Implementation of MedDRA – industry perspective
SFDA-ICH MedDRA Workshop, Beijing, 13-14 May 2011

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Disclaimer:

- The information within this presentation is based on the presenter's expertise and experience, and represents the views of the presenter for the purposes of a training workshop.
Introduction

• Why is clinical coding needed?
• When is a clinical coding dictionary used?
• Clinical coding in a large company
Why is clinical coding required?

• Uncontrolled verbatim from reporters describes the same adverse event in many ways.
• Coding classifies data for subsequent cumulative analysis

Example: Headache may be reported as
• Tenderness above temple
• Dull aches back of head
• Feels like someone hit back of head
When is a clinical coding dictionary used?

A clinical coding dictionary is generally used from the first clinical trial in man and then throughout the life cycle of the product.
Clinical coding in a large company

Users include:

- Clinical data management (statisticians, supported by dictionary analysts)
- Clinical trial teams
- Pharmacovigilance
- Regulatory
- Prescribing information

Support from coding dictionary team & information technology

Information stored in:

- Coding dictionary database (routine maintenance, version updates)
- Clinical trial database
- Safety (reporting) database
- Regulatory submissions
- Product labels
- Possibly other locations

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MedDRA implementation - industry

• Planning

• Implementation
  o Database, MedDRA browser
  o Examples in 2 companies

• Data conversion
  o Pilot, Revision of standard operating procedures, Training
  o What, when and how to convert
Planning

• Is there a deadline?
  - Regulator using MedDRA for electronic safety reporting
    - E.g. Europe January 2003, Japan April 2000
  - Sharing safety data for co-development in 2 companies

• Interdisciplinary project team
  - Regulatory affairs
  - Pharmacovigilance
  - Data management/dictionary administrators
  - Clinical research
  - Information technology
Implementation – database, MedDRA browser

• Older safety databases may not be MedDRA compatible
  o E2B field for MedDRA terms initially specified 100 characters

• Many commercially available databases now have MedDRA browsing capabilities
Implementation - examples in 2 companies

Company X

• 1998 MedDRA v1.9 testing for AERs (FDA database)
• 2H 1999 in house terminology to MedDRA mapping started
  o IT support, dictionary analysts, medical quality control
  o Developed audit trail, MedDRA autoencoder
• Intended completion of pharmacovigilance (safety) database mapping in 1Q 2001
Implementation - examples in 2 companies (2)

Company Y

• Simultaneous planning to migrate to MedDRA

• Mapping modified WHO-ART* to MedDRA
  * less specific than MedDRA

On merger of companies X and Y

  o Dictionary teams found that philosophies were different
  o STOP both processes, AGREE philosophy and RESTART mapping
  o Delayed implementation in merged company by a year
Data conversion

- **Company X**
  - In house terminology more specific than MedDRA
  - Controlled (near verbatim) synonym list mapped to MedDRA LLT

- **Company Y**
  - Modified WHO-ART less specific than MedDRA
  - WHO-ART terms have corresponding term in MedDRA
  - Company modified WHO-ART terms mapped to MedDRA LLT
  - For on-going clinical trials: remapped verbatim to MedDRA LLTs to be consistent with new data

- **Merged company**
  - Common coding philosophy and medical quality checking
Data conversion (2)

Historical terminology:

- more specific than MedDRA
  - Historical: Nervousness (PT), Restlessness (PT)
  - On conversion to MedDRA: Nervousness (PT), Restlessness (PT)
  - Result: No change in numbers of events

- less specific than MedDRA
  - Historical: Nervousness (PT), Restlessness (synonym)
  - On conversion to MedDRA: Nervousness (PT), Restlessness (PT)
  - Result: Number of reports of ‘Nervousness’ falls, new reports of ‘Restlessness’ appear
Implementation of MedDRA – industry perspective

Example: less specific terminology vs MedDRA

<table>
<thead>
<tr>
<th>OTHER TERMINOLOGY PREFERRED TERMS</th>
<th>NO. OF EVENTS</th>
<th>MEDDRA VERSION 14.0 PREFERRED TERMS</th>
<th>NO. OF EVENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infection</td>
<td>15</td>
<td>Upper respiratory tract infection</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nasopharyngitis</td>
<td>2</td>
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<td></td>
<td></td>
<td>Infection</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower respiratory tract infection</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin infection</td>
<td></td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>9</td>
<td>Abdominal pain</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Abdominal pain upper</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Abdominal tenderness</td>
<td>2</td>
</tr>
</tbody>
</table>
Data conversion (3)

• May require a pilot (trial period) with one product

• Revise standard operating procedures
  o Communicate with licence partners, clinical research organisations (CROs)

• Training
  o Within company
  o Study investigators, CROs etc
Data conversion – what, when and how

• **Safety (reporting) database often contains**
  - Clinical trial Serious Adverse Events (SAEs)
  - Spontaneous / post marketing data

• **Clinical trial database contains**
  - Non serious AEs from clinical trials

• **Many converted safety database before the clinical trial database.**
  - Clinical SAEs in MedDRA and non serious adverse events (AEs) in old terminology require data reconciliation or explanations
    - Clinical trial report may include term mapping in an appendix
Data conversion – what, when and how (2)

Impact of converting safety database on post marketing data:

• **Periodic safety update reports (PSUR)**
  - Different body systems: e.g. ‘cardiovascular’ split into ‘cardiac’ and ‘vascular’
  - Change in level of detail (granularity) resulting in different number of reports for some AEs

• **Safety monitoring**
  - Review new signals for potential labelling changes
Data conversion – what, when and how (3)

Clinical trial database

- Start new studies in MedDRA
- Convert ongoing studies to MedDRA as soon as possible

- Integrated data analysis necessary for submissions
  - Convert old studies to be included in integrated safety summary
    - Unless old terminology was very specific, convert from reporter verbatim
    - Conversion with codes from non specific terminology results in loss of detail
Thank You!