MedDRA® TERM SELECTION: POINTS TO CONSIDER

ICH-Endorsed Guide for MedDRA Users

Release 4.13

Based on MedDRA Version 20.0

1 March 2017

Disclaimer and Copyright Notice

This document is protected by copyright and may be used, reproduced, incorporated into other works, adapted, modified, translated or distributed under a public license provided that ICH's copyright in the document is acknowledged at all times. In case of any adaption, modification or translation of the document, reasonable steps must be taken to clearly label, demarcate or otherwise identify that changes were made to or based on the original document. Any impression that the adaption, modification or translation of the original document is endorsed or sponsored by the ICH must be avoided.

The document is provided "as is" without warranty of any kind. In no event shall the ICH or the authors of the original document be liable for any claim, damages or other liability arising from the use of the document.

The above-mentioned permissions do not apply to content supplied by third parties. Therefore, for documents where the copyright vests in a third party, permission for reproduction must be obtained from this copyright holder.

MedDRA® trademark is owned by IFPMA on behalf of ICH

Table of Contents

SECTIO	ON 1 –	INTRODUCTION	1
1.1	Objecti	ves of this Document	1
1.2	Uses o	f MedDRA	1
1.3	How to	Use this Document	2
1.4	Preferr	ed Option	2
1.5	MedDF	RA Browsing Tools	2
SECTIO	ON 2 –	GENERAL TERM SELECTION PRINCIPLES	3
2.1	Quality	of Source Data	3
2.2	Quality	Assurance	3
2.3	Do Not	Alter MedDRA	3
2.4	Always	Select a Lowest Level Term	3
2.5	Select	Only Current Lowest Level Terms	5
2.6	When t	o Request a Term	5
2.7	Use of	Medical Judgment in Term Selection	5
2.8	Selecti	ng More than One Term	6
2.9	Check	the Hierarchy	6
2.10) Sele	ct Terms for All Reported Information, Do Not Add Information	6
SECTIO	ON 3 –	TERM SELECTION POINTS	7
3.1	Definiti	ve and Provisional Diagnoses with or without Signs and Symptoms	7
3.2	Death a	and Other Patient Outcomes	10
	3.2.1	Death with ARs/AEs	10
	3.2.2	Death as the only reported information	11
	3.2.3	Death terms that add important clinical information	11
	3.2.4	Other patient outcomes (non-fatal)	12
3.3	Suicide	e and Self-Harm	12

	3.3.1	If overdose is reported	. 12
	3.3.2	If self-injury is reported	. 12
	3.3.3	Fatal suicide attempt	. 13
3.4	Confli	cting/Ambiguous/Vague Information	. 13
	3.4.1	Conflicting information	. 13
	3.4.2	Ambiguous information	. 14
	3.4.3	Vague information	. 14
3.5	Comb	ination Terms	. 14
	3.5.1	Diagnosis and sign/symptom	. 15
	3.5.2	One reported condition is more specific than the other	. 15
	3.5.3	A MedDRA combination term is available	. 15
	3.5.4	When to "split" into more than one MedDRA term	. 16
	3.5.5	Event reported with pre-existing condition	. 17
3.6	Age v	s. Event Specificity	. 17
	3.6.1	MedDRA term includes age and event information	. 17
	3.6.2	No available MedDRA term includes both age and event information	. 17
3.7	Body	Site vs. Event Specificity	. 18
	3.7.1	MedDRA term includes body site and event information	. 18
	3.7.2	No available MedDRA term includes both body site and event information	. 18
	3.7.3	Event occurring at multiple body sites	. 18
3.8	Locati	on-Specific vs. Microorganism-Specific Infection	. 19
	3.8.1	MedDRA term includes microorganism and anatomic location	. 19
	3.8.2 location	No available MedDRA term includes both microorganism and anatomic	. 19
3.9	Modifi	cation of Pre-existing Conditions	. 20
3.1	0 Ехр	osures during Pregnancy and Breast Feeding	. 21
	3.10.1	Events in the mother	. 21

	3.1	0.2	Events in the child or foetus	22
3.1	1	Con	genital Terms	22
	3.1	1.1	Congenital conditions	22
	3.1	1.2	Acquired conditions (not present at birth)	23
	3.1	1.3	Conditions not specified as either congenital or acquired	24
3.1	2	Neo	plasms	24
	3.1	2.1	Do not infer malignancy	25
3.1	3	Med	dical and Surgical Procedures	25
	3.1	3.1	Only the procedure is reported	25
	3.1	3.2	Procedure and diagnosis are reported	25
3.1	4	Inve	estigations	26
	3.1	4.1	Results of investigations as ARs/AEs	26
	3.1	4.2	Investigation results consistent with diagnosis	27
	3.1	4.3	Investigation results not consistent with diagnosis	27
	3.1	4.4	Grouped investigation result terms	27
	3.1	4.5	Investigation terms without qualifiers	28
3.1	5	Med	lication Errors, Accidental Exposures and Occupational Exposures	28
	3.1	5.1	Medication errors	28
pre	scri	ibed	abelled for this drug-disease interaction. LLT Contraindicated drug provides additional information about the nature of the labelled interaction error and the stage at which the error occurred	33
	3.1	5.2	Accidental exposures and occupational exposures	34
3.1	6	Misu	use, Abuse and Addiction	35
	3.1	6.1	Misuse	36
	3.1	6.2	Abuse	36
	3.1	6.3	Addiction	37
	3.1	6.4	Drug diversion	38

3.1	7	Trar	nsmission of Infectious Agent via Product	38
3.18	8	Ove	erdose, Toxicity and Poisoning	38
	3.18	3.1	Overdose reported with clinical consequences	39
	3.18	3.2	Overdose reported without clinical consequences	40
3.19	9	Dev	ice-related Terms	40
	3.19	9.1	Device-related event reported with clinical consequences	40
	3.19	9.2	Device-related event reported without clinical consequences	41
3.20	0	Dru	g Interactions	41
	3.20	0.1	Reporter specifically states an interaction	41
	3.20	0.2	Reporter does not specifically state an interaction	42
3.2 ⁻	1	No /	Adverse Effect and "Normal" Terms	42
	3.21	1.1	No adverse effect	42
	3.21	1.2	Use of "normal" terms	42
3.22	2	Une	expected Therapeutic Effect	42
3.2	3	Mod	dification of Effect	43
	3.23	3.1	Lack of effect	43
	3.23	3.2	Do not infer lack of effect	43
	3.23	3.3	Increased, decreased and prolonged effect	44
3.24	4	Soc	ial Circumstances	44
	3.24	1.1	Use of terms in this SOC	44
	3.24	1.2	Illegal acts of crime or abuse	45
3.2	5	Med	lical and Social History	46
3.2	6	Indi	cation for Product Use	46
	3.26	5.1	Medical conditions	46
	3.26	5.2	Complex indications	47
	3.26	3.3	Indications with genetic markers or abnormalities	47

3.26.4	Prevention and prophylaxis
3.26.5	Procedures and diagnostic tests as indications
3.26.6	Supplementation and replacement therapies
3.26.7	Indication not reported
3.27 Off	Label Use
3.27.1	Off label use when reported as an indication
3.27.2	Off label use when reported with an AR/AE50
3.28 Pro	oduct Quality Issues51
3.28.1	Product quality issue reported with clinical consequences
3.28.2	Product quality issue reported without clinical consequences
3.28.3	Product quality issue vs. medication error
SECTION 4 -	APPENDIX54
4.1 Versi	oning54
4.1.1	Versioning methodologies
4.1.2	Timing of version implementation
4.2 Links	and References
4.3 Meml	pership of the ICH Points to Consider Working Group
4.3.1	Current members of the ICH Points to Consider Working Group 57
4.3.2	Former members of the ICH Points to Consider Working Group 58

SECTION 1 - INTRODUCTION

The **Med**ical **D**ictionary for **R**egulatory **A**ctivities terminology (MedDRA) was designed for sharing regulatory information for human medical products. In order for MedDRA to harmonise the exchange of coded data, users should be consistent in the assignment of terms to verbatim reports of symptoms, signs, diseases, etc.

This *MedDRA Term Selection: Points to Consider* (MTS:PTC) document is an ICH-endorsed guide for MedDRA users. It is updated in step with new MedDRA versions and is a companion document to MedDRA. It was developed and is maintained by a working group charged by the ICH Steering Committee. The working group consists of regulatory and industry representatives of the European Union, Japan, and the United States, as well as representatives from the Canadian regulatory authority, the World Health Organization, the MedDRA Maintenance and Support Services Organization (MSSO) and the Japanese Maintenance Organization (JMO) (see Appendix, Section 4.3 for list of members).

1.1 Objectives of this Document

The objective of the MTS:PTC document is to promote **accurate** and **consistent** term selection.

Organisations are encouraged to document their term selection methods and quality assurance procedures in organisation-specific coding guidelines which should be consistent with the MTS:PTC.

Consistent term selection promotes medical accuracy for sharing MedDRA-coded data and facilitates a common understanding of shared data among academic, commercial and regulatory entities. The MTS:PTC could also be used by healthcare professionals, researchers, and other parties outside of the regulated biopharmaceutical industry.

The document provides term selection considerations for business purposes and regulatory requirements. There may be examples that do not reflect practices and requirements in all regions. This document does not specify regulatory reporting requirements, nor does it address database issues. As experience with MedDRA increases, and as MedDRA changes, there will be revisions to this document.

1.2 Uses of MedDRA

Term selection for adverse reactions/adverse events (ARs/AEs), device-related events, product quality issues, medication errors, exposures, medical history, social history, investigations, misuse and abuse, off label use, and indications is addressed in this MTS:PTC document.

MedDRA's structure allows for aggregation of those reported terms in medically meaningful groupings to facilitate analysis of safety data. MedDRA can also be used to list AR/AE data in reports (tables, line listings, etc.), compute frequencies of similar

ARs/AEs, and capture and analyse related data such as product indications, investigations, and medical and social history.

1.3 How to Use this Document

The MTS:PTC document does not address every potential term selection situation. Medical judgment and common sense should also be applied.

This document is not a substitute for MedDRA training. It is essential for users to have knowledge of MedDRA's structure and content. For optimal MedDRA term selection, one should also refer to the MedDRA Introductory Guide (see Appendix, Section 4.2).

Users are invited to contact the MSSO Help Desk with any questions or comments about this MTS:PTC document.

1.4 Preferred Option

In some cases, where there is more than one option for selecting terms, a "preferred option" is identified in this document. **Designation of a "preferred option" does not limit MedDRA users to applying that option.** Users should always first consider regional regulatory requirements. An organisation should be consistent in the option that they choose to use and document that option in internal coding guidelines.

1.5 MedDRA Browsing Tools

The MSSO and JMO provide two browsers (a Desktop browser and a Web-Based browser) that allow for searching and viewing the terminology (see Appendix, Section 4.2). Users may find these browsers useful aids in term selection.

SECTION 2 - GENERAL TERM SELECTION PRINCIPLES

2.1 Quality of Source Data

The quality of the original reported information directly impacts the quality of data output. Clarification should be obtained for data that are ambiguous, confusing, or unintelligible. If clarification cannot be obtained, refer to Section 3.4.

2.2 Quality Assurance

To promote consistency, organisations should document their term selection methods and quality assurance procedures in coding guidelines consistent with this MTS:PTC document.

Clear initial data can be promoted through careful design of data collection forms, and training of individuals in data collection and follow-up (e.g., investigators, drug sales representatives).

Term selection should be reviewed by a qualified individual, i.e., a person with medical background or training who has also received MedDRA training.

Human oversight of term selection performed by IT tools (such as an autoencoder) is needed to assure that the end result fully reflects the reported information and makes medical sense.

2.3 Do Not Alter MedDRA

MedDRA is a **standardised** terminology with a pre-defined term hierarchy that should not be altered. Users must not make *ad hoc* structural alterations to MedDRA, including changing the primary SOC allocation; doing so would compromise the integrity of this standard. If terms are found to be incorrectly placed in the MedDRA hierarchy, a change request should be submitted to the MSSO.

Example

Change Request to Re-Assign Primary SOC

In a previous version of MedDRA, PT *Factor VIII deficiency* was incorrectly assigned to primary SOC *Blood and lymphatic system disorders*. By means of a Change Request, the PT was re-assigned to primary SOC *Congenital, familial and genetic disorders* (making SOC *Blood and lymphatic system disorders* its secondary SOC assignment).

2.4 Always Select a Lowest Level Term

MedDRA Lowest Level Term(s) (LLT) that most accurately reflects the reported verbatim information should be selected.

The degree of specificity of some MedDRA LLTs may be challenging for term selection. Here are some tips for specific instances:

 A single letter difference in a reported verbatim text can impact the meaning of the word and consequently the term selection

Example

Reported	LLT Selected
Lip sore	Lip sore (PT <i>Lip pain</i>)
Lip sore s	Sores lip (PT Cheilitis)
Sore gums	Sore gums (PT Gingival pain)
Sore s gum	Sores gum (PT Noninfective gingivitis)

Gender-specific terms

MedDRA generally excludes terms with demographic descriptors (age, gender, etc.), but some terms with gender qualifiers are included if the gender renders the concept unique.

Example

Distinct Gender-Specific Terms	
In MedDRA, there are separate LLTs/PTs for	
Infertility, Infertility female and Infertility male	

Organisation-specific coding guidelines should address instances when it is important to capture gender-specific concepts.

MedDRA users should also consider the impact of gender-specific terms when comparing current data to data coded with a legacy terminology in which such gender specificity may not have been available.

Example

Gender Specificity - Legacy Terms vs. MedDRA

Consider the impact of selecting gender-specific MedDRA terms for breast cancer (e.g., LLT *Breast cancer female*) when comparing data coded in a legacy terminology with only a single "Breast cancer" term.

Postoperative and post procedural terms

MedDRA contains some "postoperative" and "post procedural" terms. Select the most specific term available.

Reported	LLT Selected
Bleeding after surgery	Bleeding postoperative
Sepsis occurred after the procedure	Post procedural sepsis

Newly added terms

More specific LLTs may be available in a new version of MedDRA. See Appendix, Section 4.2.

2.5 Select Only Current Lowest Level Terms

Non-current LLTs should not be used for term selection.

2.6 When to Request a Term

Do not address deficiencies in MedDRA with organisation-specific solutions. If there is no MedDRA term available to adequately reflect the reported information, submit a change request to MSSO.

Example

Change Request for a New Term	
LLT HBV coinfection was added to MedDRA	
following a user's request.	

2.7 Use of Medical Judgment in Term Selection

If an exact match cannot be found, **medical judgment** should be used to adequately represent the medical concept with an existing MedDRA term.

Reported	LLT Selected	Comment
Brittle hair	Hair breakage	There is no MedDRA term for "brittle hair". LLT Hair breakage more accurately reflects the reported concept than the less specific LLT Hair disorder

2.8 Selecting More than One Term

When a specific medical concept is not represented by a **single** MedDRA term, consider requesting a new term through the change request process (see Section 2.6). Whilst waiting for the new term, select one or more existing terms using a consistent approach with careful consideration of the impact on data retrieval, analysis, and reporting.

In some cases, it may be appropriate to select more than one MedDRA LLT to represent the reported information. If only one term is selected, specificity may be lost; on the other hand, selecting more than one term may lead to redundant counts. Established procedures should be documented.

Example

More Than One LLT Selected

There is no single MedDRA term for "metastatic gingival cancer". Therefore, the options are:

- 1. Select LLT Gingival cancer OR LLT Metastatic carcinoma
- 2. Select LLT Gingival cancer AND LLT Metastatic carcinoma

2.9 Check the Hierarchy

When considering selecting an LLT, check the hierarchy above the LLT (PT level and further up the hierarchy to HLT, HLGT and SOC) to ensure the placement accurately reflects the meaning of the reported term.

2.10 Select Terms for All Reported Information, Do Not Add Information

Select terms for every AR/AE reported, regardless of causal association. In addition, select terms for device-related events, product quality issues, medication errors, medical history, social history, investigations, and indications as appropriate.

If a diagnosis is reported with characteristic signs and symptoms, the **preferred option** is to select a term for the diagnosis only (see Section 3.1 for details and examples).

When selecting terms, no reported information should be excluded from the term selection process; similarly, do not add information by selecting a term for a diagnosis if only signs or symptoms are reported.

Reported	LLT Selected	Comment
Abdominal pain, increased	Abdominal pain	It is inappropriate to
serum amylase, and increased serum lipase	Serum amylase increased	assign an LLT for diagnosis
moreasea seram npase	Lipase increased	of "pancreatitis"

SECTION 3 - TERM SELECTION POINTS

3.1 Definitive and Provisional Diagnoses with or without Signs and Symptoms

The table below provides term selection options for definitive and provisional diagnoses with or without signs/symptoms reported. Examples are listed below the table.

A provisional diagnosis may be described as "suspicion of", "probable", "presumed", likely", "rule out", "questionable", "differential", etc.

The **preferred option** for a single or multiple provisional diagnosis(es) is to select a term(s) for the diagnosis(es) *and* terms for reported signs and symptoms. This is because a provisional diagnosis may change while signs/symptoms do not.

SUMMARY OF PREFERRED AND ALTERNATE OPTIONS			
SINGLE DIAGNOSIS			
DEFINITIVE DIAGNOSIS	PROVISIONAL DIAGNOSIS		
Single definitive diagnosis without signs/symptoms • Diagnosis (only possible option)	Single provisional diagnosis without signs/symptoms • Provisional diagnosis (only possible option)		
Single definitive diagnosis with signs/symptoms • Preferred: Diagnosis only	Single provisional diagnosis with signs/symptoms • Preferred: Provisional diagnosis		
Alternate: Diagnosis and signs/symptoms Note: Always include signs/symptoms not associated with diagnosis SEE EXAMPLE 1	and signs/symptoms • Alternate: Signs/symptoms only Note: Always include signs/symptoms not associated with diagnosis SEE EXAMPLE 2		
MULTIPLE I	DIAGNOSES		
DEFINITIVE DIAGNOSES	PROVISIONAL DIAGNOSES		
 Multiple definitive diagnoses without signs/symptoms Multiple diagnoses (only possible option) 	 Multiple provisional diagnoses without signs/symptoms Multiple provisional diagnoses (only possible option) 		
Multiple definitive diagnoses with signs/symptoms • Preferred: Multiple diagnoses only • Alternate: Diagnoses and signs/symptoms Note: Always include signs/symptoms not associated with diagnosis SEE EXAMPLE 3	Multiple provisional diagnoses with signs/symptoms • Preferred: Multiple provisional diagnoses and signs/symptoms • Alternate: Signs/symptoms only Note: Always include signs/symptoms not associated with diagnosis SEE EXAMPLE 4		

EXAMPLES			
Example	Reported	LLT Selected	Preferred Option
		Anaphylactic reaction	✓
		Anaphylactic reaction	
1	Anaphylactic reaction, rash dyspnoea, hypotension,	Rash	
ı	and laryngospasm	Dyspnoea	
		Hypotension	
		Laryngospasm	
		Myocardial infarction	
		Chest pain	
	Possible myocardial infarction	Dyspnoea	•
2	Possible myocardial infarction with chest pain, dyspnoea, diaphoresis	Diaphoresis	
		Chest pain	
		Dyspnoea	
		Diaphoresis	
		Pulmonary embolism	
		Myocardial infarction	✓
		Congestive heart failure	
	Pulmonary embolism, myocardial infarction, and congestive heart failure with chest pain, cyanosis, shortness of breath, and blood pressure decreased	Pulmonary embolism	
2		Myocardial infarction	
3		Congestive heart failure	
		Chest pain	
		Cyanosis	
		Shortness of breath	
		Blood pressure decreased	

EXAMPLES			
Example	Reported	LLT Selected	Preferred Option
4	Chest pain, cyanosis, shortness of breath, and blood pressure decreased. Differential diagnosis includes pulmonary embolism, myocardial infarction, and congestive heart failure.	Pulmonary embolism Myocardial infarction Congestive heart failure Chest pain Cyanosis Shortness of breath Blood pressure decreased Chest pain Cyanosis Shortness of breath Blood pressure decreased	•
Always include signs/ symptoms not associated with diagnosis	Myocardial infarction, chest pain, dyspnoea, diaphoresis, ECG changes and jaundice	Myocardial infarction Jaundice (note that jaundice is not typically associated with myocardial infarction)	

3.2 Death and Other Patient Outcomes

Death, disability, and hospitalisation are considered **outcomes** in the context of safety reporting and not usually considered ARs/AEs. Outcomes are typically recorded in a separate manner (data field) from AR/AE information. A term for the outcome should be selected if it is the only information reported or provides significant clinical information.

(For reports of suicide and self-harm, see Section 3.3).

3.2.1 Death with ARs/AEs

Death is an outcome and not usually considered an AR/AE. If ARs/AEs are reported along with death, select terms for the ARs/AEs. Record the fatal outcome in an appropriate data field.

Reported	LLT Selected	Comment
Death due to myocardial infarction	Myocardial infarction	
	Constipation	
Constipation, ruptured bowel, peritonitis, sepsis; patient died	Perforated bowel	Record death as
	Peritonitis	an outcome
	Sepsis	

3.2.2 Death as the only reported information

If the only information reported is death, select the most specific death term available. Circumstances of death should not be inferred but recorded only if stated by the reporter.

Death terms in MedDRA are linked to HLGT Fatal outcomes.

Example

Reported	LLT Selected
Patient was found dead	Found dead
Patient died in childbirth	Maternal death during childbirth
The autopsy report stated that the cause of death was natural	Death from natural causes

3.2.3 Death terms that add important clinical information

Death terms that add important clinical information should be selected along with any reported ARs/AEs.

Reported	LLT Selected
Patient experienced a rash and had sudden cardiac death	Rash Sudden cardiac death

3.2.4 Other patient outcomes (non-fatal)

Hospitalisation, disability, and other patient outcomes are not generally considered ARs/AEs.

Example

Reported	LLT Selected	Comment
Hospitalisation due to congestive heart failure	Congestive heart failure	Record hospitalisation as an outcome

If the only information reported is the patient outcome, select the most specific term available.

Example

Reported	LLT Selected
Patient was hospitalised	Hospitalisation

3.3 Suicide and Self-Harm

Accurate and consistent term selection for reports of suicide attempts, completed suicides, and self-harm is necessary for data retrieval and analysis. If the motive for reported injury is not clear, seek clarification from the source.

3.3.1 If overdose is reported

Do not assume that an overdose – including an intentional overdose – is a suicide attempt. Select only the appropriate overdose term (see Section 3.18).

3.3.2 If self-injury is reported

For reports of self-injury that do not mention suicide or suicide attempt, select only the appropriate self-injury term.

Reported	LLT Selected	Comment
Self slashing	Self inflicted laceration	LLT Self inflicted laceration is linked to PT
Cut her own wrists		Intentional self-injury
Cut wrists in a suicide	Self inflicted laceration	
attempt	Suicide attempt	

Reported	LLT Selected	Comment
Took an overdose in an attempt to commit suicide	Intentional overdose Suicide attempt	If overdose is reported in the context of suicide or a suicide attempt, the more specific LLT Intentional overdose can be selected (see also Section 3.18)

3.3.3 Fatal suicide attempt

If a suicide attempt is fatal, select the term that reflects the outcome instead of the attempt only.

Example

Reported	LLT Selected	Comment
Suicide attempt resulted in death	Completed suicide	Record death as an outcome

3.4 Conflicting/Ambiguous/Vague Information

When conflicting, ambiguous, or vague information is reported, term selection to support appropriate data retrieval may be difficult. When this occurs, attempt to obtain more specific information. If clarification cannot be achieved, select terms as illustrated in the examples below (Sections 3.4.1 through 3.4.3).

3.4.1 Conflicting information

Comment
LLT Serum potassium abnormal covers both of the reported concepts (note: serum potassium of 1.6 mEq/L is a low result, not high)
ć

3.4.2 Ambiguous information

Example

Reported	LLT Selected	Comment
GU pain	Pain	Effort should be made to obtain clarification of the meaning of "GU" from the source so that more specific term selection may be possible. "GU" could be either "genito-urinary" or "gastric ulcer". If additional information is not available, then select a term to reflect the information that is known, i.e., LLT Pain

3.4.3 Vague information

For information that is vague, attempt to obtain clarification. If clarification cannot be achieved, select an LLT that reflects the vague nature of the reported event.

Example

Reported	LLT Selected	Comment
Turned green	Unevaluable event	"Turned green" reported alone is vague; this could refer to a patient condition or even to a product (e.g., pills)
Patient had a medical problem of unclear type	III-defined disorder	Since it is known that there is some form of a medical disorder, LLT <i>III-</i> defined disorder can be selected

3.5 Combination Terms

A **combination term** in MedDRA is a single medical concept combined with additional medical wording that provides important information on pathophysiology or aetiology. A combination term is an internationally recognised, distinct and robust medical concept as illustrated in the examples below.

MedDRA Combination Terms
PT Diabetic retinopathy
PT Hypertensive cardiomegaly
PT <i>Eosinophilic pneumonia</i>

A combination term may be selected for certain reported ARs/AEs (e.g., a condition "due to" another condition), keeping the following points in mind (Note: medical judgment should be applied):

3.5.1 Diagnosis and sign/symptom

If a diagnosis and its characteristic signs or symptoms are reported, select a term for the diagnosis (see Section 3.1). A MedDRA combination term is not needed in this instance.

Example

Reported	LLT Selected
Chest pain due to myocardial infarction	Myocardial infarction

3.5.2 One reported condition is more specific than the other

If two conditions are reported in combination, and one is more specific than the other, select a term for the more specific condition.

Example

Reported	LLT Selected
Hepatic function disorder (acute hepatitis)	Hepatitis acute
Arrhythmia due to atrial fibrillation	Atrial fibrillation

3.5.3 A MedDRA combination term is available

If two conditions are reported in combination, and a single MedDRA combination term is available to represent them, select that term.

Reported	LLT Selected
Retinopathy due to diabetes	Diabetic retinopathy
Rash with itching	Itchy rash

3.5.4 When to "split" into more than one MedDRA term

If "splitting" the reported ARs/AEs provides more clinical information, select more than one MedDRA term.

Example

Reported	LLT Selected
Diarrhoea and vomiting	Diarrhoea Vomiting
Wrist fracture due to fall	Wrist fracture Fall

Exercise medical judgment so that information is not lost when "splitting" a reported term. Always check the MedDRA hierarchy above the selected term to be sure it is appropriate for the reported information.

Reported	LLT Selected	Comment
Haematoma due to an animal bite	Animal bite Traumatic haematoma	LLT Traumatic haematoma is more appropriate than LLT Haematoma (LLT Traumatic haematoma links to HLT Non-site specific injuries NEC and HLT Haemorrhages NEC while LLT Haematoma links only to HLT Haemorrhages NEC)

3.5.5 Event reported with pre-existing condition

If an event is reported along with a pre-existing condition **that has not changed**, and if there is not an appropriate combination term in MedDRA, select a term for the event only (see Section 3.9 for pre-existing conditions that have changed).

Example

Reported	LLT Selected	Comment
Shortness of breath due to pre-existing cancer	Shortness of breath	In this instance, "shortness of breath" is the event; "cancer" is the pre-existing condition that has not changed

3.6 Age vs. Event Specificity

3.6.1 MedDRA term includes age and event information

Example

Reported	LLT Selected
Jaundice in a newborn	Jaundice of newborn
Developed psychosis at age 6 years	Childhood psychosis

3.6.2 No available MedDRA term includes both age and event information The preferred option is to select a term for the event and record the age in the appropriate demographic field.

Alternatively, select terms (more than one) that together reflect both the age of the patient and the event.

Reported	LLT Selected	Preferred Option
	Pancreatitis	✓
Pancreatitis in a newborn	Pancreatitis	
	Neonatal disorder	

3.7 Body Site vs. Event Specificity

3.7.1 MedDRA term includes body site and event information

Example

Reported	LLT Selected
Skin rash on face	Rash on face

3.7.2 No available MedDRA term includes both body site and event information

Select a term for the **event**, rather than a term that reflects a non-specific condition at the body site; in other words, the **event** information generally has priority.

Example

Reported	LLT Selected	Comment
Skin rash on chest	Skin rash	In this instance, there is no available term for a skin rash on the chest

However, medical judgment is required, and sometimes, the body site information should have priority as in the example below.

Example

Reported	LLT Selected	Comment
Cyanosis at injection site	Injection site reaction	Cyanosis implies a generalised disorder. In this example, selecting LLT Cyanosis would result in loss of important medical information and miscommunication

3.7.3 Event occurring at multiple body sites

If an event is reported to occur at more than one body site, and if all of those LLTs link to the same PT, then select a single LLT that most accurately reflects the event; in other words, the **event** information has priority.

Reported	LLT Selected	Comment
Skin rash on face and neck	Skin rash	LLT Rash on face, LLT Neck rash, and LLT Skin rash all link to PT Rash
Oedema of hands and feet	Oedema of extremities	LLT Oedema hands and LLT Oedematous feet both link to PT Oedema peripheral. However, LLT Oedema of extremities most accurately reflects the event in a single term

3.8 Location-Specific vs. Microorganism-Specific Infection

3.8.1 MedDRA term includes microorganism and anatomic location

Example

Reported	LLT Selected	Comment
Pneumococcal pneumonia	Pneumococcal pneumonia	In this example, the implied anatomic location is the lung

3.8.2 No available MedDRA term includes both microorganism and anatomic location

The **preferred** option is to select terms for both the microorganism-specific infection **and** the anatomic location.

Alternatively, select a term that reflects the anatomic location **or** select a term that reflects the microorganism-specific infection. Medical judgment should be used in deciding whether anatomic location or the microorganism-specific infection should take priority.

Reported	LLT Selected	Preferred Option	Comment
Respiratory	Chlamydial infection Respiratory infection	✓	Represents both microorganism-specific infection and anatomic location
chlamydial infection	Respiratory infection		Represents location-specific infection
	Chlamydial infection		Represents microorganism- specific infection

3.9 Modification of Pre-existing Conditions

Pre-existing conditions that have changed may be considered ARs/AEs, especially if the condition has worsened or progressed (see Section 3.5.5 for pre-existing conditions that have not changed, and Section 3.22 for an unexpected improvement of a pre-existing condition).

Ways That Pre-existing Conditions May Be Modified	
Aggravated, exacerbated, worsened	
Recurrent	
Progressive	

Select a term that most accurately reflects the modified condition (if such term exists)

Example

Reported	LLT Selected
Exacerbation of myasthenia gravis	Myasthenia gravis aggravated

If no such term exists, consider these approaches:

- Example 1: Select a term for the pre-existing condition and record the modification in a consistent, documented way in appropriate data fields
- Example 2: Select a term for the pre-existing condition and a second term for the modification of the condition (e.g., LLT Condition aggravated, LLT Disease progression). Record the modification in a consistent, documented way in appropriate data fields.

Examples	Reported	LLT Selected	Comment
Example 1	Jaundice aggravated	Jaundice	Record "aggravated" in a consistent, documented way
Example 2	Jaundice aggravated	Jaundice Condition aggravated	Record "aggravated" in a consistent, documented way. Select terms for the pre-existing condition and the modification.

3.10 Exposures during Pregnancy and Breast Feeding

To select the most appropriate exposure term (or terms), first determine if the subject/patient who experienced the event is the mother or the child/foetus.

3.10.1 Events in the mother

3.10.1.1 Pregnant patient exposed to medication with clinical consequences If a pregnancy exposure is reported with clinical consequences, select terms for both the pregnancy exposure and the clinical consequences.

Example

Reported	LLT Selected
Pregnant patient receiving drug X	Maternal exposure during pregnancy
experienced a pruritic rash	Pruritic rash

3.10.1.2 Pregnant patient exposed to medication without clinical consequences If a pregnancy exposure report specifically states that there were no clinical consequences, the **preferred option** is to select only a term for the pregnancy exposure. Alternatively, a term for the pregnancy exposure and the additional LLT *No adverse effect* can be selected (see Section 3.21).

Reported	LLT Selected	Preferred Option
Patient received drug X while	Maternal exposure during pregnancy	√
pregnant (no adverse effect)	Maternal exposure during pregnancy	
	No adverse effect	

3.10.2 Events in the child or foetus

Select terms for both the type of exposure and any adverse event(s).

Example

Setting/Patient	Reported	LLT Selected
Foetus with AE; exposed in utero; mother took product	Pregnant woman taking drug X; foetal tachycardia noted on routine examination	Drug exposure in utero Foetal tachycardia
Baby with AE; exposed in utero; father took product	Baby born with cleft palate; father had been taking drug X at time of conception	Paternal drug exposure before pregnancy Cleft palate
Newborn with AE; exposed to product via breast milk	Mother exposed to drug X; nursing newborn experienced vomiting	Drug exposure via breast milk Vomiting neonatal

3.11 Congenital Terms

"Congenital" = any condition present at birth, whether genetically inherited or occurring *in utero* (see the MedDRA Introductory Guide).

3.11.1 Congenital conditions

Select terms from SOC *Congenital, familial and genetic disorders* when the reporter describes the condition as congenital or when medical judgment establishes that the condition was present at the time of birth.

Reported	LLT Selected	Comment
Congenital heart disease	Heart disease congenital	
Child born with heart disease		
Newborn with phimosis	Phimosis	A "congenital" term is not available but LLT/PT Phimosis links to primary SOC Congenital, familial and genetic disorders

3.11.2 Acquired conditions (not present at birth)

If information is available indicating that the condition is not congenital or present at birth, i.e., it is acquired, select the non-qualified term for the condition, making sure that the non-qualified term does not link to SOC *Congenital, familial and genetic disorders*. If a non-qualified term is not available, select the "acquired" term for the condition.

Reported	LLT Selected	Comment
Developed night blindness in middle age	Night blindness	LLT/PT Night blindness links to primary SOC Eye disorders. Do not assume the condition is congenital (LLT/PT Congenital night blindness).
Developed phimosis at age 45	Acquired phimosis	LLT/PT <i>Phimosis</i> should not be selected because it links to primary SOC <i>Congenital, familial and</i> <i>genetic disorders</i>
34 year old patient with cholangiectasis	Cholangiectasis acquired	A non-qualified term "Cholangiectasis" is not available. It cannot be assumed that the condition was present at birth so it is appropriate to select the acquired term.

3.11.3 Conditions not specified as either congenital or acquired

If a condition is reported without any information describing it as congenital or acquired, select the non-qualified term for the condition. For conditions or diseases existing in both congenital and acquired forms, the following convention is applied in MedDRA: the more common form of the condition/disease is represented at the PT level without adding a qualifier of either "congenital" or "acquired".

Example

Reported	LLT Selected	Comment
Pyloric stenosis	Pyloric stenosis	Pyloric stenosis is more commonly congenital than acquired; LLT/PT Pyloric stenosis links to primary SOC-Congenital, familial and genetic disorders
Hypothyroidism	Hypothyroidism	Hypothyroidism is more commonly acquired than congenital; LLT/PT Hypothyroidism links to primary SOC Endocrine disorders

3.12 Neoplasms

Due to the large number of neoplasm types, specific guidance cannot be provided for all situations. The MedDRA Introductory Guide describes the use and placement of neoplasm terms and related terms in MedDRA.

Keep in mind the following points:

Neoplasms Terms in MedDRA		
"Cancer" and "carcinoma" are synonyms (Appendix B of Introductory Guide)		
"Tumo(u)r" terms refer to neoplasia		
"Lump" and "mass" terms are <u>not</u> neoplasia		

If the type of neoplasia is not clear, seek clarification from the reporter. Consult medical experts when selecting terms for difficult or unusual neoplasms.

3.12.1 Do not infer malignancy

Select a malignancy term only if malignancy is stated by the reporter. Reports of "tumo(u)r" events should not be assigned a "cancer", "carcinoma" or another malignant term unless it is clear that malignancy is present.

Example

Reported	LLT Selected
Tumour growing on skin	Skin tumour
Cancer growing on tongue	Malignant tongue cancer

3.13 Medical and Surgical Procedures

Terms in SOC *Surgical and medical procedures* are generally not appropriate for ARs/AEs. Terms in this SOC are not multiaxial. Be aware of the impact of these terms on data retrieval, analysis, and reporting.

Keep in mind the following points:

3.13.1 Only the procedure is reported

If only a procedure is reported, select a term for the procedure.

Example

Reported	LLT Selected
Patient had transfusion of platelets	Platelet transfusion
Patient had tonsillectomy in childhood	Tonsillectomy

3.13.2 Procedure and diagnosis are reported

If a procedure is reported with a diagnosis, the **preferred option** is to select terms for both the procedure and diagnosis. Alternatively, select a term only for the diagnosis.

Reported	LLT Selected	Preferred Option	Comment
	Liver transplantation		Selecting term for the
Liver transplantation due to liver injury		✓	procedure may indicate severity
add to liver injury	Liver injury		of the condition
	Liver injury		

3.14 Investigations

SOC *Investigations* includes test names with qualifiers (e.g., increased, decreased, abnormal, normal) and without qualifiers. Corresponding medical conditions (such as "hyper-" and "hypo-" terms) are in other "disorder" SOCs (e.g., SOC *Metabolism and nutrition disorders*).

SOC *Investigations* is not multiaxial; always consider the terms in this SOC for data retrieval.

3.14.1 Results of investigations as ARs/AEs

Keep in mind the following points when selecting terms for results of investigations:

Selecting terms for a medical condition vs. an investigation result

Example

Reported	LLT Selected	Comment
Hypoglycaemia	Hypoglycaemia	LLT Hypoglycaemia links to SOC Metabolism and nutrition disorders
Decreased glucose	Glucose decreased	LLT Glucose decreased links to SOC Investigations

> Unambiguous investigation result

Example

Reported	LLT Selected	Comment
Glucose 40 mg/dL	Glucose low	Glucose is clearly below the reference range

> Ambiguous investigation result

Reported	LLT Selected	Comment
His glucose was 40	Glucose abnormal	In this example, no units have been reported. Select LLT <i>Glucose</i> abnormal if clarification cannot be obtained

3.14.2 Investigation results consistent with diagnosis

When investigation results are reported with a diagnosis, select only a term for the diagnosis if investigation results are consistent with the diagnosis.

Example

Reported	LLT Selected	Comment
Elevated potassium, K 7.0 mmol/L, and hyperkalaemia	Hyperkalaemia	It is not necessary to select LLT Potassium increased

3.14.3 Investigation results not consistent with diagnosis

When investigation results are reported with a diagnosis, select a term for the diagnosis **and also** select terms for any investigation results that are **not** consistent with the diagnosis.

Example

Reported	LLT Selected	Comment
Alopecia, rash, and elevated potassium 7.0 mmol/L	Alopecia Rash Potassium increased	Elevated potassium is not consistent with the diagnoses of alopecia and rash. Terms for all concepts should be selected.

3.14.4 Grouped investigation result terms

Select a term for each investigation result as reported; do not "lump" together separate investigation results under an inclusive term **unless reported as such**.

Reported	LLT Selected	Comment
Abnormalities of liver function tests	Abnormal liver function tests	
Increased alkaline	Alkaline phosphatase increased	Select four individual terms for the investigation results.
phosphatase, increased SGPT, increased SGOT and	SGPT increased	A single term such as LLT
elevated LDH	SGOT increased	Liver function tests abnormal should not
	LDH increased	be selected

3.14.5 Investigation terms without qualifiers

Terms in SOC *Investigations* without qualifiers are intended to be used to record test names when entering diagnostic test data in the ICH E2B electronic transmission standard.

Example

Information/Reported (Verbatim)	LLT Selected for Test Name	Comment
Cardiac output measured	Cardiac output	
Haemoglobin 7.5 g/dL	Haemoglobin	LLT Haemoglobin decreased should not be selected as it is both a test name and a result*

^{*} MedDRA is used only for test names, not test results, in the E2B data elements for Results of Tests and Procedures

Test name terms without qualifiers are not intended for use in other data fields capturing information such as ARs/AEs and medical history. The use of the Unqualified Test Name Term List is optional and may be used to identify the inappropriate selection of these terms in data fields other than the test name data element. It is available for download from the MedDRA and JMO websites.

3.15 Medication Errors, Accidental Exposures and Occupational Exposures

3.15.1 Medication errors

Medication errors are defined as any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient or consumer.

Appendix B of the MedDRA Introductory Guide contains descriptions of the interpretation and use of certain medication error terms (e.g., "Dispensing error").

Reports of medication errors may or may not include information about clinical consequences.

3.15.1.1 Medication errors reported <u>with</u> clinical consequences If a medication error is reported with clinical consequences, select terms for both the medication error and the clinical consequences.

Reported	LLT Selected	Comment
Patient was administered wrong drug and experienced hypotension	Wrong drug administered	
	Hypotension	
Because of similar sounding drug names, the wrong drug was dispensed; as a result, the patient took the wrong drug and experienced a rash	Drug name confusion	It is important to select terms for all medication
	Wrong drug dispensed	error concepts, i.e., do
	Wrong drug administered	not subtract information
	Rash	
Insulin preparation was given using the wrong syringe resulting in the administration of an overdose. The patient developed hypoglycaemia.	Drug administered in wrong device	If an overdose is reported in the context
		of a medication error,
		the more specific term
	Accidental overdose	LLT Accidental overdose can be
	Hypoglycaemia	selected (see also
		Section 3.18)

3.15.1.2 Medication errors and potential medication errors reported <u>without</u> clinical consequences

Medication errors without clinical consequences are not ARs/AEs. However, it is important to record the occurrence or **potential** occurrence of a medication error. Select a term that is closest to the description of medication error reported.

Intercepted medication error. For the purposes of term selection and analysis of MedDRA-coded data, an intercepted medication error refers to the situation where a medication error has occurred, but is prevented from reaching the patient or consumer. The intercepted error term should reflect the stage at which the error occurred, rather than the stage at which it was intercepted.

If a medication error report specifically states that there were no clinical consequences, the **preferred option** is to select only a term for the medication error. Alternatively, a term for the medication error and the additional LLT *No adverse effect* can be selected (see Section 3.21).

intravenously instead of intramuscularly but the	LT Selected	Preferred Option
any adverse effects	uscular formulation dministered by other route uscular formulation dministered by other route	✓

Reported	LLT Selected	Comment	
Pharmacist notices that the names of two drugs are similar and is concerned that this may result in a medication error	Drug name confusion Circumstance or information capable of leading to medication error	Note: this example is a potential medication error and LLT <i>Drug name confusion</i> provides additional information about the nature of the potential medication error	
The physician prescribed the wrong dose of the drug; the error was identified at the time of dispensing	Intercepted drug prescribing error	The intercepted error terms reflect the stage at which the error occurred,	
The pharmacist dispensed the wrong drug but the patient realised the error and did not take the drug	Intercepted drug dispensing error	rather than the stage at which the error was intercepted	
Patient forgot to take his scheduled dose of drug X	Drug dose omission	Dose omission is failure to administer an ordered dose but excludes patient's refusal, clinical decision or other objective reason not to administer. It is a medication error. See Concept Description in Appendix B of the MedDRA Introductory Guide.	
Patient's scheduled dose of drug X was not administered because he was undergoing surgery that day	Intentional dose omission	This is an example of an intentional dose omission/missed dose. It is not a medication error.	

3.15.1.3 Medication monitoring errors

For the purposes of term selection and analysis of MedDRA-coded data, a medication monitoring error is an error that occurs in the process of monitoring the effect of the medication through clinical assessment and/or laboratory data. It can also refer to

monitoring errors in following instructions or information pertinent to the safe use of the medication.

Example

Reported	LLT Selected	Comment
The patient's liver enzymes were measured every six months instead of the recommended monthly schedule	Drug monitoring procedure incorrectly performed	The monthly monitoring schedule is in the label for this drug. This is an example of incorrect monitoring of laboratory tests recommended in the use of a drug.
Patient taking lithium-based drug did not have his lithium levels measured	Therapeutic drug monitoring analysis not performed	This is an example of not monitoring the therapeutic drug level to ensure that it is within the therapeutic range as recommended in the label for this drug.

If the label describes **known effects** when the product is co-administered with specific drugs, with specific foods, or to patients with specific disease states, and if the report does not indicate that this is intentional misuse or intentional off label use, then select a medication error term for the type of interaction, such as those listed below:

Medication Error Terms – Labelled Interactions
Labelled drug-drug interaction medication error
Labelled drug-food interaction medication error
Labelled drug-disease interaction medication error
Documented hypersensitivity to administered product

Reported	LLT Selected	Comment
Patient became pregnant whilst taking an antifungal drug and an oral contraceptive	Labelled drug-drug interaction medication error Pregnancy on oral contraceptive	Product is labelled for this drug-drug interaction (see also Section 3.20)
Patient drank grapefruit juice whilst taking a calcium channel blocker	Labelled drug-food interaction medication error	Product is labelled for this drug-food interaction with grapefruit juice
Patient with renal failure is accidentally prescribed a drug that is contraindicated in renal failure	Labelled drug-disease interaction medication error Contraindicated drug prescribed	Product is labelled for this drug-disease interaction. LLT Contraindicated drug prescribed provides additional information about the nature of the labelled interaction medication error and the stage at which the error occurred
Patient with known sulfa allergy is administered a sulfonamide-based drug and experienced wheezing	Documented hypersensitivity to administered drug Wheezing	See Concept Description in Appendix B of the MedDRA Introductory Guide. This medication error refers to the situation when a patient is administered a drug that is documented in the patient's medical file to cause a hypersensitivity reaction in the patient.

3.15.1.4 Do not infer a medication error

Do not infer that a medication error has occurred unless specific information is provided. This includes inferring that extra dosing, overdose, or underdose has occurred (see Section 3.18)

Reported	LLT Selected	Comment
Patient took only half the prescribed dose	Underdose	Based on this report, it is not known whether the underdose is intentional or accidental. If information is available, select the more specific LLT Accidental underdose or LLT Intentional underdose as appropriate.

3.15.2 Accidental exposures and occupational exposures

3.15.2.1 Accidental exposures

The principles for Section 3.15.1 (Medication errors) also apply to accidental exposures.

Example

Reported	LLT Selected	Comment
Child accidentally took grandmother's pills and	Accidental drug intake by child	
experienced projectile vomiting	Vomiting projectile	
Father applying topical steroid to his arms accidentally exposed his child to the drug by carrying her	Accidental exposure to product by child Exposure via skin contact	The "exposure to" term captures the agent of exposure, i.e., a product, and the "exposure via" term captures the route/vehicle of exposure, i.e., skin contact

3.15.2.2 Occupational exposures

For the purposes of term selection and analysis of MedDRA-coded data, occupational exposure encompasses the "chronic" exposure to an agent (including therapeutic products) during the normal course of one's occupation, and could include additional scenarios in specific regulatory regions. For example, occupational exposure may additionally relate to a more acute, accidental form of exposure that occurs in the context

of one's occupation. In these regions, occupational exposure for healthcare workers could be of particular interest.

Example

Reported	LLT Selected	Comment
Physical therapist developed a photosensitivity rash on hands after exposure to an NSAID- containing pain relief cream that she applied to a patient	Occupational exposure to drug Exposure via skin contact Photosensitive rash	
Pathologist chronically exposed to formaldehyde developed nasopharyngeal carcinoma	Occupational exposure to toxic agent Nasopharyngeal carcinoma	Exposure to formaldehyde is a known risk factor for this type of malignancy
Nurse splashed injectable drug in her own eye resulting in excessive tearing	Inadvertent exposure to drug Excess tears	An additional term for occupational exposure – e.g., LLT Occupational exposure to drug – could also be selected, if applicable to regional requirements

3.16 Misuse, Abuse and Addiction

The concepts of misuse, abuse and addiction are closely related and can pose challenges for term selection since the terms may overlap to some extent; the specific circumstances of each case/reported event may help in consideration for term selection of these concepts. Medical judgment and regional regulatory considerations need to be applied.

It may also be useful to consider these concepts as shown in the table below:

Concept	Intentional?	By Whom?	Therapeutic Use?	Additional Sections in this Document
Misuse	Yes	Patient/consumer	Yes*	3.16.1
Abuse	Yes	Patient/consumer	No	3.16.2
Addiction	Yes	Patient/consumer	No	3.16.3
Medication error	No	Patient/consumer or healthcare professional	Yes	3.15
Off label use	Yes	Healthcare professional	Yes	3.27

^{*} Definitions of misuse may not always include the concept of therapeutic use; misuse may be similar to the concept of abuse in some regions.

Select the most specific term available and always check the MedDRA hierarchy above the selected term to be sure it is appropriate for the reported information. In some cases, it may be appropriate to select more than one MedDRA LLT to represent the reported information.

3.16.1 Misuse

For the purposes of term selection and analysis of MedDRA-coded data, **misuse** is the intentional use for a therapeutic purpose by a patient or consumer of a product – over-the-counter or prescription – other than as prescribed or not in accordance with the authorised product information.

Example

Reported	LLT Selected
Patient deliberately took the medication twice daily instead of once daily	Intentional misuse in dosing frequency

3.16.2 Abuse

For the purposes of term selection and analysis of MedDRA-coded data, **abuse** is the intentional, non-therapeutic use by a patient or consumer of a product – over-the counter or prescription – for a perceived reward or desired non-therapeutic effect including, but not limited to, "getting high" (euphoria). Abuse may occur with a single use, sporadic use or persistent use of the product.

Reported	LLT Selected	Comment
Athlete used anabolic steroid preparation to enhance performance	Steroid abuse	
Patient occasionally uses opioid product to get high	Opioid abuse, episodic use	
Patient deliberately ingested the topical medication for its psychoactive effect	Drug abuse Intentional use by incorrect route	LLT Intentional use by incorrect route (PT Intentional product use issue) provides additional information about the nature of the drug abuse

See Section 3.24.1 and 3.24.2 for additional references to "abuse" terms in MedDRA.

3.16.3 Addiction

For the purposes of term selection and analysis of MedDRA-coded data, **addiction** is an overwhelming desire by a patient or consumer to take a drug for non-therapeutic purposes together with inability to control or stop its use despite harmful consequences. Addiction can occur because drug induces physical dependence and consequently a withdrawal syndrome, but this is not an essential feature; and addiction can occur because of a desire to experience the drug's psychological, behavioral or physical effects.

Example

Reported	LLT Selected
Patient became dependent on crack cocaine	Dependence on cocaine
Patient became addicted to a deliberately	Drug addiction
ingested topical medication for its psychoactive effect	Intentional use by incorrect route

See Section 3.24.1 for additional references to "addict/addiction" terms in MedDRA.

3.16.4 Drug diversion

For the purposes of term selection and analysis of MedDRA-coded data, drug diversion means that a drug is diverted from legal and medically necessary uses toward illegal uses.

Example

Reported	LLT Selected
Pharmacist stole medications from the pharmacy and sold them to others for recreational use	Drug diversion
A person put a sedative into the patient's drink	Drug diversion Inadvertent exposure to drug

3.17 Transmission of Infectious Agent via Product

If a report of transmission of an infectious agent via a product is received, select a term for the transmission. If the infection is identified, select a second term for the specific infection; if appropriate, a product quality issue term can also be selected (see Section 3.28).

Example

Reported	LLT Selected
Patient received a nasal spray product and later developed a severe nasal infection	Transmission of an infectious agent via product
with <i>Burkholderia cepacia</i> . Cultures of unopened containers of the nasal spray	Product contamination bacterial
grew B. cepacia	Burkholderia cepacia infection
Patient received a blood transfusion and	Transfusion-transmitted infectious disease
developed Hepatitis C	Hepatitis C

Medical judgment should be used if the reporter does not explicitly state transmission of an infectious agent via a product but this could be implied by other data within the report. In this instance, select LLT *Suspected transmission of an infectious agent via product*.

3.18 Overdose, Toxicity and Poisoning

Accidental overdose terms are grouped under HLT *Product administration errors and issues*; other overdose terms are grouped under HLT *Overdoses NEC*. Toxicity and

poisoning terms are grouped under HLT *Poisoning and toxicity*. For more information, refer to the MedDRA Introductory Guide.

For the purposes of term selection and analysis of MedDRA-coded data, overdose is more than the maximum recommended dose (in quantity and/or concentration), i.e., an excessive dose (see Appendix B, MedDRA Introductory Guide.)

If overdose, poisoning or toxicity is explicitly reported, select the appropriate term.

Example

Reported	LLT Selected	Comment
Patient took an overdose	Overdose	Based on this report, it is not known whether the overdose is intentional or accidental. If information is available, select the more specific LLT Accidental overdose or LLT Intentional overdose as appropriate.
A child was accidentally	Accidental poisoning	
poisoned when she ingested a chemical cleaning product	Chemical poisoning	
Patient deliberately took an overdose of analgesic pills to treat his worsening arthritis	Intentional overdose	LLT Arthritis aggravated can be selected as the indication for treatment
The dose taken was above the recommended maximum dose in the label	Overdose	Based on this report, it is not known whether the overdose is intentional or accidental. If information is available, select the more specific LLT Accidental overdose or LLT Intentional overdose as appropriate.

3.18.1 Overdose reported with clinical consequences

Select terms for overdose and for clinical consequences reported in association with an overdose.

Reported	LLT Selected
	Overdose
Stomach upset from study drug overdose	Stomach upset

3.18.2 Overdose reported without clinical consequences

If an overdose report specifically states that there were no clinical consequences, the **preferred option** is to select only a term for the overdose. Alternatively, a term for the overdose and the additional LLT *No adverse effect* can be selected (see Section 3.21).

Example

Reported	LLT Selected	Preferred Option
Patient received an overdose of	Overdose	✓
medicine without any adverse consequences	Overdose	
	No adverse effect	

3.19 Device-related Terms

3.19.1 Device-related event reported with clinical consequences

If available, select a term that reflects both the device-related event and the clinical consequence, if so reported.

Example

Reported	LLT Selected
Patient with a vascular implant developed an infection of the implant	Vascular implant infection
Patient noted the prosthesis caused pain	Medical device pain

If there is no single MedDRA term reflecting the device-related event and the clinical consequence, select separate terms for both.

Reported	LLT Selected
Ventricular tachycardia due to malfunction	Device malfunction
of device	Ventricular tachycardia
Partial denture fractured leading to tooth	Dental prosthesis breakage
pain	Tooth pain

3.19.2 Device-related event reported <u>without</u> clinical consequences

If a device-related event is reported in the absence of clinical consequences, select the appropriate term.

Example

Reported	LLT Selected	
Medical device breakage	Device breakage	
My patch is leaking on my arm	Leaking patch	

3.20 Drug Interactions

This term includes reactions between drugs and other drugs, food, devices and alcohol. In this document, "drug" includes biologic products.

Labelled drug interactions may be medication errors (see Section 3.15.1.3).

3.20.1 Reporter specifically states an interaction

Select an interaction term and additional term(s) for any reported medical event.

Reported	LLT Selected
Torsade de pointes with suspected	Drug interaction
drug interaction	Torsade de pointes
Patient drank cranberry juice which	Food interaction
interacted with anticoagulant drug causing an INR increase	INR increased

3.20.2 Reporter does not specifically state an interaction

Two products may be used together, but if the reporter does not specifically state that an interaction has occurred, select terms only for the medical events reported.

Example

Reported	LLT Selected
Patient was started on an anti-seizure medication and a heart medication and developed syncope	Syncope
Patient was already on an anti-seizure medication and was started on a heart medication, and anti-seizure medication levels increased	Anticonvulsant drug level increased

3.21 No Adverse Effect and "Normal" Terms

3.21.1 No adverse effect

LLT *No adverse effect* can be used when absence of an AR/AE is specifically reported, despite exposure to a product (see Sections 3.15.1.2 and 3.18.2).

Some organisations may want to record LLT *No adverse effect* for administrative purposes (e.g., pregnancy registries, overdose and medication error reports).

3.21.2 Use of "normal" terms

Terms for normal states and outcomes can be used as needed.

Examples of Terms for "Normal" States and Outcomes		
Sinus rhythm		
Normal baby		
Normal electrocardiogram		

3.22 Unexpected Therapeutic Effect

Some organisations may want to record LLT *Unexpected therapeutic effect* for reports of a beneficial effect of a product apart from the reason it had been given. (Such effects are not usually considered ARs/AEs)

Reported	LLT Selected
A bald patient was pleased that he grew hair while using a product	Unexpected therapeutic effect Hair growth increased

3.23 Modification of Effect

It is important to record modification of effect (e.g., increased, prolonged) although it is not always an AR/AE.

3.23.1 Lack of effect

The **preferred option** is to select only the "lack of effect" term even if consequences are also reported. However, terms may also be selected for events associated with the lack of effect.

Example

Reported	LLT Selected	Preferred Option
Patient took drug for a	Drug ineffective	✓
headache, and her headache	Drug ineffective	
didn't go away	Headache	
Antibiotic didn't work	Lack of drug effect	

3.23.2 Do not infer lack of effect

Reported	LLT Selected	Comment
AIDS patient taking anti-HIV drug died	Death	Do not assume lack of effect in this instance. Select only a term for death (see Section 3.2)

3.23.3 Increased, decreased and prolonged effect

Example

Reported	LLT Selected
Patient had increased effect from drug A	Increased drug effect
Patient had decreased effect from drug A	Drug effect decreased
Patient had prolonged effect from drug A	Drug effect prolonged

3.24 Social Circumstances

3.24.1 Use of terms in this SOC

Terms in SOC *Social circumstances* represent social factors and may be suitable to record social and medical history data. Such terms are not generally suitable for recording ARs/AEs; however, in certain instances, terms in SOC *Social circumstances* are the only available terms for recording ARs/AEs or may add valuable clinical information.

Example

Reported	LLT Selected
Patient's ability to drive was impaired	Impaired driving ability

Terms in SOC *Social circumstances* are not multiaxial and, unlike terms in other "disorder" SOCs in MedDRA (e.g., SOC *Gastrointestinal disorders*), they generally refer to a **person**, not to a medical condition.

Be aware of the impact that terms in SOC *Social circumstances* may have on data retrieval, analysis and reporting as illustrated in the table below:

Term in SOC Social circumstances ("person")	Similar term in "Disorder" SOC ("condition")
Alcoholic	Alcoholism
Drug abuser	Drug abuse
Drug addict	Drug addiction
Glue sniffer	Glue sniffing
Smoker	Nicotine dependence

Note that "abuse" terms not associated with drugs/substances are in this SOC*, regardless of whether they refer to the person or to the condition, as illustrated in the table below:

LLT	PT
Child abuse	Child abuse
Child abuser	Crilia abuse
Elder abuse	Elder abuse
Elder abuser	Liuei abuse

(See Section 3.24.2 concerning illegal/criminal acts.)

3.24.2 Illegal acts of crime or abuse

Terms for illegal acts of crime and abuse (excluding those related to drug/substance abuse) are in SOC *Social circumstances*, such as LLT *Physical assault*.

LLTs representing the **perpetrator** are linked to PTs describing the unlawful act committed. PTs representing the **victim** of unlawful acts generally begin with "*Victim of...*".

Reported	LLT Selected	Comment
Patient's history indicates that patient is a known sexual offender	Sexual offender	Perpetrator; LLT Sexual offender links to PT Sexual abuse in SOC Social circumstances
Patient was a childhood sexual assault victim	Childhood sexual assault victim	Victim; LLT Childhood sexual assault victim links to PT Victim of sexual abuse in SOC Social circumstances

3.25 Medical and Social History

Example

Reported	LLT Selected
History of gastrointestinal bleed	Gastrointestinal bleed
and hysterectomy	Hysterectomy
Patient is a cigarette smoker with coronary	Cigarette smoker
artery disease	Coronary artery disease

3.26 Indication for Product Use

Indications can be reported as medical conditions, prophylaxis of conditions, replacement therapies, procedures (such as anesthesia induction) and verbatim terms such as "anti-hypertension". Terms from almost any MedDRA SOC – including SOC *Investigations* – may be selected to record indications.

Regulatory authorities may have specific requirements for certain aspects of term selection for indications (e.g., for indications within regulated product information). Please refer to the regulatory authority's specific guidance for such issues.

3.26.1 Medical conditions

Example

Reported	LLT Selected	
Hypertension	- Hypertension	
Anti-hypertensive		
Chemotherapy for breast cancer	Breast cancer	
I took it for my cold symptoms	Cold symptoms	

If the only information reported is the type of therapy, select the most specific term.

Reported	LLT Selected
Patient received chemotherapy	Chemotherapy
Patient received antibiotics	Antibiotic therapy

It may not be clear if the reported indication is a medical condition or a desired outcome of therapy. The term selected in either case may be the same.

Example

Reported	LLT Selected	Comment
Weight loss	Weight loss	Unclear if the purpose is to induce weight loss or to treat an underweight patient
Immunosuppression	Immunosuppression	Unclear if the purpose is to induce or to treat immunosuppression

3.26.2 Complex indications

Term selection for some indications (e.g., in regulated product information) may be complex and require selection of more than one LLT to represent the information completely, depending on the circumstances.

Reported	LLT Selected	Comment
Treatment of aggression in autism	Aggression	The products do not treat the underlying
Treatment of chronic iron overload in thalassaemia major	Chronic iron overload	autism, thalassaemia, or myocardial infarction, but they <i>do</i> address the associated signs/symptoms (aggression, chronic iron overload, atherothrombosis).
Prevention of atherothrombotic events in patients with myocardial infarction	Atherothrombosis prophylaxis	It may be necessary to select LLT Autism, LLT Thalassaemia major, or LLT Myocardial infarction based on regional regulatory requirements.

3.26.3 Indications with genetic markers or abnormalities

For indications that describe a genetic marker or abnormality associated with a medical condition, select a term for both the medical condition and the genetic marker or abnormality.

Reported	LLT Selected
Non small cell lung cancer with K-ras	Non-small cell lung cancer
mutation	K-ras gene mutation

3.26.4 Prevention and prophylaxis

When an indication for prevention or prophylaxis is reported, select the specific MedDRA term, if it exists (Note: the words "prevention" and "prophylaxis" are synonymous in the context of MedDRA).

Example

Reported	LLT Selected
Prophylaxis of arrhythmia	Arrhythmia prophylaxis
Prevention of migraine	Migraine prophylaxis

If there is no MedDRA term containing "prevention" or "prophylaxis", choose one of the following options. The **preferred option** is to select a general prevention/ prophylaxis term **and** a term for the condition. Alternatively, select a term for the condition alone **or** a prevention/prophylaxis term alone.

Example

Reported	LLT Selected	Preferred Option	Comment
	Prevention		Represents both the
	Hanatataviaity	✓	prevention/prophylaxis
	Hepatotoxicity		concept and the condition
Prevention of	Hepatotoxicity		Represents
hepatotoxicity			the condition
			Represents the
	Prevention		prevention/prophylaxis
			concept

3.26.5 Procedures and diagnostic tests as indications

Select the appropriate term if the product is indicated for performing a procedure or a diagnostic test.

Reported	LLT Selected
Induction of anaesthesia	Induction of anaesthesia
Contrast agent for angiogram	Angiogram

Reported	LLT Selected
Contrast agent for coronary angiogram	Coronary angiogram

3.26.6 Supplementation and replacement therapies

Terms for supplemental and replacement therapies are in SOC *Surgical and medical procedures* (see Section 3.13). If the product indication is for supplementation or replacement therapy, select the closest term.

Example

Reported	LLT Selected
Testosterone replacement therapy	Androgen replacement therapy
Prenatal vitamin	Vitamin supplementation

3.26.7 Indication not reported

If clarification cannot be obtained, select LLT Drug use for unknown indication.

Example

Reported	LLT Selected
Aspirin was taken for an unknown indication	Drug use for unknown indication

3.27 Off Label Use

For the purposes of term selection and analysis of MedDRA-coded data, the concept of "off label use" relates to situations where a healthcare professional intentionally prescribes, dispenses, or recommends a product for a medical purpose not in accordance with the authorised product information. When recording off label use, consider that product information and/or regulations/requirements may differ between regulatory regions.

3.27.1 Off label use when reported as an indication

If a medical condition/indication is reported **along with "off label use"**, the **preferred option** is to select terms for the medical condition/indication and off label use. Alternatively, select a term for the medical condition/indication alone. Select LLT *Off label use* alone **only** if it is the only information available.

Reported	LLT Selected	Preferred Option
	Off label use	✓
Hypertension; this is off label use	Hypertension	
	Hypertension	

Example

Reported	LLT Selected
Used off label	Off label use

Example

Reported	LLT Selected	Comment
Drug indicated for use in adults used off label to treat a 6 year old child	Off label use Adult product administered to child	LLT Adult product administered to child (PT Drug administered to patient of inappropriate age, HLT Product administration errors and issues) provides additional information about the specific type of off label use. The term is not an off label use term itself; it is a general product use issue term that can be used in combination with other terms to capture detail about off label use, misuse, medication errors, etc.

3.27.2 Off label use when reported with an AR/AE

If an AR/AE occurs in the setting of off label use for a medical condition/indication, the **preferred option** is to select a term for off label use, and a term for the medical condition/indication in addition to a term for the AR/AE. Alternatively, select a term for the medical condition/indication and a term for the AR/AE.

Reported	LLT Selected	Preferred Option
	Off label use	
Patient was administered a drug	Pulmonary hypertension	✓
off label for pulmonary hypertension and suffered a stroke	Stroke	
Trypertension and surfered a stroke	Pulmonary hypertension	
	Stroke	

3.28 Product Quality Issues

It is important to recognise product quality issues as they may have implications for patient safety. They may be reported in the context of adverse events or as part of a product quality monitoring system.

Product quality issues are defined as abnormalities that may be introduced during the manufacturing/labelling, packaging, shipping, handling or storage of the products. They may occur with or without clinical consequences. Such concepts may pose a challenge for term selection.

Familiarity with HLGT *Product quality, supply, distribution, manufacturing and quality system issues* (in SOC *Product issues*) is essential for term selection. Under this HLGT are categories of specific product quality issues such as HLT *Product packaging issues*, HLT *Product physical issues*, HLT *Manufacturing facilities and equipment issues*, HLT *Counterfeit, falsified and substandard products*, etc. Navigating down to the appropriate LLTs from the MedDRA hierarchy is the optimal approach for term selection.

Explanations of the interpretations and uses of certain product quality issue terms (e.g., "Product coating incomplete") are found in the MedDRA Introductory Guide (Appendix B, MedDRA Concept Descriptions).

3.28.1 Product quality issue reported with clinical consequences

If a product quality issue results in clinical consequences, term(s) for the product quality issue and the clinical consequences should be selected.

Reported	LLT Selected	Comment
New bottle of drug tablets have unusual chemical smell that made me nauseous	Product odour abnormal Nauseous	
I switched from one brand to another of my blood pressure medication, and I developed smelly breath	Product substitution issue brand to brand Smelly breath	
Consumer noted that the toothpaste they had purchased caused a stinging sensation in the mouth. Subsequent investigation of the product lot number revealed that the toothpaste was a counterfeit product.	Product counterfeit Stinging mouth	
Patient reported severe burning in his nose after using nasal drops that had a cloudy appearance. An investigation by the manufacturer revealed that impurities were found in the batch of nasal drops and that these had been introduced by a faulty piece of equipment.	Nasal burning Product appearance cloudy Product impurities found Manufacturing equipment issue	Specific product defects and issues with manufacturing systems may be reported subsequently as part of a root cause analysis

3.28.2 Product quality issue reported without clinical consequences

It is important to capture the occurrence of product quality issues even in the absence of clinical consequences.

Example

Reported	LLT Selected
Sterile lumbar puncture kit received in broken packaging (sterility compromised)	Product sterile packaging disrupted

3.28.3 Product quality issue vs. medication error

It is important to distinguish between a product quality issue and a medication error.

Product quality issues are defined as abnormalities that may be introduced during the manufacturing/labelling, packaging, shipping, handling or storage of the products. They may occur with or without clinical consequences.

Medication errors are defined as any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient or consumer.

Explanations of the interpretations of product quality issue terms are found in the MedDRA Introductory Guide (Appendix B, MedDRA Concept Descriptions).

Reported	LLT Selected	Comment
Pharmacist dispensing Drug A inadvertently attached a product label for Drug B	Wrong label placed on medication during dispensing	Medication error
The drug store clerk noted that the wrong product label was attached to some bottles in a shipment of mouthwash	Product label on wrong product	Product quality issue
The mother administered an underdose of antibiotic because the lines on the dropper were illegible	Product dropper calibration unreadable Accidental underdose	Product quality issue and medication error. If underdose is reported in the context of a medication error, the more specific LLT Accidental underdose can be selected.

SECTION 4 - APPENDIX

4.1 Versioning

4.1.1 Versioning methodologies

Each organisation should have a versioning strategy that should be documented. The versioning strategy may differ between safety databases and clinical trial databases. For example, there may be no need to update clinical trial data from older trials if the data are not presently used or will not be used in the future. On the other hand, postmarketing safety data may be required to be reported in the current (or near-current) version of MedDRA, and version update recommendations then apply.

Users should choose the most optimal approach based on their organisation's characteristics. The optional methods described below can be used to document the extent to which an organisation has applied a new version of MedDRA. These methods should not be interpreted as regulatory requirements but may be used to communicate effectively between and within organisations.

The table below summarises the types of versioning methods.

Method	Description	Resource Intensity	Data Accuracy
1	Begin to use new version for coding new data; no recoding of existing data	Least	Least
2	Identify verbatim terms linked to non-current LLTs and recode existing data	_	_
3	Identify verbatim terms linked to non-current LLTs and recode existing data and Recode verbatim terms to new LLTs that are direct or lexical matches		
4	Identify verbatim terms linked to non-current LLTs and recode existing data and Recode verbatim terms to new LLTs that are direct or lexical matches and Recode verbatim terms to new LLTs that are more accurate concepts	Most	Most

This list may not be inclusive; other versioning methods may be used. Depending on how MedDRA data are stored in the database, additional steps may be needed to ensure consistency in data retrieval and reporting, including medical review of the data after the version method has been applied.

Note that Method 4 is the most resource intense and Method 1 is the least. There are additional points to consider: recoding to LLTs that are new direct matches or more accurate concepts (Method 4) provides the most accurate data compared to the other methods.

The MSSO and JMO provide tools to assist the user in comparing the changes between MedDRA versions. The Version Report (provided by the MSSO and JMO) is a spreadsheet listing all changes between the current version of MedDRA and the one previous to it; this spreadsheet is provided with each new release of MedDRA. The MSSO also provides the MedDRA Version Analysis Tool (MVAT) that facilitates identification and understanding of the impact of changes between any two MedDRA versions, including non-consecutive ones (see Appendix, Section 4.2).

4.1.2 Timing of version implementation

For single case reporting, the sender and receiver of the data need to be in synchrony regarding MedDRA versions. There are MSSO recommendations for the timing of the implementation of a new MedDRA release for both individual case safety reporting and clinical trial data. Specific transition dates for single case reporting for the next MedDRA versions are provided (see Appendix, Section 4.2).

Date of New Reporting Version for Individual Case Safety Reporting

A new release version of MedDRA should become the reporting version on the first Monday of the second month after it is released. To synchronise this event over the three ICH regions, the MSSO recommends midnight GMT, Sunday to Monday, for the switchover. For example:

- 1 March MedDRA X.0 released
- First Monday of May MedDRA X.0 becomes the reporting version
 - 1 September MedDRA X.1 released
- First Monday of November MedDRA X.1 becomes the reporting version

4.2 Links and References

The following documents and tools can be found on the MedDRA website: (www.meddra.org):

- MedDRA Introductory Guide
- MedDRA Change Request Information document
- MedDRA Web-Based Browser *
- MedDRA Desktop Browser
- MedDRA Version Report (lists all changes in new version) *
- MedDRA Version Analysis Tool (compares any two versions) *
- Unqualified Test Name Term List
- MSSO's Recommendations for Single Case Reporting using Semi-annual Version Control
- MSSO's Recommendations for MedDRA Implementation and Versioning for Clinical Trials
- Transition Date for the Next MedDRA Version
- * Requires user ID and password to access

4.3 Membership of the ICH Points to Consider Working Group

4.3.1 Current members of the ICH Points to Consider Working Group

Affiliation	Member
Commission of the European Communities	Maria Luisa Casini
·	Kavita Chadda
European Federation of Pharmaceutical	Hilary Vass*
Industries and Associations	Christina Winter [†]
Health Canada	Dwana Pritchett
Tiodilit Gariada	Lynn Macdonald
	Yutaka Nagao
Japanese Maintenance Organization	Kazuyuki Sekiguchi
Capanoso mannonanos Organization	Mitsuru Takano
	Tomoko Narita
Japan Pharmaceutical Manufacturers	Yo Tanaka
Association	Hitomi Takeshita
	Miyako Shionoiri
MedDRA MSSO	Judy Harrison
	Daisuke Inoue
Ministry of Health, Labour and	Miki Ohta
Welfare/Pharmaceuticals and Medical Devices Agency	Daisuke Sato
Devices Agency	Yasuko Inokuma
	Kiyomi Ueno
Pharmaceutical Research and Manufacturers of America	Milbhor D'Silva
US Food and Drug Administration	Sonja Brajovic [#]
55 1 000 and Drug Administration	Christopher Breder
World Health Organization	Daisuke Tanaka

^{*} Current Rapporteur# Regulatory Chair

[†] Former Rapporteur

4.3.2 Former members of the ICH Points to Consider Working Group

Affiliation	Member	
Commission of the European Communities	Dolores Montero; Carmen Kreft-Jais; Morell David; Sarah Vaughan	
European Federation of Pharmaceutical Industries and Associations	Barry Hammond [†] ; Reinhard Fescharek [†]	
Health Canada	Alison Bennett; Valérie Bergeron; Heather Morrison;Polina Ostrovsky; Michelle Séguin; Stephanie Silva; Heather Sutcliffe; Bill Wilson	
Japanese Maintenance Organization	Osamu Handa; Akemi Ishikawa; Yasuo Sakurai; Yuki Tada; Reiji Tezuka	
Japan Pharmaceutical Manufacturers Association	Takayoshi Ichikawa; Akemi Ishikawa; Satoru Mori; Yasuo Sakurai; Kunikazu Yokoi	
MedDRA MSSO	JoAnn Medbery; Patricia Mozzicato	
Ministry of Health, Labour and Welfare/Pharmaceuticals and Medical Devices Agency	Yuhei Fukuta; Tamaki Fushimi; Wakako Horiki; Sonoko Ishihara; Makiko Isozaki; Kazuhiro Kemmotsu; Tatsuo Kishi; Chie Kojima; Emiko Kondo; Hideyuki Kondou; Kemji Kuramochi; Tetsuya Kusakabe; Kaori Nomura; Izumi Oba; Shinichi Okamura; Yoshihiko Sano; Nogusa Takahara; Kenichi Tamiya; Daisuke Tanaka; Shinichi Watanabe; Takashi Yasukawa; Go Yamamoto; Manabu Yamamoto	
Pharmaceutical Research and Manufacturers of America	David Goldsmith; Sidney Kahn; Anna-Lisa Kleckner; Susan M. Lorenski; JoAnn Medbery; Margaret M. Westland [†]	
US Food and Drug Administration	Miles Braun; Andrea Feight; John (Jake) Kelsey [†] ; Brad Leissa; Toni Piazza-Hepp	

[†] Former Rapporteur