



What is MedDRA and How is it Used?



MedDRA was developed under the auspices of the International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH). The activities of the MedDRA Maintenance and Support Services Organization (MSSO) are overseen by an ICH MedDRA Management Committee, which is composed of the ICH parties, the Medicines and Healthcare products Regulatory Agency (MHRA) of the UK, Health Canada, and the WHO (as Observer).



MedDRA

Disclaimer and Copyright Notice

- This presentation is protected by copyright and may, with the exception of the MedDRA and ICH logos, be used, reproduced, incorporated into other works, adapted, modified, translated or distributed under a public license provided that ICH's copyright in the presentation is acknowledged at all times. In case of any adaptation, modification or translation of the presentation, reasonable steps must be taken to clearly label, demarcate or otherwise identify that changes were made to or based on the original presentation. Any impression that the adaptation, modification or translation of the original presentation is endorsed or sponsored by the ICH must be avoided.
- The presentation is provided "as is" without warranty of any kind. In no event shall the ICH or the authors of the original presentation be liable for any claim, damages or other liability arising from the use of the presentation.
- 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.

000561

3



MedDRA

Course Overview

- Present background information about MedDRA and its governance
- Review MedDRA's, scope, structure, and characteristics
- Describe the maintenance of MedDRA
- Describe MedDRA tools (browsers, MVAT)
- Discuss principles of coding with MedDRA
- Introduce the MedDRA Points to Consider documents
- Describe Standardised MedDRA Queries (SMQs)
- Conclude with a question and answer session

000561

4



MedDRA Background

000561

5



What is MedDRA?

Med = Medical

D = Dictionary for

R = Regulatory

A = Activities

000561

6



MedDRA

MedDRA Definition

MedDRA is a clinically-validated international medical terminology used by regulatory authorities and the regulated biopharmaceutical industry. The terminology is used through the entire regulatory process, from pre-marketing to post-marketing, and for data entry, retrieval, evaluation, and presentation.

000561

7



MedDRA

MedDRA's Purpose

- Facilitate the exchange of clinical information through standardization
- Important tool for product evaluation, monitoring, communication, electronic records exchange, and oversight
- Supports coding (data entry) and retrieval and analysis of clinical information about human medical products including pharmaceuticals, biologics, vaccines, and drug-device combination products

000561

8



MedDRA

Governance Structure for MedDRA

- ICH MedDRA Management Committee appointed by the ICH Assembly to provide oversight of MedDRA related activities and the Maintenance and Support Services Organization (MSSO)

000561

9



MedDRA

Management Committee and MSSO Relationship

- ICH owns MedDRA
- ICH MedDRA Management Committee
 - Contracts with MSSO to maintain it
 - Has oversight of all operations of the MSSO
 - Meets regularly with MSSO
 - Sets subscription rates
 - Approves developmental plans and services
 - Membership includes ICH regulatory authorities and industry associations

000561

10



MedDRA

MedDRA and the MSSO

- International support and development of terminology
- Foster use of MedDRA through communications and educational offerings
- “Custodians”, not owners, of the terminology
- JMO (partner organization for Japanese-language MedDRA)
- Governed by a Management Committee (industry, regulators, multi-national, other interested parties)

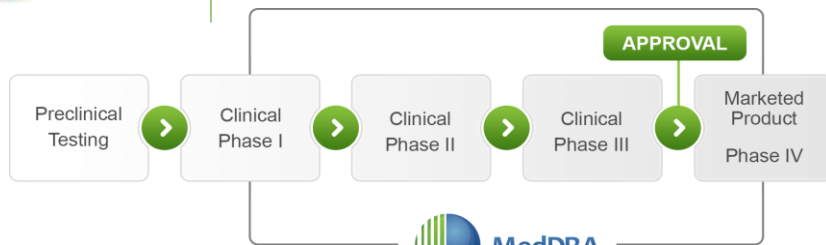
000561

11



MedDRA

Where MedDRA is Used



Regulatory Authority and Industry Databases
Individual Case Safety Reports and Safety Summaries

Clinical Study Reports

Investigators' Brochures

Core Company Safety Information

Marketing Applications


Publications

Prescribing Information

Advertising


000561

12



MedDRA's Scope, Structure, and Characteristics

000561 13



Scope of MedDRA

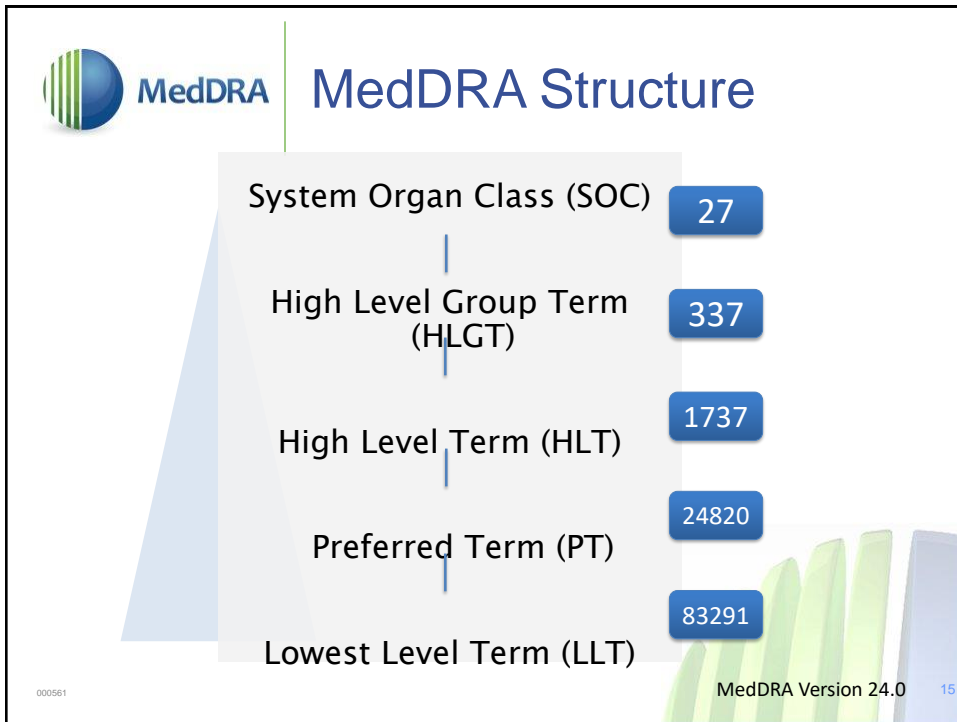
OUT

- Not a drug dictionary
- Patient demographic terms
- Clinical trial study design terms
- Frequency qualifiers
- Numerical values for results
- Severity descriptors
- Not an equipment, device, diagnostic product dictionary

IN

- Medical conditions
- Indications
- Investigations (tests, results)
- Medical and surgical procedures
- Medical, social, family history
- Medication errors
- Product quality issues
- Device-related issues
- Product use issues
- Pharmacogenetic terms
- Toxicologic issues
- Standardized queries

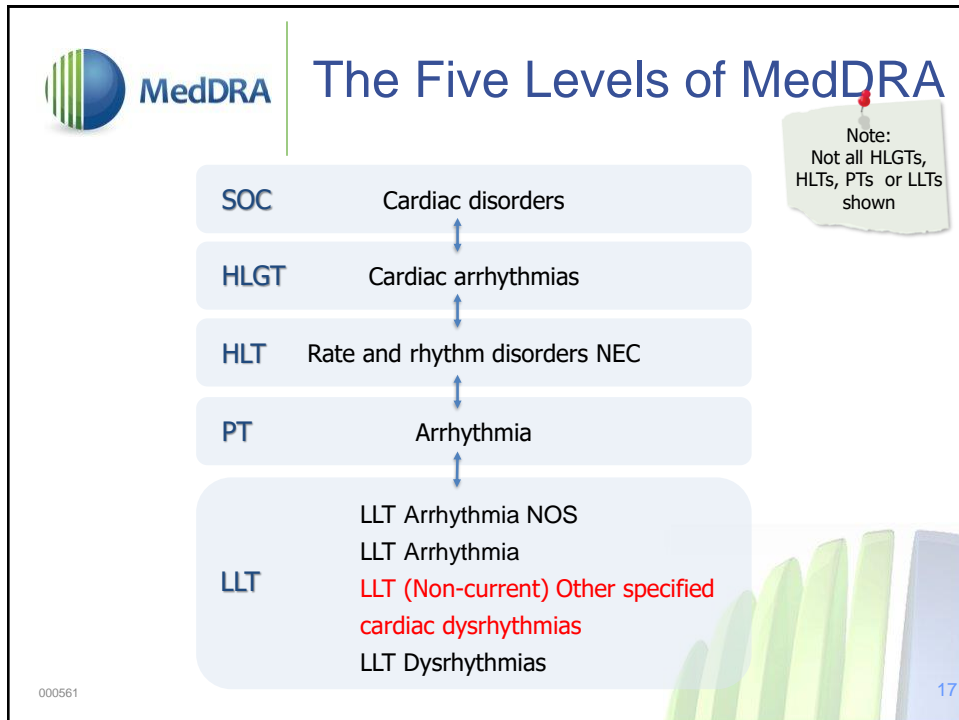
000561 14



The diagram displays the 27 System Organ Classes (SOC) of MedDRA, arranged in two columns. The classes are:

- Blood and lymphatic system disorders
- Cardiac disorders
- Congenital, familial and genetic disorders
- Ear and labyrinth disorders
- Endocrine disorders
- Eye disorders
- Gastrointestinal disorders
- General disorders and administration site conditions
- Hepatobiliary disorders
- Immune system disorders
- Infections and infestations
- Injury, poisoning and procedural complications
- Investigations
- Metabolism and nutrition disorders
- Musculoskeletal and connective tissue disorders
- Neoplasms benign, malignant and unspecified (incl cysts and polyps)
- Nervous system disorders
- Pregnancy, puerperium and perinatal conditions
- Product issues
- Psychiatric disorders
- Renal and urinary disorders
- Reproductive system and breast disorders
- Respiratory, thoracic and mediastinal disorders
- Skin and subcutaneous tissue disorders
- Social circumstances
- Surgical and medical procedures
- Vascular disorders

000561 16



The diagram illustrates Non-Current Terms in MedDRA, showing a red box labeled **LLT**.

- Flagged at the LLT level in MedDRA
- Not recommended for continued use
- Retained to preserve historical data for retrieval and analysis
- Terms that are vague, ambiguous, outdated, truncated, or misspelled
- Terms derived from other terminologies that do not fit MedDRA rules

000561 18



MedDRA

MedDRA Codes

- Each MedDRA term assigned an 8-digit numeric code starting with "1"
- The code is non-expressive
- Codes can fulfill a data field in various electronic submission types (e.g., E2B)
- New terms are assigned sequentially

000561

19



MedDRA

Codes and Languages



000561

20



MedDRA

A Multi-Axial Terminology

Multi-axial = the representation of a medical concept in multiple SOC's

- ✓ Allows grouping by different classifications
- ✓ Allows retrieval and presentation via different data sets

All PTs assigned a primary SOC

- ✓ Determines which SOC will represent a PT during cumulative data outputs
- ✓ Prevents "double counting"
- ✓ Supports standardized data presentation
- ✓ Pre-defined allocations should not be changed by users

000561

21



MedDRA

A Multi-Axial Terminology (cont)

SOC = Respiratory, thoracic and mediastinal disorders
(Secondary SOC)

HLGT = Respiratory tract infections

HLT = Viral upper respiratory tract infections

SOC = Infections and infestations
(Primary SOC)

HLGT = Viral infectious disorders

HLT = Influenza viral infections

PT = Influenza

000561

22



MedDRA Maintenance



MedDRA Maintenance

- Users can send change requests (CRs) to MSSO for consideration
 - Organizations allowed 100 CRs/month
 - Rigorous medical review by MSSO physicians
 - For simple changes (PT and LLT levels), response within 7-10 working days
 - Complex changes (above PT level) posted for comments mid-year
- Two MedDRA updates/year
 - 1 March X.0 (Complex release)
 - 1 September X.1 (Simple release)

000561

24



MedDRA

WebCR

- Web-based tool for Change Requests (CR)
 - URL: <https://mssotools.com/webcr/>
 - Via the Change Request Information page
- Ability to submit CRs online
 - Requests must be in English
- Immediate confirmation
- Review unsubmitted CRs online
- Ability to query CR history back to v5.1

000561

25



MedDRA

Submitting Changes

- Online change request submission tool guides user to enter all needed information
- Instructional video on use of WebCR on “Training” page of MedDRA website

000561

26



MedDRA

Submitting Changes (cont)

Add a New PT

Proposed PT (Required)

Second degree chemical burns of skin

Primary HLT (Optional)

Chemical injuries

Primary SOC (Optional)

Injury, poisoning and procedural complications

Secondary HLT (Optional)

Dermatitis ascribed to specific agent

Secondary SOC (Optional)

Skin and subcutaneous tissue disorders

Justification statement is required

Justification

Please consider including the gradation of chemical burns similar to the gradation of thermal burns under HLT Thermal burns to assist with coding and analysis.

Attach supporting document (Optional)

Attachment
C:\Users\sa804733\Desktop\SupportingInforma Browse...

000561

- Sample entry for a new PT in WebCR
- Justification and supporting documentation is important to help MSSO understand the need

27



MedDRA

Proactive MedDRA Maintenance

- What is the proactive approach?
 - Corrections/improvements made internally by the MSSO
 - General changes suggested by users
- Submitting ideas
 - Send to MSSO Help Desk. Justification is helpful.
 - Example: Review placement of bruise and contusion terms to facilitate coding and analysis
- Evaluation of proposals
 - Final disposition is not time limited; MSSO may take time to review
 - Proactive approach does not replace usual CR process

000561

28



MedDRA Tools


000561



29




MSSO's MedDRA Browsers



MedDRA Desktop Browser (MDB)
Download MDB and release files from MedDRA website

MedDRA Web-Based Browser (WBB)
<https://tools.meddra.org/wbb/>

000561



Mobile MedDRA Browser
<https://mmb.meddra.org>

30



MedDRA

MSSO's MedDRA Browsers (cont)

- Features
 - Each require MedDRA ID and password
 - View/search MedDRA and SMQs
 - Support for all MedDRA languages
 - Language specific interface
 - Ability to export search results and Research Bin to local file system (MDB and WBB only)



000561

31



MedDRA

Web-Based Browser

The screenshot displays the MedDRA Browser web interface. The browser address bar shows the URL: https://tools.meddra.org/web/main_wbb.aspx?nc=Y&inactive=Y&term=. The page title is "MedDRA Browser".

Search Options:

- SOC: HLT: PT: LLT:
- Language: English
- Version: 24.0
- Browser View: SOC
- Display Options: Show Codes Show Non-Current LLTs

Search Results:

Total Search Results: 60
 Defaults: PT (10) LLT (50)

Search Results (PT):

- Exact Match - 1
 - PT COVID-19
- Lexical Variant - 0
- Synonym Search Results - 0
- Contains Search Results - 0
- PT Asymptomatic COVID-19
- PT Congenital COVID-19
- PT COVID-19 immunisation
- PT COVID-19 pneumonia
- PT COVID-19 prophylaxis
- PT COVID-19 screening
- PT COVID-19 treatment
- PT Post-acute COVID-19 syndrome
- PT Suspected COVID-19

Term Details in Primary Language:

PT - Preferred Term

MedDRA Code/MedDRA Term
10084268 COVID-19

SOC Code: SOC Name
10021803 Infections and infestations
10058738 Respiratory, thoracic and mediastinal disorder

SMQ Code SMQ Name Scope Status Category Weight
2000023 COVID-19 Narrow Active A 0
(SMQ)
Infective

000561

32



MedDRA Version Analysis Tool (MVAT)

- Web-based (<https://tools.meddra.org/mvat>)
- Free to all users
- Features
 - Version Report Generator (produces exportable report comparing any two versions)
 - Data Impact Report (identifies changes to a specific set of MedDRA terms or codes uploaded to MVAT)
 - Search Term Change (identifies changes to a single MedDRA term or code)

000561

33



MedDRA Version Analysis Tool (MVAT) (cont)

- User interface and report output available in all MedDRA languages
- Ability to run reports on supplemental changes
- Option to run reports on secondary SOC changes

000561

34



MedDRA Version Analysis Tool

MedDRA Version Analysis Tool (MVAT)

Version Report Description

Select Different Versions to Compare

Language: English

Starting Version: MedDRA 23.1 English

Ending Version: MedDRA 24.0 English

Include Secondary SOC Information

Select SOCs to filter (default is all SOCs)

- Blood and lymphatic system disorders
- Cardiac disorders
- Congenital, familial and genetic disorders
- Ear and labyrinth disorders
- Endocrine disorders
- Eye disorders
- Gastrointestinal disorders
- General disorders and administration site conditions
- Hepatobiliary disorders
- Immune system disorders

Clear Selection

Note: The starting MedDRA version must be older than the ending MedDRA version

Run Version Report

Preferred Language: English

Release/Supplemental View: Release

MVAT Home

Search Term Change

Data Impact Report

Login

000561 35



MVAT Demonstration (Optional)



Coding with MedDRA

000561

37



What are Coding Conventions?

- Written guidelines for coding with MedDRA in your organization
- Support accuracy and consistency
- Common topics
 - Misspellings, abbreviations and acronyms
 - Combination terms and “due to” concepts
 - “Always query” terms, e.g., “Chest pain”

000561

38



MedDRA

Why Do We Need Coding Conventions?

- Differences in medical aptitude of coders
- Consistency concerns (many more “choices” to manually code terms in MedDRA compared to older terminologies)
- Even with an autoencoder, may still need manual coding

000561

39



MedDRA

MedDRA Support Documentation

- ICH provides a guidance document for MedDRA coding called the MedDRA Term Selection: Points to Consider (PtC) document

000561

40



MedDRA

MedDRA Term Selection: Points to Consider (MTS:PTC)

MedDRA® TERM SELECTION: POINTS TO CONSIDER ICH-Endorsed Guide for MedDRA Users

Release 4.21

March 2021

Disclaimer and Copyright Notice
This document is protected by copyright and may, with the exception of the MedDRA and ICH logos, 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 registered by ICH

000561

41

- Provides term selection advice for industry and regulatory purposes
- Objective is to promote accurate and consistent term selection to facilitate a common understanding of shared data
- Recommended to be used as basis for individual organization's own coding conventions



MedDRA

MedDRA Term Selection: PTC (cont)

- Developed by a working group of the ICH Management Committee
- Updated annually in step with the March release of MedDRA
- Complete versions available in English, Japanese, Chinese, Korean and Spanish
- Condensed versions available for other MedDRA languages
- Available on MedDRA and JMO websites

000561

42



MedDRA

Always Select a Lowest Level Term

Select Only Current LLTs

- Lowest Level Term that most accurately reflects the reported verbatim information should be selected
- Degree of specificity may be challenging
 - Example: "*Abscess on face*" → select "*Facial abscess*," not simply "*Abscess*"
- Select current LLTs only
 - Non-current terms for legacy conversion/historical purposes

000561

43



MedDRA

Select Terms for All Reported Information

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

000561

44



MedDRA

Coding: Translating into MedDRA

Reported Information	MedDRA Coding Term (LLT)
Throbbing above temple Aching all over head Pulsing pain in head Really bad headache Headache	Headache
Infection in lungs	Lung infection
Patient took Drug A instead of Drug B and experienced hypertension	Wrong drug administered Hypertension

000561

45



MedDRA

Term Selection Points

- Diagnoses and Provisional Diagnoses with or without Signs and Symptoms
- Death and Other Patient Outcomes
- Suicide and Self-Harm
- Conflicting/Ambiguous/Vague Information
- Combination Terms
- Age vs. Event Specificity
- Body Site vs. Event Specificity
- Location-Specific vs. Microorganism-Specific Infection
- Modification of Pre-existing Conditions
- Exposures During Pregnancy and Breast Feeding
- Congenital Terms
- Neoplasms
- Medical and Surgical Procedures
- Investigations

000561

46



MedDRA

Term Selection Points (cont)

- Medication Errors, Accidental Exposures and Occupational Exposures
- Misuse, Abuse and Addiction
- Transmission of Infectious Agent via Product
- Overdose, Toxicity and Poisoning
- Device-related Terms
- Drug Interactions
- No Adverse Effect and "Normal" Terms
- Unexpected Therapeutic Effect
- Modification of Effect
- Social Circumstances
- Medical and Social History
- Indication for Product Use
- Off Label Use
- Product Quality Issues

000561

47



MedDRA

Coding Demonstration with MedDRA Browser (Optional)

000561

48



Standardised MedDRA Queries (SMQs)

000561

49



Standardised MedDRA Queries (SMQs)

- Groupings of terms from one or more MedDRA SOCs related to medical condition or area of interest
- Terms relate to signs/symptoms, diagnoses, syndromes, physical findings, laboratory and other test data, etc.
- Intended to aid in case identification

000561

50



MedDRA

SMQ Term Inclusion

- SMQs are constructed at MedDRA PT level
- LLTs that are subordinate to an included PT are also included

000561

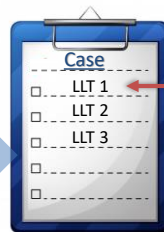
51



MedDRA

How to “Run” SMQs

Clinical Trial Database
Safety Database



"Hit"

Query

SMQ	
PT	
LLT	
LLT	
LLT1	
PT	
LLT	
LLT	
LLT	

000561

52



MedDRA

MedDRA Data Retrieval and Presentation: Points to Consider (DRP:PTC)

MedDRA® DATA RETRIEVAL AND PRESENTATION: POINTS TO CONSIDER ICH-Endorsed Guide for MedDRA Users on Data Output

Release 3.21

March 2021

Disclaimer and Copyright Notice
This document is protected by copyright and may, with the exception of the MedDRA and ICH logos, 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 registered by ICH

000561

- Provides data retrieval and presentation options for industry or regulatory purposes
- Most effective when used in conjunction with MedDRA Term Selection: PTC document
- Recommended to be used as basis for individual organization's own data retrieval conventions

53



MedDRA

SMQs in Production - Examples

- As of Version 24.0, a total of 108 level 1 SMQs in production
 - Agranulocytosis
 - Anaphylactic reaction
 - Central nervous system vascular disorders
 - Convulsions
 - COVID-19
 - Depression and suicide/self-injury
 - Hepatic disorders
 - Hypersensitivity
 - Ischaemic heart disease
 - Lack of efficacy/effect
 - Medication errors
 - Osteonecrosis
 - Peripheral neuropathy
 - Pregnancy and neonatal topics
 - Pseudomembranous colitis
 - Rhabdomyolysis/myopathy
 - Severe cutaneous adverse reactions
 - Shock
 - Systemic lupus erythematosus

000561

54



MedDRA

SMQ Benefits and Limitations

- **Benefits**
 - Application across multiple therapeutic areas
 - Validated reusable search logic
 - Standardized communication of safety information
 - Consistent data retrieval
 - Maintenance by MSSO/JMO
- **Limitations**
 - Do not cover all medical topics or safety issues
 - Will evolve and undergo further refinement even though they have been tested during development

000561

55



MedDRA

SMQ Applications

- **Clinical trials**
 - Where safety profile is not fully established, use multiple SMQs on routine basis as screening tool
 - Selected SMQs to evaluate previously identified issue (pre-clinical data or class effect)
- **Post-marketing**
 - Selected SMQs to retrieve cases for suspected or known safety issue
 - Signal detection (multiple SMQs employed)
 - Single case alerts
 - Periodic reporting (aggregate cases for safety and other issues, e.g., lack of efficacy)

000561

56



MedDRA

Summary

In this course, we:

- Presented background information about MedDRA
- Reviewed MedDRA's scope, structure, and characteristics
- Described the maintenance of MedDRA
- Described MedDRA tools (browsers, MVAT)
- Discussed coding with MedDRA
- Discussed the MedDRA Points to Consider documents
- Described Standardised MedDRA Queries (SMQs)

000561

57



MedDRA

MSSO Contacts

- Website
 - www.meddra.org
- Email
 - mssohelp@meddra.org
- Frequently Asked Questions
 - www.meddra.org/faq
- MedDRA Browsers
 - <https://www.meddra.org/meddra-desktop-browsers> (Desktop Browser)
 - <https://tools.meddra.org/wbb/> (Web-Based Browser)
 - <https://mmb.meddra.org> (Mobile Browser)

000561

58



MedDRA

MSSO Contacts (cont)

- Change Request Submission
 - <https://www.meddra.org/how-to-use/change-requests>
- MedDRA Support Documentation
 - <https://www.meddra.org/how-to-use/support-documentation>

000561

59



MedDRA

Question and Answer Session

000561

60