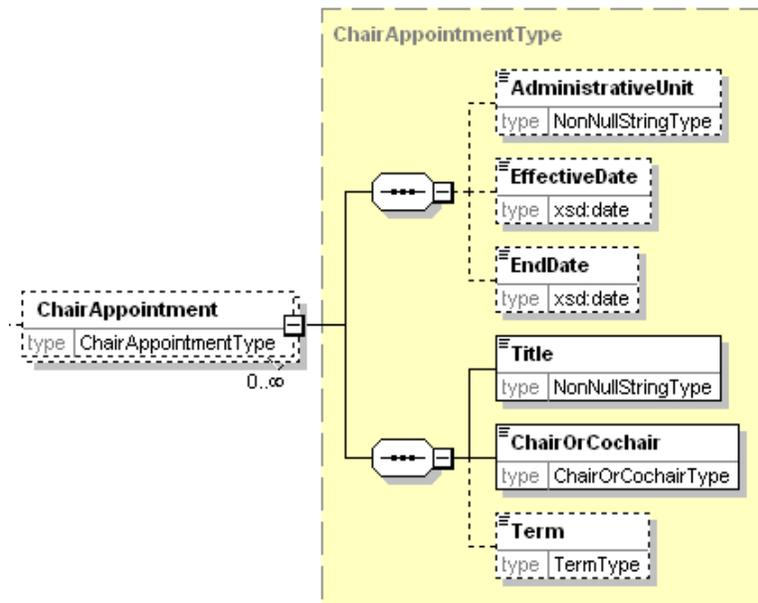
ChairAppointment Element Information

| Elements	Description	Required	Multiplicity	Datatype
ChairAppointment	ChairAppointment contains subelements that describe an individual's appointment as chair of a department or department head in detail.	No	0 or more	Container
AdministrativeUnit	AdministrativeUnit is the subelement of ChairAppointment. AdministrativeUnit identifies the academic department for this	No	0 or 1	NonNull String

Elements	Description	Required	Multiplicity	Datatype
	appointment. For example, Department of Surgery.			
EffectiveDate	EffectiveDate is the subelement of ChairAppointment. It defines the start date for this appointment. EffectiveDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	No	0 or 1	Date
EndDate	EndDate is the subelement of ChairAppointment. It defines the end date for this appointment. EndDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	No	0 or 1	Date
Title	Title is the subelement of ChairAppointment. It defines the official title of the appointment at the institution. For example, Chairman, Department of Medicine.	Yes	1	NonNull string
ChairOrCochair	ChairOrCochair defines the type of chair appointment	Yes	1	Restricted

Elements	Description	Required	Multiplicity	Datatype
	held. Valid values are: Chair and Co-chair.			
Term	Indicates the permanence of the term of office. Valid values are: acting, interim, and permanent.	Optional	0 or 1	Restricted

Example:

```
<ChairAppointment>
    <AdministrativeUnit>Department of Surgery</AdministrativeUnit>
    <EffectiveDate>2001-01-30</EffectiveDate>
    <ChairOrCochair>Chair</ChairOrCochair>
    <Title>Chairman, Department of Surgery</Title>
</ChairAppointment>
```

8.7.4   DivisionOrSectionAppointment

DivisionOrSectionAppointment describe's an individual's appointment within an academic section or divison of a department.
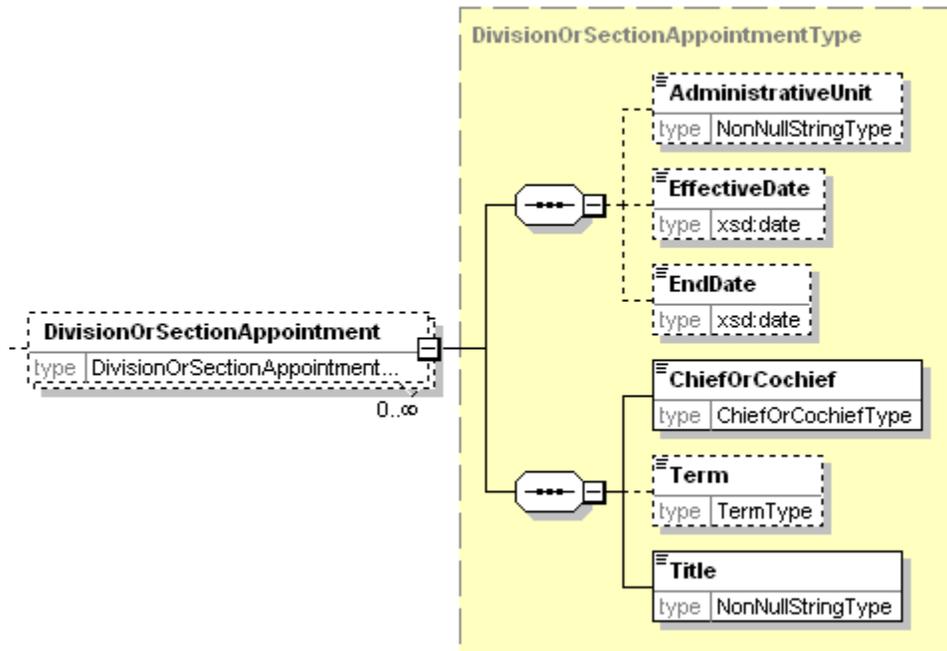
DivisionOrSectionAppointment Element Information

| Elements	Description	Required	Multiplicity	Datatype
DivisionOrSectionAppointment	DivisionOrSectionAppointment is the subelement of AcademicAppointmentInfo. It contains subelements that describe an individual's appointment within a division or section of an academic department in detail.	No	0 or more	Container
AdministrativeUnit	AdministrativeUnit is the subelement of DivisionOrSectionAppointment. AdministrativeUnit identifies the academic division or section for this appointment. For example, Neonatology Division.	No	0 or 1	NonNull string
EffectiveDate	EffectiveDate is the subelement of	No	0 or 1	Date

	DivisionOrSectionAppointment. It defines the start date for this appointment. EffectiveDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.			
EndDate	EndDate is the subelement of DivisionOrSectionAppointment. It defines the end date for this appointment. EndDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	No	0 or 1	Date
ChiefOrCochief	ChiefOrCochief defines the type of appointment held. Valid values are: Chief and Co-chief.	Yes	1	Restricted
Term	Indicates the permanence of the term of office. Valid values are: acting, interim, and permanent.	No	0 or 1	Restricted
Title	Title is the subelement of DivisionOrSectionAppointment. It defines the official title of the appointment at the institution.	Yes	1	NonNull string

	For example, Director, Division of Rheumatology.			

8.7.5   AdministrativeAppointment

AdministrativeAppointment describes an individual's administrative appointment within a school, hospital, or Veterans Administration organization in detail.

AdministrativeAppointment is not intended to describe chair of division or section chief appointments. To describe department chair appointments, use the ChairAppointment element. To describe division or section chief appointments, use the DivisionOrSectionAppointment element.
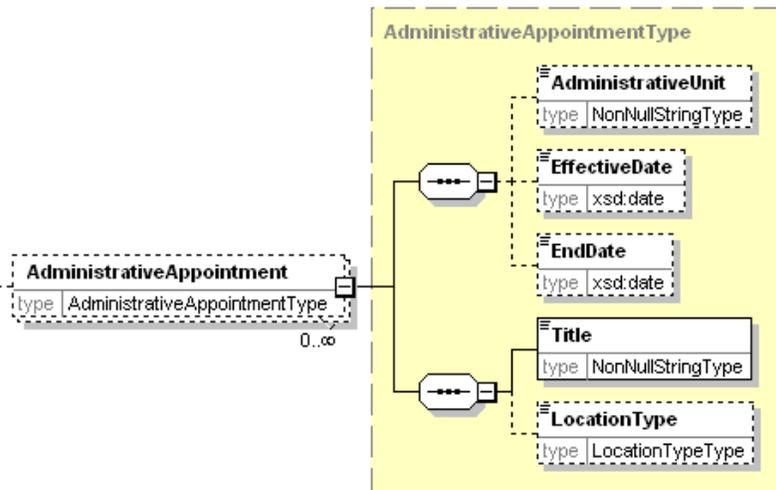
Generated by XMLSpy   www.altova.com

AdministrativeAppointment Element Information

Elements	Description	Required	Multiplicity	Datatype
AdministrativeAppointment	AdministrativeAppointment is the subelement of AcademicAppointmentInfo. It contains subelements that describe an individual's	No	0 or more	Container

| Elements	Description	Required	Multiplicity	Datatype
	administrative appointment in detail.			
AdministrativeUnit	AdministrativeUnit is the subelement of AdministrativeAppointment. AdministrativeUnit identifies the administrative unit for this appointment. For example, Legal Department.	No	0 or 1	NonNull String
EffectiveDate	EffectiveDate is the subelement of AdministrativeAppointment. It defines the start date for this appointment. EffectiveDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	No	0 or 1	Date
EndDate	EndDate is the subelement of AdministrativeAppointment. It defines the end date for this appointment. EndDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	No	0 or 1	Date

Elements	Description	Required	Multiplicity	Datatype
Title	Title is the subelement of AdministrativeAppointment. It defines the official title of the administrative appointment. For example, Vice Dean.	Yes	1	NonNull String
LocationType	LocationType is the subelement of AdministrativeAppointment. It defines the location of the administrative appointment. Valid values are: School-based, Hospital-based, VA-based.	No	0 or 1	Restricted

Example:

```
<AdministrativeAppointment>
     <AdministrtiveUnit>Office of Educational
Affairs</AdministrativeUnit>
     <EffectiveDate>2002-06-30</EffectiveDate>
     <Title>Dean for Educational Affairs</Title>
     <LocationType>
  School-based
</LocationType>
     </AdministrativeAppointment>
```

PersonalInfo

The PersonalInfo element defines personal information about a user. This element breaks personal information into more detailed elements. PersonalInfo is a sub-element of Member.
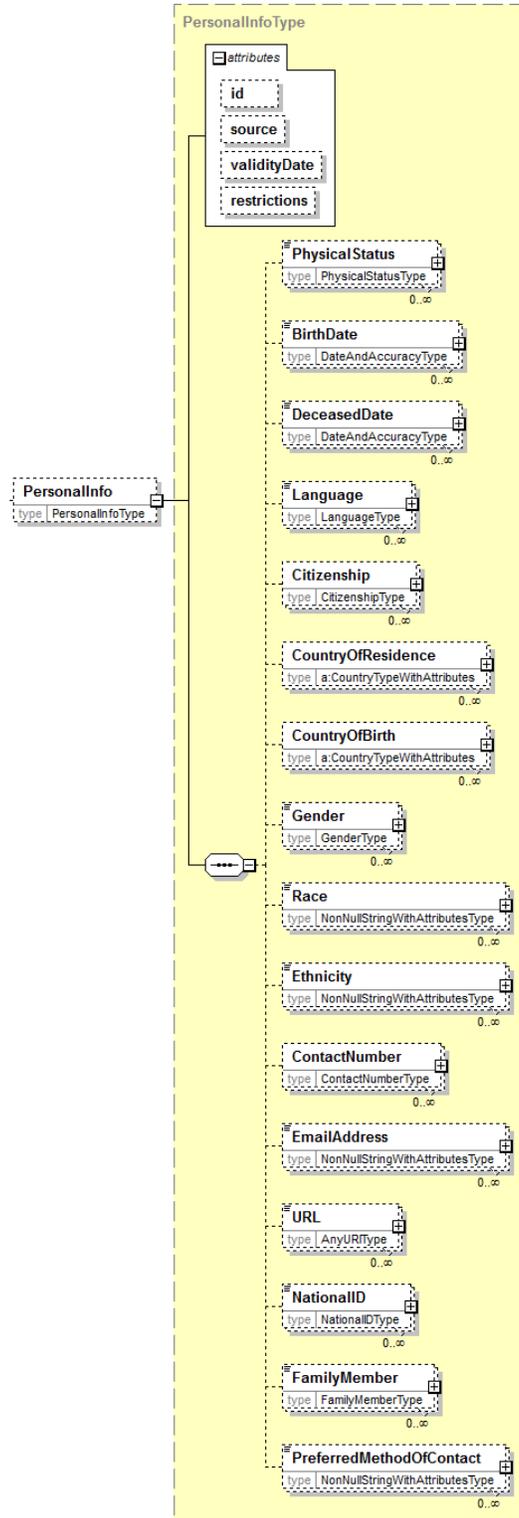
PersonalInfo Element Description

Element	Description	Required	Multiplicity	Datatype
PersonalInfo	The PersonalInfo element has sub-elements to define personal information in detail. PersonalInfo has one attribute:	Optional	0 or 1	Container
PhysicalStatus	This element is a sub-element of PersonalInfo element and defines the physical status of the person. Valid values are: Living, Deceased.	Optional	0 or 1	Restricted
BirthDate	BirthDate is a sub-element of PersonalInfo and defines a person's birth date. BirthDate has the following attributes: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	Optional	0 or 1	Date
DeceasedDate	DeceasedDate is a sub-element of PersonalInfo and indicates the date of death for the individual. DeceasedDate has the following attributes: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	Optional	0 or 1	Date

Element	Description	Required	Multiplicity	Datatype
Language	Language is a sub-element of PersonalInfo and defines a language a person speaks, reads, or writes. Language has the following attribute: *nativeLanguage* Indicates whether this language is the individual's native language. Valid values are true and false.	Optional	0 or more	language
Citizenship	This element is the sub-element of the PersonalInfo element. Citizenship contains subelements that define the nation of citizenship of an individual. Citizenship extends the CountryType datatype, which contains CountryName and CountryCode subelements. See the MedBiquitous Address Specifications and Description Document for more information [Address]. Citizenship has one attribute: *pointInTime* Allows the schema to describe citizenship at multiple points in time. Valid values are: entry to professional school, birth, and current. Citizenship for any point in time may be repeated to indicate dual citizenship.	Optional	0 or more	Container

Element	Description	Required	Multiplicity	Datatype
CountryOfReside nce	This element is the sub-element of the PersonalInfo element. CountryofResidence contains elements that describe the country of residence for an individual. CountryofResidence uses the CountryTypeWithAttributes datatype, which contains CountryName and CountryCode subelements and common attributes. See the MedBiquitous Address Specifications and Description Document for more information [Address].	Optional	0 or more	Container
CountryOfBirth	CountryOfBirth contains subelements that describe the country of birth for an individual. CountryOfBirth uses the CountryTypeWithAttributes datatype, which contains CountryName and CountryCode subelements and common attributes. See the MedBiquitous Address Specifications and Description Document for more information [Address].	Optional	0 or 1	Container
Gender	This element is the sub-element of the PersonalInfo element. Gender defines the gender of the person. Valid values are: Male, Female.	Optional	0 or 1	Restricted
Race	This element is the sub-element of the PersonalInfo element. Race defines a population group or classification usually based on physical characteristics.	Optional	0 or more	Non-null string

| Element	Description	Required	Multiplicity	Datatype
Ethnicity	This element is the sub-element of the PersonalInfo element. Ethnicity defines a population group based on culture, religion, language, nationality, or race.	Optional	0 or more	Non-null string
ContactNumber	This element is the sub-element of the PersonalInfo element. It contains elements that describe a person's telephone, fax, and pager numbers. See the section ContactNumber for more information.	Optional	0 or more	Container
EmailAddress	This element is the sub-element of the PersonalInfo element. EmailAddress defines a person's email address. EmailAddress has one attribute:	Optional	0 or more	Non-null String
URL	This element is the sub-element of the PersonalInfo element. URL defines the location for a web page or site for this person. For example, http://www.johnsmithmd.com.	Optional	0 or more	URI
NationalID	This element is the sub-element of the PersonalInfo element. NationalID defines an ID issued by a national body, such as a social security/tax number or passport number. NationalOD has the following attributes: *countryName* The name of the country providing	Optional	0 or more	NonNull String

Element	Description	Required	Multiplicity	Datatype
	the identifier. For example, Switzerland *countryCode* The ISO 3166 alpha code for a particular country. For example, US. *idType* The type of national identifier. Valid values are: Tax number, Passport number, Alien number. *truncated* Indicates whether the identifier has been truncated. Often organizations use the last four digits of a tax number to protect privacy. Valid values are true and false.			
FamilyMember	This element is the sub-element of the PersonalInfo element. FamilyMember defines a member of the individual's family. *relationship* Relationship defines the family member's relationship to the individual that is profiled. For example, husband.	Optional	0 or more	Non-null String
PreferredMethod OfContact	This element is the sub-element of the PersonalInfo element. PreferredMethodOfContact defines the preferred method of contact for this individual. For example, cellphone, telephone, fax, pager, email, postal.	Optional	0 or 1	Non-null String

Example:

```
    <PersonalInfo>
        <PhysicalStatus>Living</PhysicalStatus>
        <BirthDate accuracy="DayMonthYear" restrictions = "Unrestricted" >1960-
12-05</BirthDate>
        <Language>English</Language>
        <Citizenship>
            <a:CountryCode>US</a:CountryCode>
        </Citizenship>
        <Gender>Male</Gender>
        <ContactNumber>
            <CountryCode>1</CountryCode>
            <TelephoneNumber>4105551212</TelephoneNumber>
            <Description>Office</Description>
        </ContactNumber>
        <EmailAddress>pbshelley@nosuchmail.org</EmailAddress>
        <NationalID countryCode="US" idType="Tax number" restrictions=
"Confidential"> 888-88-8888</NationalID>
        <PreferredMethodOfContact>email</PreferredMethodOfContact>
    </PersonalInfo>
```

8.7.6   ContactNumber

The ContactNumber element contains subelement that define a person's telephone, fax, and pager numbers. ContactNumber is a subelement of PersonalInfo.
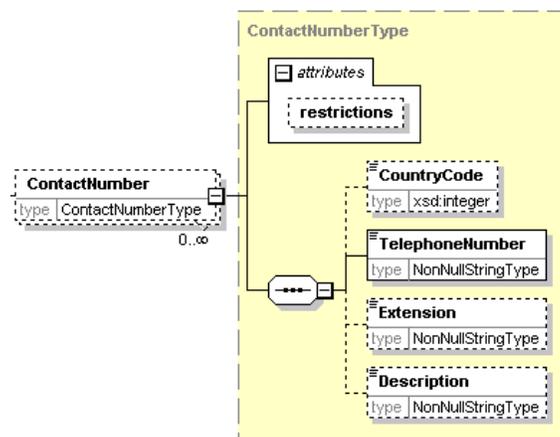
ContactNumber Element Information

Element	Description	Required	Multiplicity	Datatype
ContactNumber	ContactNumber is the subelement of PersonalInfo. ContactNumber contains elements that define a person's telephone, fax, and pager numbers. ContactNumber has one attribute:	Optional	0 or more	Container
CountryCode	CountryCode is the subelement of ContactNumber. CountryCode defines the numeric telephone code used to reach telephone numbers within a particular country. For example, 44.	Optional	0 or 1	Integer of up to 3 digits
TelephoneNumber	TelephoneNumber is the subelement of ContactNumber. TelephoneNumber defines a telephone, fax, or pager number, including area or city code.	Required	1	Integer of up to 14 digits
Extension	Extension is the subelement of ContactNumber. Extension defines a telephone extension used to reach an individual.	Optional	0 or 1	Non-null String
Description	Description is a subelement of ContactNumber and defines the type of telephone number. For example, home, business, fax, pager, or mobile.	Optional	0 or 1	Non-null String

Example:

```
<ContactNumber>
    <CountryCode>44</CountryCode>
```

```
    <TelephoneNumber>2076115555</TelephoneNumber>
    <Description>Fax</Description>
  </ContactNumber>
```

8.8   MembershipInfo

The MembershipInfo element defines a user's membership in professional medical societies and related organizations. This element breaks membership information into more detailed elements. MembershipInfo is a sub-element of Member.

MembershipInfo Element Information

Element	Description	Required	Multiplicity	Datatype
MembershipInfo	This is the sub-element of the Member element. MembershipInfo has sub-elements that define the user's membership in societies and organizations.	Optional	0 or 1	Container
Membership	This is the sub-element of the MembershipInfo element. Membership defines membership in a single society or organization in a free-format text field.	Optional	0 or 1	Non-null String
MembershipOrganization	This is the sub-element of the MembershipInfo element. MembershipOrganization element defines the name of the organization to which to user belongs. For example, American Academy of Ophthalmology. This element provides the following attribute: *OrganizationID* Defines a unique, alphanumeric identification for the organization that MedBiquitous Consortium establishes.	Optional	0 or 1	Non-null String
Country	This is the sub-element of the MembershipInfo element and defines the country of the organization. Country uses the CountryType datatype, which contains CountryName and CountryCode subelements. See the MedBiquitous Address	Optional	0 or 1	Container

| Element	Description	Required	Multiplicity	Datatype
	Specifications and Description Document for more information [Address].			
MemberNumber	This is the sub-element of the MembershipInfo element. MemberNumber defines the number used by the organization to identify this member.	Optional	0 or 1	Non-null String
MembershipLevel	This is the sub-element of the MembershipInfo element. MembershipLevel defines the membership level of the member. For example, associate, fellow, etc. This element provides the following attributes: *code* Defines a code that the organization associates with the membership level.	Optional	0 or 1	Non-null String
MembershipRole	This is the sub-element of the MembershipInfo element. MembershipRole defines the member's role in the organization. For example, President, Secretary General, etc.	Optional	0 or 1	Non-null String
MembershipStatus	This is the sub-element of the MembershipInfo element. MembershipStatus defines a user's membership status within the organization. For example, active, inactive, retired, emeritus, life.	Optional	0 or 1	Non-null String
MemberSinceDate	This is the sub-element of the MembershipInfo element.	Optional	0 or 1	Date

Element	Description	Required	Multiplicity	Datatype
	MemberSinceDate defines the date that the member first joined the organization. MemberSinceDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.			
FellowshipDate	This is the sub-element of the MembershipInfo element. FellowshipDate defines the date that the member became a fellow within the organization. FellowshipDate has the following attribute: *accuracy* defines which parts of a date are accurate. Valid values are: DayMonthYear, MonthYear, and Year.	Optional	0 or 1	Date
ComponentGroup	This is the sub-element of the MembershipInfo element. ComponentInfo has sub-elements that define the organization components to which a member belongs. For more information, see section ComponentInfo.	Optional	0 or more	Container

Example:

```
<MembershipInfo>
```

```
    <MembershipOrganization>
    European Association for Cardio-thoracic Surgery
    </MembershipOrganization>
    <Country>
        <a:CountryName>United Kingdom</a:CountryName>
    </Country>
    <MemberNumber>21077</MemberNumber>
    <MembershipLevel>Member</MembershipLevel>
    <MembershipRole>Secretary General</MembershipRole>
    <MembershipStatus>Active</MembershipStatus>
    <MemberSinceDate>1979-01-01</MemberSinceDate>
  </MembershipInfo>
```

8.8.1 ComponentGroup

The ComponentGroup element contains sub-elements that define a user's membership in chapters, special interest groups, and other components of national and international professional medical societies. ComponentGroup is a sub-element of MembershipInfo.

Generated by XMLSpy   www.altova.com
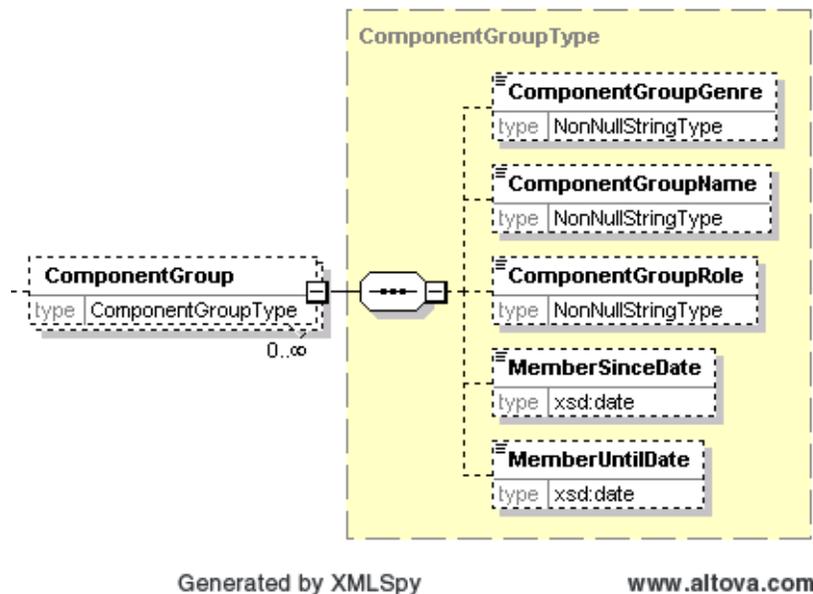
ComponentInfo Element Information

Element	Description	Required	Multiplicity	Datatype
ComponentGroup	This is the sub-element of the MembershipInfo	Optional	0 or more	Container

Element	Description	Required	Multiplicity	Datatype
	element. ComponentInfo has sub-elements that define the organization components to which a member belongs.			
ComponentGroupGenre	This is the subelement of the ComponentGroup element. ComponentGroupGenre defines the type of component to which the user belongs. For example, Chapter, Special Interest Group, Committee, etc.	Optional	0 or 1	Non-null String
ComponentGroupName	This is the sub-element of the ComponentGroup element. ComponentGroupName defines the name of the organization component to which the user belongs. For example, Belgian Chapter, Annual Meeting Program Committee, etc.	Optional	0 or 1	Non-null String
ComponentGroupRole	This is the sub-element of the ComponentGroup element. ComponentGroupRole defines the member's role in the organization component. For example, Committee Chair, Secretary, etc.	Optional	0 or 1	Non-null String
MemberSinceDate	This is the sub-element of the ComponentGroup element. MemberSinceDate defines the date that the	Optional	0 or 1	Date

Element	Description	Required	Multiplicity	Datatype
	member first joined the organization component.			
MemberUntilDate	This is the sub-element of the ComponentGroup element. MemberUntilDate defines the date that the individual's membership in the organization component expires.	Optional	0 or 1	Date

Example:

```
<ComponentGroup>
    <ComponentGroupGenre>Chapter</ComponentGroupGenre>
    <ComponentGroupName>Minnesota Radiological Society</ComponentGroupName>
    <ComponentGroupRole>President</ComponentGroupRole>
    <MemberSinceDate>1985-01-31</MemberSinceDate>
    <MemberUntilDate>2004-01-30</MemberUntilDate>
</ComponentGroup>
```

8.9 XtensibleInfo

The XtensibleInfo element contains sub-elements defined by the organization implementing the schema. It extends the currently defined schema. XtensibleInfo is included for backward compatibility and is not the preferred method of extension.

XtensibleInfo is a sub-element of Member.

9   Sample XML Document (UPDATE)

```xml
<?xml version = "1.0" encoding = "UTF-8"?>
<Members xmlns = "http://ns.medbiq.org/member/v1/"
xmlns:xsi = "http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation = "http://ns.medbiq.org/member/v1/
http://ns.medbiq.org/member/v1/member.xsd"
xmlns:n = "http://ns.medbiq.org/name/v1/"
xmlns:a = "http://ns.medbiq.org/address/v1/">
   <Member>
       <UniqueID domain = "American College of Surgeons">21556222</UniqueID>
       <Name>
          <n:GivenName>Percy</n:GivenName>
          <n:GivenName>Bysshe</n:GivenName>
          <n:FamilyName>Shelley</n:FamilyName>
          <n:Degree>MD</n:Degree>
       </Name>
       <Address>
          <a:StreetAddressLine>Department of Surgery</a:StreetAddressLine>
          <a:StreetAddressLine>600 N. Wolfe Street</a:StreetAddressLine>
          <a:City>Baltimore</a:City>
          <a:StateOrProvince>MD</a:StateOrProvince>
          <a:PostalCode>21287</a:PostalCode>
          <a:Country>
             <a:CountryCode>US</a:CountryCode>
          </a:Country>
       </Address>
       <EducationInfo>
          <Degree>MD</Degree>
          <InstitutionInfo>
             <InstitutionName>Stanford University</InstitutionName>
          </InstitutionInfo>
          <EndDate>1992-06-01</EndDate>
       </EducationInfo>
       <TrainingInfo>
          <ProgramInfo>
             <ProgramName>General Surgery Residency</ProgramName>
             <Accreditation>ACGME</Accreditation>
             <Specialty>Surgery</Specialty>
             <InstitutionInfo>
                <InstitutionName>Yale University</InstitutionName>
             </InstitutionInfo>
          </ProgramInfo>
          <Distinction>Chief Resident</Distinction>
          <StartDate>1992-07-01</StartDate>
          <EndDate>1998-06-01</EndDate>
       </TrainingInfo>
```

```
<CertificationInfo>
   <CertificationOrganization>
     American Board of Medical Specialties
   </CertificationOrganization>
   <CertificationBoard>American Board of Surgery</CertificationBoard>
   <CertificateInfo>
      <CertificateName certificateID = "44444">
        General Surgery
      </CertificateName>
      <CertificateType>General Certificate</CertificateType>
      <CertificateIssuance>
         <CertificationID>55555</CertificationID>
         <CertificationDuration>Time-limited</CertificationDuration>
         <CertificationOccurrence>
           Recertification
         </CertificationOccurrence>
         <CertificationIssueDate accuracy = "DayMonthYear">
           2004-01-31
         </CertificationIssueDate>
         <CertificationExpireDate accuracy = "DayMonthYear">
           2011-01-31
         </CertificationExpireDate>
         <CertificationStatus>Active</CertificationStatus>
      </CertificateIssuance>
   </CertificateInfo>
</CertificationInfo>
<OccupationInfo>
   <InstitutionInfo>
      <InstitutionName>Johns Hopkins University</InstitutionName>
   </InstitutionInfo>
   <OccupationTitle>Assistant Professor of Surgery</OccupationTitle>
   <OccupationStatus>Active</OccupationStatus>
</OccupationInfo>
<PersonalInfo>
   <PhysicalStatus>Living</PhysicalStatus>
   <Language>English</Language>
   <Citizenship>
      <a:CountryCode>US</a:CountryCode>
   </Citizenship>
   <Gender>Male</Gender>
   <ContactNumber>
      <CountryCode>1</CountryCode>
      <TelephoneNumber>4105551212</TelephoneNumber>
      <Description>Office</Description>
   </ContactNumber>
   <EmailAddress>pbshelley@nosuchmail.org</EmailAddress>
   <PreferredMethodOfContact>email</PreferredMethodOfContact>
</PersonalInfo>
<MembershipInfo>
```

```
        <MembershipOrganization>
          American College of Surgeons
        </MembershipOrganization>
        <MemberNumber>8888888</MemberNumber>
        <MembershipLevel>Fellow</MembershipLevel>
        <MembershipStatus>Active</MembershipStatus>
        <ComponentGroup>
            <ComponentGroupName>Scholarships Committee</ComponentGroupName>
            <ComponentGroupRole>Chair</ComponentGroupRole>
        </ComponentGroup>
      </MembershipInfo>
    </Member>
</Members>
```

10 References

Address

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Website. http://www.medbiq.org/std_specs/standards/index.html#HCLOM. Accessed August 24,
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W3C Extensible Markup Language (XML) 1.0 (Fourth Edition), http://www.w3.org/TR/xml . Accessed
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