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VICH Topic GL35: Guideline on pharmacovigilance of veterinary medicinal products: electronic standards for transfer of data

Draft[1]

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Comments should be provided using this template. The completed comments form should be sent to vet-guidelines@ema.europa.eu

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7 Westferry Circus ● Canary Wharf ● London E14 4HB ● United Kingdom
Telephone +44 (0)20 7418 8400 **Facsimile** +44 (0)20 7418 8447
E-mail info@ema.europa.eu **Website** www.ema.europa.eu

VICH International Cooperation on Harmonisation of Technical Requirements for Registration of Veterinary Medicinal Products

VICH GL35 (PHARMACOVIGILANCE: EST)
June 2010
For consultation at Step 4

PHARMACOVIGILANCE OF VETERINARY MEDICINAL PRODUCTS: ELECTRONIC STANDARDS FOR TRANSFER OF DATA

Recommended for Consultation
at Step 4 of the VICH Process
in June 2010
by the VICH Steering Committee

THIS GUIDELINE HAS BEEN DEVELOPED BY THE APPROPRIATE VICH EXPERT WORKING GROUP AND IS SUBJECT TO CONSULTATION BY THE PARTIES, IN ACCORDANCE WITH THE VICH PROCESS. AT STEP 7 OF THE PROCESS, THE FINAL DRAFT WILL BE RECOMMENDED FOR ADOPTION TO THE REGULATORY BODIES OF THE EUROPEAN UNION, JAPAN AND USA.

Secretariat : c/o IFAH Rue Defacqz, 1 - B - 1000 Bruxelles (Belgium) - Tel. +32-2-543.75.72, Fax +32-2-543.75.85
e-mail: sec@ivichsecc.org – Internet: http://www.vichsec.org

Introduction

The objective of this guideline is to provide standards to construct a single electronic message to transmit GL42 contents to all regions.

The need to transfer and disseminate information quickly, accurately and easily between Regulatory Authorities (RA) and Marketing Authorization Holders (MAH) on a worldwide scope is especially pertinent to the notification and assimilation of information for pharmacovigilance. Whereas the definition of the pharmacovigilance information has been established within GL24, GL30 and GL42, this guideline defines the electronic standards for transfer of data.

In order to allow for electronic exchange of this information between stakeholders, further specification of the field descriptors and their relationships, including agreement on format of the electronic message is essential.

Scope of Electronic Standards for Information Exchange

The scope of electronic standards for exchange of veterinary pharmacovigilance data between VICH RA and MAH includes but is not limited to:

- Recommendation to ensure secure transmission
- Definition of the electronic message structure
- Relationships (cardinality) between the data elements
- Establishment of additional vocabularies for electronic transmission and implementation of GL24, GL30, and GL42
- Business and schema validation rules and field descriptors specification for the data defined in GL24, GL30, GL35 and GL42

Recommendations to Ensure Secure Transmission

Regional exchange of pharmacovigilance information preferably occurs through a Gateway that follows the ICH M2 Gateway recommendation for the Electronic Standards for the Transfer of Regulatory Information (ESTRI-Gateway) in order to allow for an automated and secure way including all aspects of confidentiality, authentication, integrity and non-repudiation of all transactions in pharmacovigilance. MAHs will need to adhere to the RAs gateway specifications.

Definition of the Electronic Message Structure

For the basis of describing the messaging structure, the VICH Pharmacovigilance Working Group recommends the adoption a single standard, i.e., the International Standard ISO 27953-1. The message format is XML.

The US FDA CVM technical document entitled "Electronic Submission of Animal Adverse Events - HL7 ICSR - Electronic Transmission Implementation Specifications [Step By Step] (herein known as the Step By Step Document) is available on the US FDA CVM website. This document will serve as the core document from which VICH will develop its own specific VICH Step By Step Document in line with ISO 27953-1 for implementation. The unique adverse event processing system of each MAH and RA will need to be compliant with the VICH Step By Step Document (to be developed).

The purpose of this VICH Step By Step Document is to provide directions to assist users, reporters, and technical staff in completing a well formed electronic message for animal veterinary medicinal products adverse event reports (AER). The GL42 document has established a standard set of definitions to describe the data elements that need to be submitted for compliant adverse event reports. This document provides a translation and mapping of GL42 compliant adverse event elements into an electronic message. The GL42 data elements comprise the "payload" of the message.

These submissions are intended to be sent electronically to the RAs through their Electronic Submissions Gateway (ESG) and upon receipt they will be processed by the RAs unique systems. In addition to the "payload" information, the electronic message also contains "wrapper" information (also known as envelope information). Unique and specific information will be included in the wrappers of the electronic message as specified by the RAs. The purpose is so that the electronic message can be processed appropriately according to each RA's administrative needs. These unique and specific data should be specified in each RA's technical documents.

Relationships (Cardinality) Between the Data Elements

The relationships (cardinality) between the data elements are defined in GL42, the VICH Step By Step Document, VICH Validation Procedure Document (see description below), and Annex A. The draft data model diagrams are found in Annex A. Implementers should review and study all 3 of these documents to carefully understand the relationships between the data elements.

For repeatable fields, the RA should provide the maximum number of arrays that RA electronic systems will accept.

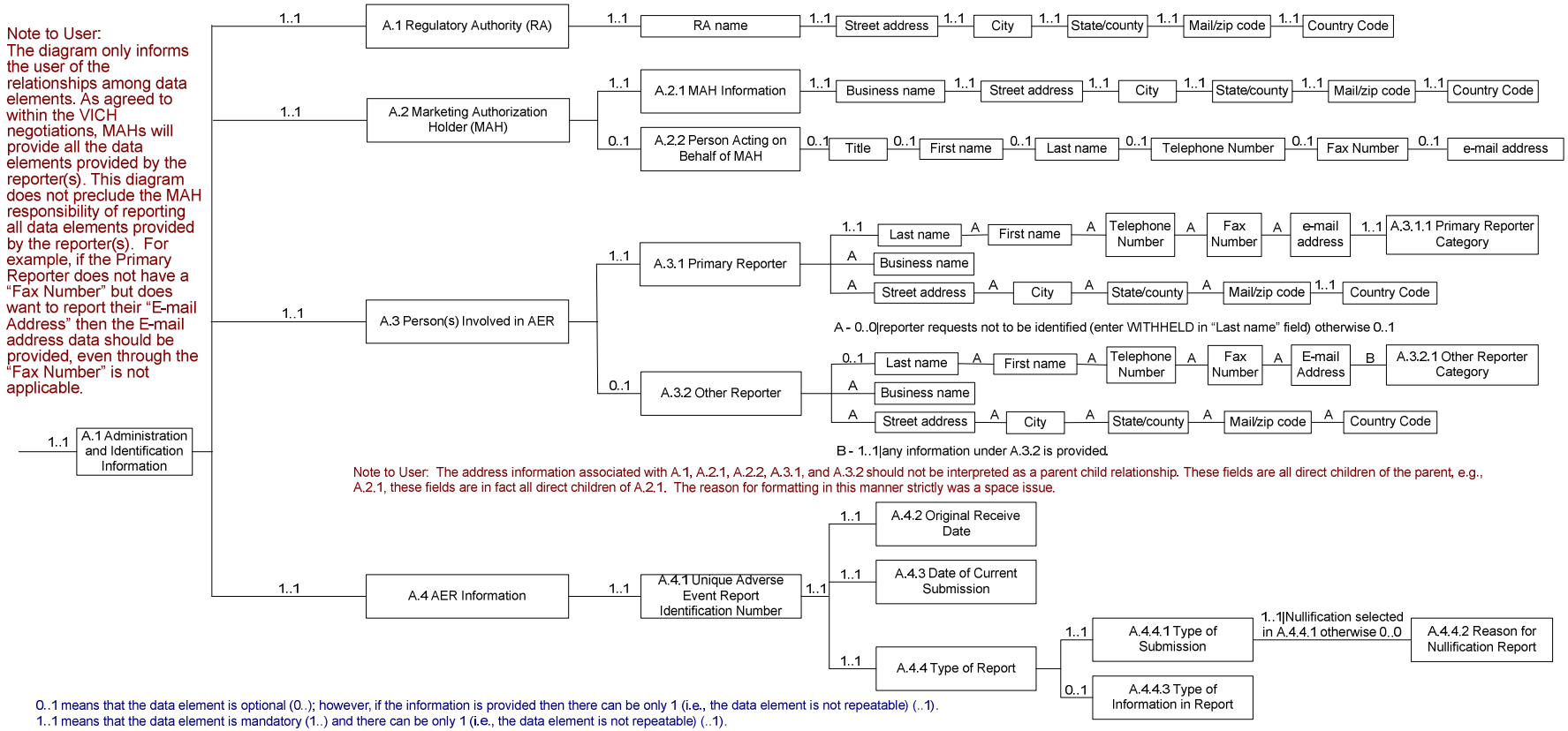
Business and Schema Validation Rules, Field Descriptors Specification for the Data Defined in GL42 and Wrapper Information and Relationships (Cardinality)

The US FDA CVM technical document entitled "Electronic Submission of Animal Adverse Events HL7 Individual Case Safety Report (ICSR) Electronic Transmission Implementation Specifications (herein known as the Validation Procedures) is available on the US FDA CVM website. This document will serve as the core document from which VICH will develop its own specific VICH Validation Procedures for implementation. The unique adverse event processing system of each MAH and RA will need to be compliant with the VICH Validation Procedures Document (to be developed).

Field Descriptions

Presented in Annex B are the field lengths and data types for all the GL42 that will serve as the basis for discussion in the implementation

Annex A
Draft Data Model for Section A - Administrative and Identification Information

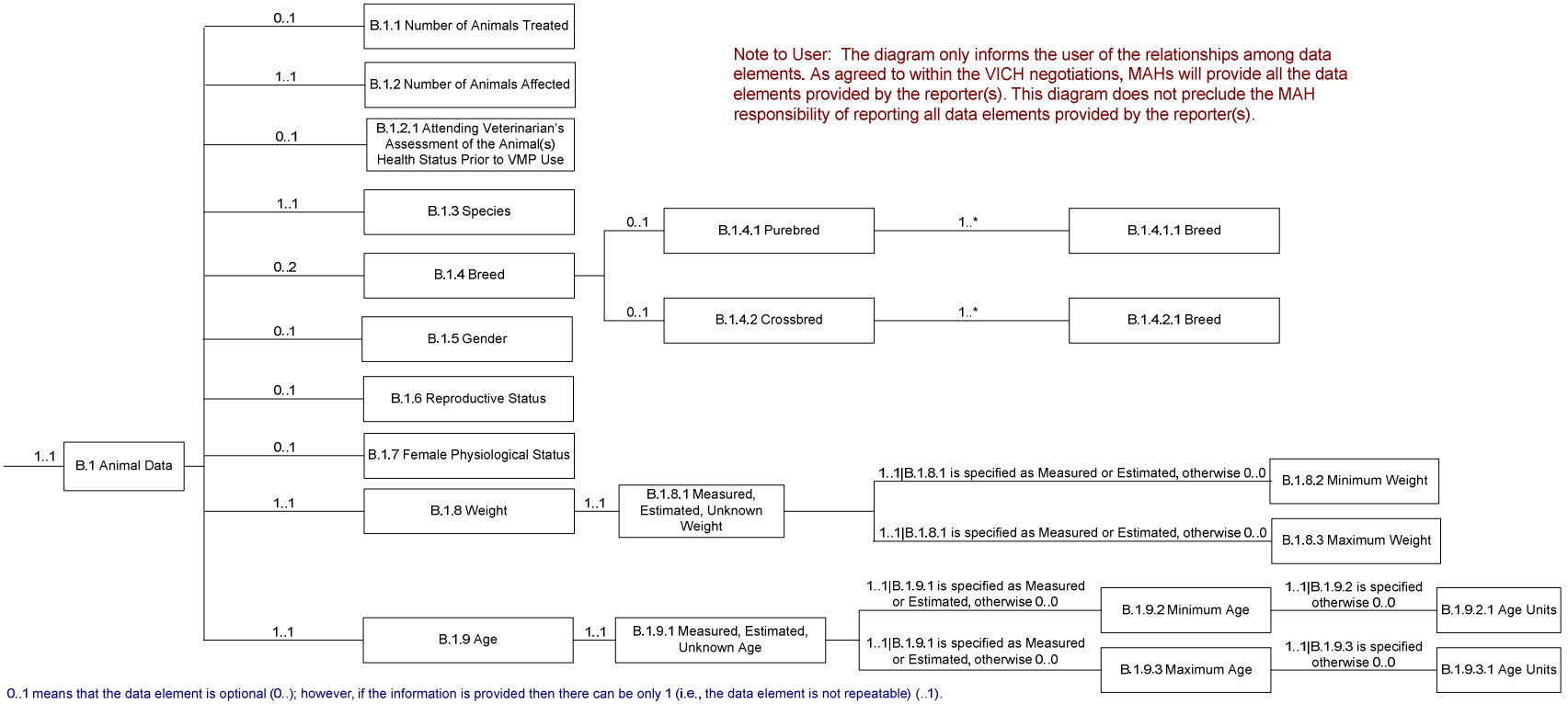


Note to User: The address information associated with A.1, A.2.1, A.2.2, A.3.1, and A.3.2 should not be interpreted as a parent child relationship. These fields are all direct children of the parent, e.g., A.2.1, these fields are in fact all direct children of A.2.1. The reason for formatting in this manner strictly was a space issue.

0..1 means that the data element is optional (0..); however, if the information is provided then there can be only 1 (i.e., the data element is not repeatable) (..1).
1..1 means that the data element is mandatory (1..) and there can be only 1 (i.e., the data element is not repeatable) (..1).
1..1|Nullification selected in A.4.4.1 otherwise 0..0 - If "Nullification" is selected as the Type of Submission, Reason for Nullification Report is mandatory but not repeatable. If an other Type of Submission is selected then 0..0 applies - no information is provided.

Filename: GeneralizedModelVICHSectionA.0 08312010.vsd
Dated: August 31, 2010

Draft Data Model for Section B.1 - Animal Data

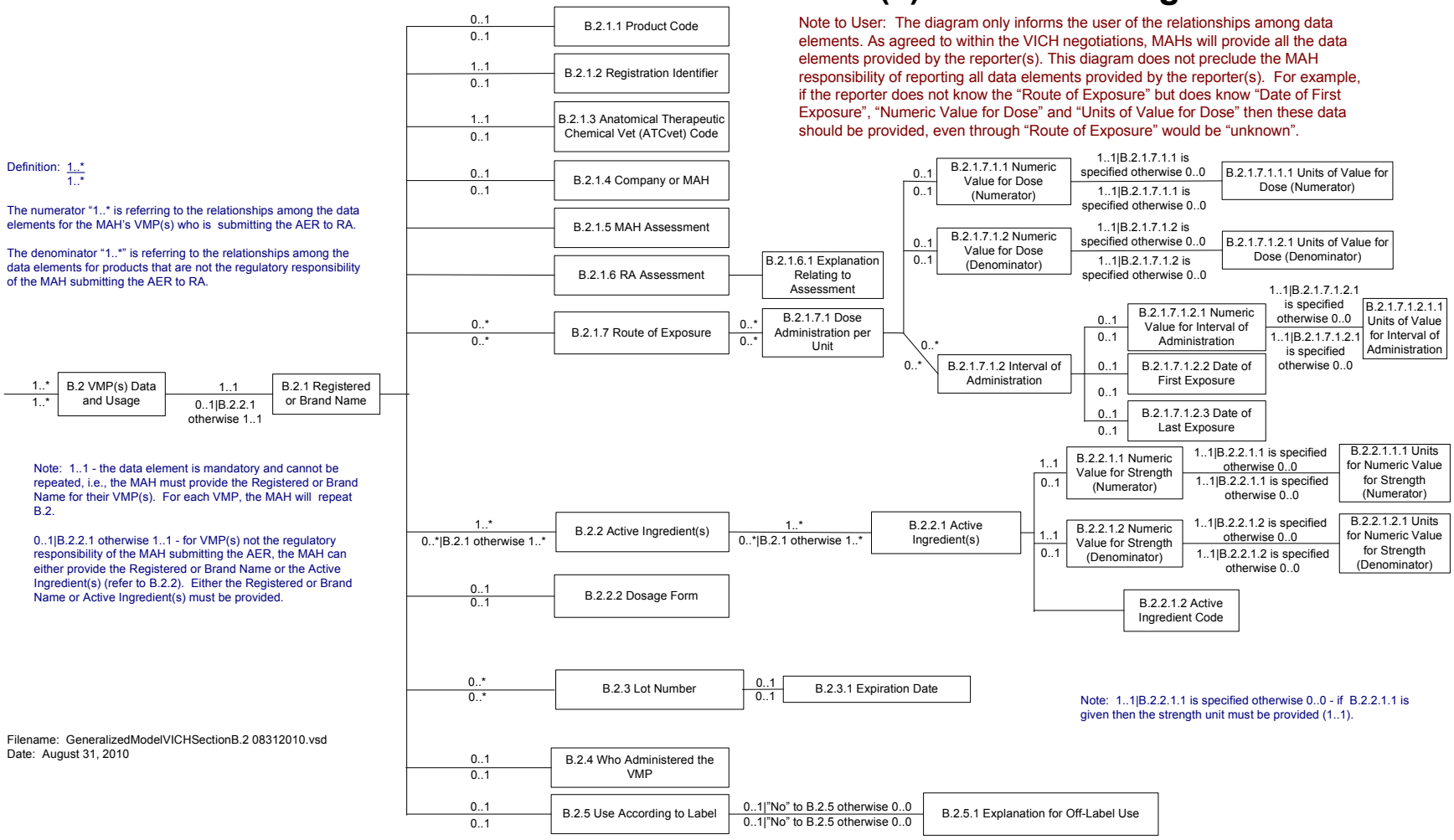


0..1 means that the data element is optional (0..); however, if the information is provided then there can be only 1 (i.e., the data element is not repeatable) (..1).
1..1 means that the data element is mandatory (1..) and there can be only 1 (i.e., the data element is not repeatable) (..1).
1..1|B.1.8.1 is specified as Measured or Estimated, otherwise 0..0 - The data element minimum weight is mandatory but not repeatable if B.1.8.1 is specified as Measured or Estimated or 0..0 if unknown is specified - no information is provided.
1..1|B.1.9.2 is specified otherwise 0..0 - The data element age units is mandatory but not repeatable if B.1.9.2, minimum age is specified or 0..0 if unknown is specified in B.1.9.1 - no information is provided.

NOTE: For B.1.4 Breed – 0..2 means that both purebreds and crossbreds can be expressed in the model. B.1.4.1 and B.1.4.2 are indicators of purebred or crossbred. B.1.4.1.1 and B.1.4.2.1 indicates the actual name of the breeds involved. Per the Pharmacovigilance Working Group, each region should propose cardinality limits for B.1.4.1.1 and B.1.4.2.1 for harmonization by the Implementation Working Group. In cases where there is only a single crossbred animal, only 3 breeds will be allowed. In cases where there are multiple purebred or crossbred animals, the Pharmacovigilance Working Group will leave it up the Implementation Working Group to determine the number of breeds that can be given (1..*).

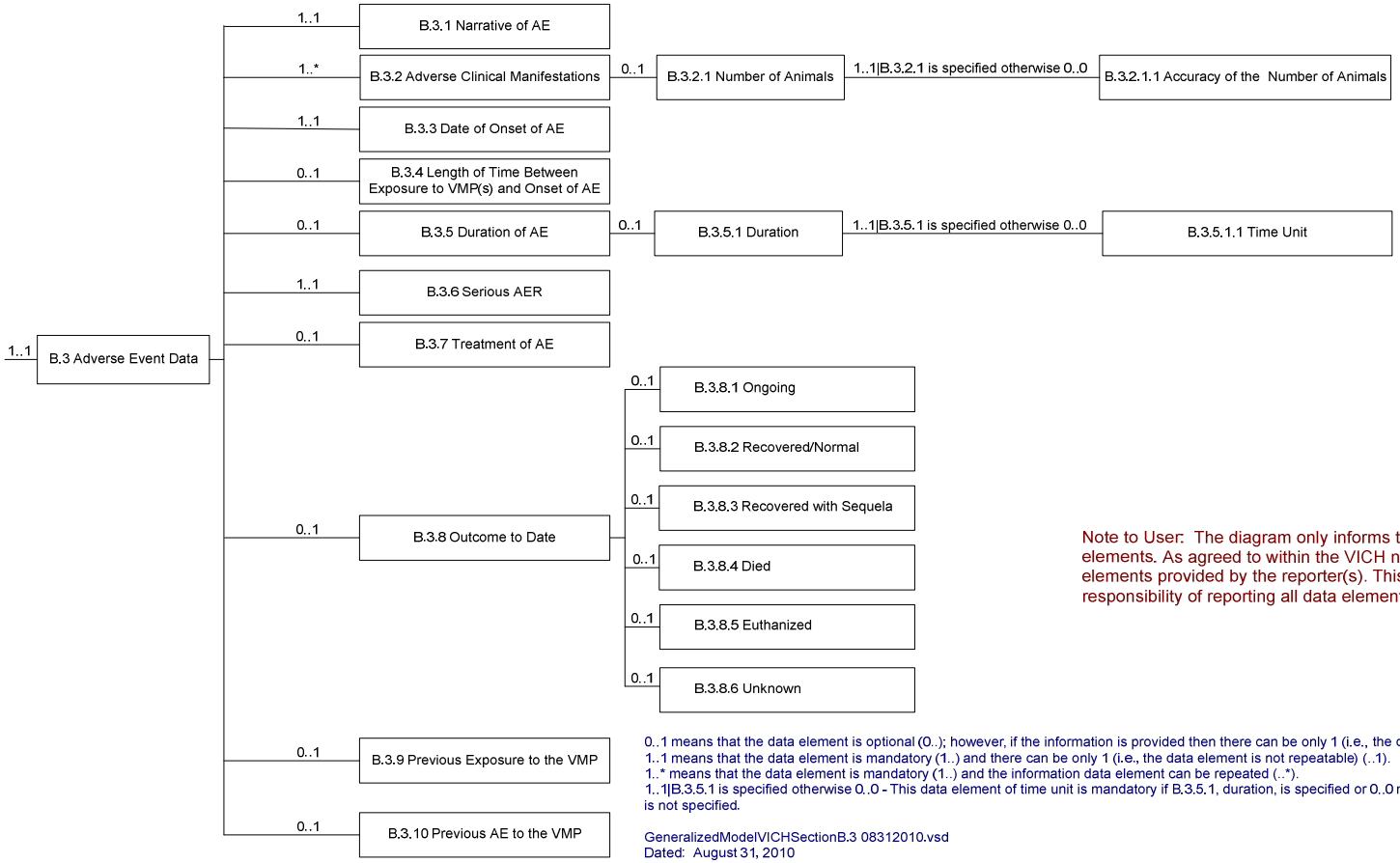
Filename: GeneralizedModelVICHSectionB.1 08312010.vsd
Date: August 31, 2010

Draft Data Model for Section B.2 VMP(s) Data and Usage



Filename: GeneralizedModelVICHSectionB.2 08312010.vsd
Date: August 31, 2010

Draft Data Model for Section B.3 - Adverse Event Data

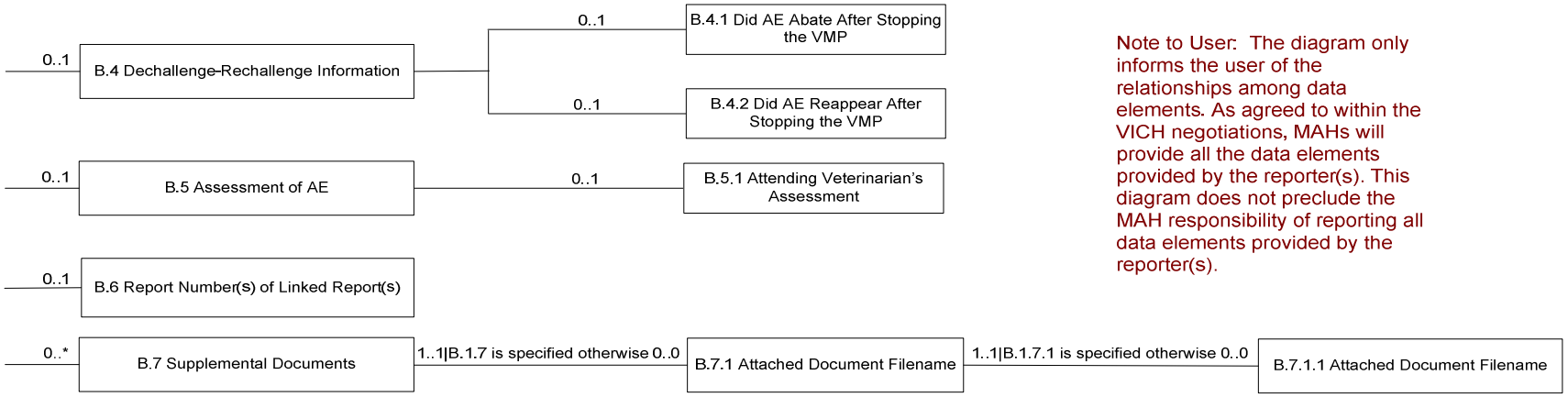


Note to User: The diagram only informs the user of the relationships among data elements. As agreed to within the VICH negotiations, MAHs will provide all the data elements provided by the reporter(s). This diagram does not preclude the MAH responsibility of reporting all data elements provided by the reporter(s).

0..1 means that the data element is optional (0..); however, if the information is provided then there can be only 1 (i.e., the data element is not repeatable) (..1).
1..1 means that the data element is mandatory (1..) and there can be only 1 (i.e., the data element is not repeatable) (..1).
1..* means that the data element is mandatory (1..) and the information data element can be repeated (..*).
1..1|B.3.5.1 is specified otherwise 0..0 - This data element of time unit is mandatory if B.3.5.1, duration, is specified or 0..0 meaning no information is necessary if duration is not specified.

GeneralizedModelVICHSectionB.3 08312010.vsd
Dated: August 31, 2010

Draft Data Model for Sections B.4 Dechallenge-Rechallenge Information, B.5 Assessment of AE, B.6 Report Number(s) of Linked Report(s), and B.7 Supplemental Documents



Note to User: The diagram only informs the user of the relationships among data elements. As agreed to within the VICH negotiations, MAHs will provide all the data elements provided by the reporter(s). This diagram does not preclude the MAH responsibility of reporting all data elements provided by the reporter(s).

0..1 means that the data element is optional (0..); however, it the information is provided then there can be only 1 (i.e., the data element is not repeatable) (..1).
0..* means that the data element is optional (0..) and the information data element can be repeated (..*).
1..1 means that the data element is mandatory (1..) and there can be only 1 (i.e., the data element is not repeatable) (..1).

GeneralizedModelVICHSectionB.4 5 6 7 08312010.vsd
Dated: August 31, 2010

Annex B. Field Length and Data Type by GL42 Data Elements

GL 42 Section Title	GL42 Section Number	Field Length (maximum length – characters)	Data Type
Administrative and Identification Information – Section A			
Regulatory Authority (RA)	A.1		
RA name		60	Open ended text
Street address		100	Open ended text
City		35	Open ended text
State/county		USA State – 15 County - 80	Single Choice Code List Open ended text
Mail/zip code		15	Open ended text
Country (3 character country codes ISO 3166)		15	single choice code list
Marketing Authorization Holder (MAH) (Sender) -- Section A.2			
MAH Information	A.2.1		
Business name		60	Open ended text
Street address		100	Open ended text
City		35	Open ended text
State/county		USA State – 15 County - 80	Single Choice Code List Open ended text
Mail/zip code		15	Open ended text
Country (3 character country codes ISO 3166)		15	single choice code list
Person Acting on Behalf of MAH	A.2.2		
Title		50	Open ended text
First name		35	Open ended text
Last name		50	Open ended text
Telephone		18	Formatted numeric for USA; open ended text for non-USA
Fax		18	Formatted numeric for USA; open ended text for non-USA
e-mail		100	Open ended text
Person(s) Involved in AER (Reporter) – Section A.3			
Primary Reporter Information	A.3.1		
First name		35	Open ended text

GL 42 Section Title	GL42 Section Number	Field Length (maximum length – characters)	Data Type
Administrative and Identification Information – Section A			
Last name		50	Open ended text
Telephone		18	Formatted numeric for USA; open ended text for non-USA
Fax		18	Formatted numeric for USA; open ended text for non-USA
e-mail		100	Open ended text
Business name		60	Open ended text
Street address		100	Open ended text
City		35	Open ended text
State/county		USA State – 15 County - 80	Single Choice Code List Open ended text
Mail/zip code		15	Open ended text
Country (3 character country codes ISO 3166)		15	Single choice code list
Primary Reporter Category	A.3.1.1	15 (code) 80 (code description/term)	Single choice code list
Other Reporter Information	A.3.2		
First name		35	Open ended text
Last name		50	Open ended text
Telephone		18	Formatted numeric for USA; open ended text for non-USA
Fax		18	Formatted numeric for USA; open ended text for non-USA
e-mail		100	Open ended text
Business name		60	Open ended text
Street address		100	Open ended text
City		35	Open ended text
State/county		USA State – 15 County - 80	Single Choice Code List Open ended text
Mail/zip code		15	Open ended text
Country (3		15	Single choice

GL 42 Section Title	GL42 Section Number	Field Length (maximum length – characters)	Data Type
Administrative and Identification Information – Section A			
character country codes ISO 3166)			code list
Other Reporter Category	A.3.2**.1**	15 (code) 80 (code description/term)	Single choice code list
AER Information (Sender Investigation/Report Information) – Section A.4			
Unique Adverse Event Identification Number	A.4.1	60	Open ended text
Original Receive Date	A.4.2	19	Date
Date of Current Submission	A.4.3	19	Date
Type of Report – Section A.4.4			
Type of Submission & Code	A.4.4.1	15 (code) 80 (code description/term)	Single choice code list
Reason for Nullification Report	A.4.4.2	200	Open ended text
Type of Information in Report & Code	A.4.4.3	15 (code) 80 (code description/term)	Single choice code list
Description of Animal Data Information – Section B			
Animal Data – Section B.1			
Number of Animals Treated	B.1.1	12	Integer
Number of Animals Affected	B.1.2	12	Integer
Attending Veterinarian's Assessment of Health Status Prior to VMP & Code	B.1.2.1	15 (code) 80 (code description/term)	Single choice code list
Species (Type of Species) & Code	B.1.3	15 (code) 80 (code description/term)	Single choice code list
Breed & Code	B.1.4.1.1 Breed (Purebreed) and B.1.4.2,1 Breed (Crossbred)	15 (code) 80 (code description/term)	Multiple choice code list
Gender & Code	B.1.5	15 (code) 80 (code description/term)	Single choice code list
Reproductive Status & Code	B.1.6	15 (code) 80 (code	Single choice code list

GL 42 Section Title	GL42 Section Number	Field Length (maximum length – characters)	Data Type
Administrative and Identification Information – Section A			
		description/term)	
Female Physiological Status & Code	B.1.7	15 (code) 80 (code description/term)	Single choice code list
Animal Weight – Section B.1.8			
Weight Measured, Estimated or Unknown & Code	B.1.8.1	15 (code) 80 (code description/term)	Single choice code list
Minimum Weight	B.1.8.2	12	Numeric (nnnnnnnnn.nn)
Minimum Weight Unit		kg	
Maximum Weight	B.1.8.3	12	Numeric (nnnnnnnnn.nn)
Maximum Weight Unit		kg	
Animal Age – Section B.1.9			
Age Measured, Estimated or Unknown & Code	B.1.9.1	15 (code) 80 (code description/term)	Single choice code list
Minimum Age	B.1.9.2	12	Numeric (nnnnnnnnn.nn)
Minimum Age Units (code)	B.1.9.2.1	15	Single choice code list
Maximum Age	B.1.9.3	12	Numeric (nnnnnnnnn.nn)
Maximum Age Units (code)	B.1.9.3.1	15	Single choice code list
VMP Data and Usage – Section B.2			
Registered Name or Brand Name	B.2.1	200	Open ended text
Product Code (Product NDC Number or Unique ID)	B.2.1.1	20	Open ended text
Registration Identifier	B.2.1.2	35	Open ended text
Anatomical Therapeutic Chemical Vet (ATCvet) Code	B.2.1.3	10	Open ended text
Company or MAH	B.2.1.4	60	Open ended text
MAH Assessment	B.2.1.5	250	Open ended text
RA Assessment	B.2.1.6	Not Applicable	Not Applicable
Explanation Relating to Assessment	B.2.1.6.1	Not Applicable	Not Applicable
Route of Exposure & Dosage Information – Section B.2.1.7 & Section B.2.2			
Route of Exposure	B.2.1.7	15 (code)	Single choice

GL 42 Section Title	GL42 Section Number	Field Length (maximum length – characters)	Data Type
Administrative and Identification Information – Section A			
(Route of Administration)		80 (code description/term)	code list
Dose Per Administration	B.2.1.7.1	[redacted]	[redacted]
Numeric Value for Dose	B.2.1.7.1.1	12	Numeric (nnnnnnn.nnnn)
Units of Value for Dose	B.2.1.7.1.1.1	15 (code) 80 (code description/term)	single choice code list
Interval of Administration	B.2.1.7.1.2	[redacted]	[redacted]
Numeric Value for Interval of Administration	B.2.1.7.1.2.1	12	Integer
Units of Value for the Interval of Administration	B.2.1.7.1.2.1.1	15 (code) 80 (code description/term)	Single choice code list
Date of First Exposure	B.2.1.7.1.2.2	19	Date
Date of Last Exposure	B.2.1.7.1.2.3	19	Date
Active Ingredient(s)	B.2.2	[redacted]	[redacted]
Active Ingredient(s)	B.2.2.1	200	Open ended text
Numeric Value for Strength (Numerator)	B.2.2.1.1	12	Numeric (nnnnnnn.nnnn)
Units for Numeric Value for Strength (Numerator)	B.2.2.1.1.1	15 (code) 80 (code description/term)	Single choice code list
Numeric Value for Strength (Denominator)	B.2.2.1.2	12	Numeric (nnnnnnn.nnnn)
Units for Numeric Value for Strength (Denominator)	B.2.2.1.2.1	15 (code) 80 (code description/term)	Single choice code list
Active Ingredient Code	B.2.2.1.2	15	Single choice code list
Dosage Form & Code	B.2.2.2	15 (code) 80 (code description/term)	Single choice code list
Manufacturing/Product Defect Information – Section B.2.3 & B.2.3.6			
Lot Number(s)	B.2.3	35	Open ended text
Expiration Date	B.2.3.1	19	Date
Administration – Section B.2.4			
Who Administered the VMP & Code	B.2.4	15 (code) 80 (code	Single choice code list

GL 42 Section Title	GL42 Section Number	Field Length (maximum length – characters)	Data Type
Administrative and Identification Information – Section A			
		description/term)	
Label Usage – Section B.2.5			
Use According to Label	B.2.5	5	Boolean
Explanation for Off-Label Use & Code	B.2.5.1	12	Integer
Adverse Event Data – Section B.3			
Narrative of AE	B.3.1	20,000	Open ended text
Adverse Clinical Manifestations (AER Term Name(s) & Code(s))	B.3.2	15 (code) 250 (code description/term)	Multiple choice code list
Number of Animal	B.3.2.1	12	Integer
Accuracy of the Number of Animals	B.3.2.1.1	15 (code) 80 (code description/term)	Single choice code list
Date of Onset of AE (AE Start Date)	B.3.3	19	Date
Length of Time between Exposure to VMP & Onset of AE	B.3.4	15 (code) 80 (code description/term)	Single choice code list
Duration of AE	B.3.5		
Duration (Time)	B.3.5.1	12	Numeric (nnnnnnn.nnnn)
Duration Time Units	B.3.5.1.1	15 (code) 80 (code description/term)	Single choice code list
Serious AER Reported	B.3.6	5	Boolean
Treatment of AE	B.3.7	5	Boolean
Outcome to Date	B.3.8	12	Integer
Previous Exposure to the VMP	B.3.9	5	Boolean
Previous AE to VMP	B.3.10	5	Boolean
Dechallenge - Rechallenge Information – Section B.4			
Did AE Abate After Stopping the VMP?	B.4.1	5	Boolean
Did AE Reappear After Re-introduction of the VMP?	B.4.2	5	Boolean
Veterinary Assessment of AE – Section B.5			
Attending Veterinarian's Assessment of AE	B.5.1	15 (code) 80 (code description/term)	Single choice code list
Supplemental Documents -- Section B.7			
Attached Document Filename	B.7.1	256	Open ended text
Attached Document	B.7.1.1	15 (code)	Single choice

GL 42 Section Title	GL42 Section Number	Field Length (maximum length – characters)	Data Type
Administrative and Identification Information – Section A			
Type		80 (code description/term)	code list