

MedDRA Coding of Medication Errors (Part 1) – General Principles





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Course Overview

- Explore the regulatory background for the topic medication errors
- Discuss definitions and terminologies for product use concepts based on the ICH Guidance documents
- Understand general principles for coding of medication errors
- Apply these principles in exercises
- Conclude with a question and answer session



Regulatory Background

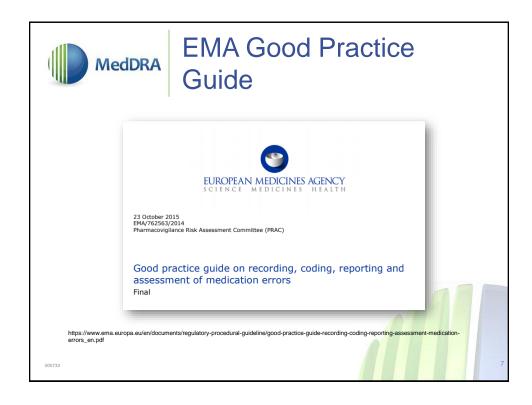
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Medication Errors



- Medication errors (MEs) have a high impact on patient safety and health care systems worldwide
- MEs are the most common preventable reason for adverse events in the medicinal product use process
- MEs are in focus of regulatory guidance
 - Support recording, coding, reporting and assessment activities of the errors made
 - Understand the causes, contributing factors and clinical consequences of the errors
 - Increase the safe use of medicines by mitigating actions and solutions





FDA Guidances

Guidances

We update guidances periodically. For the most recent version of a guidance, see $\underline{FDA's}$ website on guidance documents

- Guidance for Industry: Safety Considerations for Product Design to Minimize Medication Errors
- Guidance for Industry: Contents of a Complete Submission for the Evaluation of Proprietary Names
- Draft Guidance for Industry: Best Practices in Developing Proprietary Names for Drugs
- Draft Guidance for Industry: Safety Considerations for Container Labels and Carton Labeling Design to Minimize Medication Errors
- Draft Guidance for Industry: Contents of a Complete Submission for Threshold Analyses and Human Factors Submissions to Drug and Biologic Applications
- Guidance for Industry and Food and Drug Administration Staff Applying Human Factors and Usability Engineering to Medical Devices
- PDUFA Pilot Project: Proprietary Name Review Concept Paper

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https://www.fda.gov/drugs/drug-safety-and-availability/medication-errors-related-cder-regulated-drug-products



Medication Errors and MedDRA

- MedDRA was expanded with new terms and its hierarchy was re-structured to better support data retrieval and assessment of MEs and other types of product use concepts
- MedDRA Term Selection Points to Consider (MTS:PTC) document and the Points to Consider Companion Document were updated and supplemented to provide MedDRA users with more guidance on this topic

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ICH Guidance Documents

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

MedDRA® TERM SELECTION: **POINTS TO CONSIDER**

ICH-Endorsed Guide for MedDRA Users Release 4.22

March 2022

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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: Points to Consider (MTS:PTC)

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MedDRA Points to Consider Companion Document

MedDRA® POINTS TO CONSIDER COMPANION DOCUMENT

ICH-Endorsed Guide for MedDRA Users

Release 2.0

October 2020

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 Provides more detailed information, examples, and guidance on MEs and other types of product use concepts

 Intended as a "living" document with frequent updates based on users' needs

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MedDRA Points to Consider Companion Document

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Definitions



Medication Error Definition



A medication error is any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of a healthcare provider, patient, or consumer.

Such events may be related to professional practice, health care products, procedures and systems, including prescribing, order communication, product labeling, packaging and nomenclature, compounding, dispensing, distribution, administration, education, monitoring and use.

National Coordinating Council for Medication Error Reporting and Prevention (US); 2001. About medication errors.

https://www.nccmerp.org/about-medication-errors. Accessed 1 March, 2020.



MedDRA Product Use Concepts

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

https://admin.meddra.org/sites/default/files/guidance/file/000714_termselptc_r4_22_mar2022.pdf

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Consider the Context

Lisa is stressed at work and so her doctor prescribed one tablet of XY nightly. Last night she was still awake at 3 a.m. so took a second tablet.

Scenario: DRUG MISUSE

Lisa is stressed at work and has insomnia but sleeping tablets leave her drowsy. Her doctor prescribed an unapproved analgesic medication instead.

Scenario: OFF LABEL USE

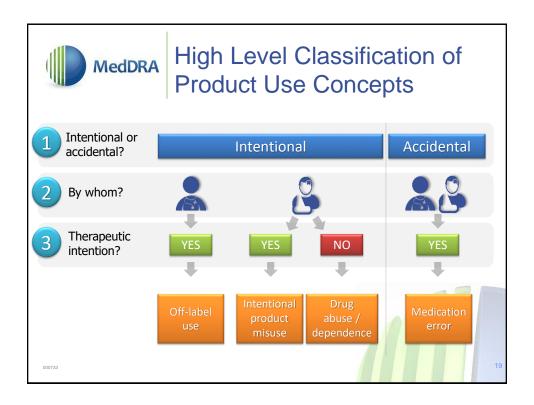


Lisa is stressed at work and went online for painkillers to calm her down, based on advice of a friend. One dose became two and this week she's been taking four a day.

Scenario: DRUG ABUSE

Lisa is stressed at work and is having trouble remembering things. Today she forgot she had already taken her medication and took it twice.

Scenario: MEDICATION ERROR





Incomplete Information

- When the reporter does not describe an event fully, it may not be clear whether it was accidental or intentional
- "For the past month, she has been taking an extra tablet at bedtime"



Why did this happen?

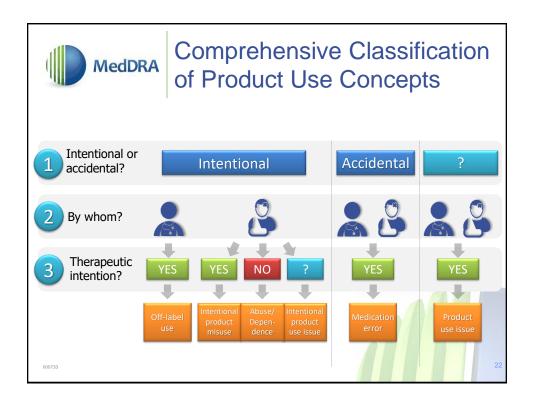
- She misunderstood the instructions?
- Her doctor prescribed the wrong schedule?
- Her symptoms are always worse at night?
- Her doctor believes this is more effective?

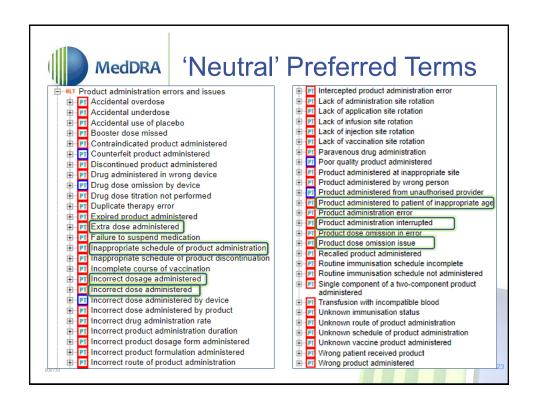
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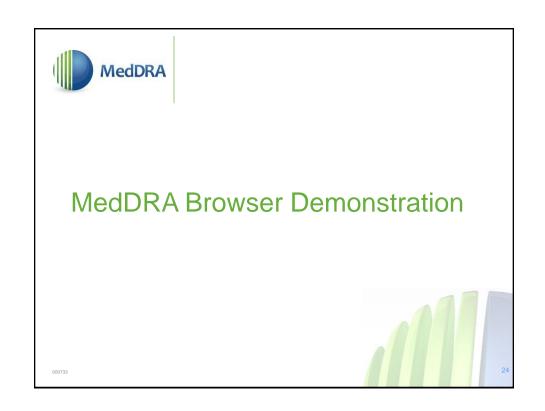


'Neutral' Preferred Terms

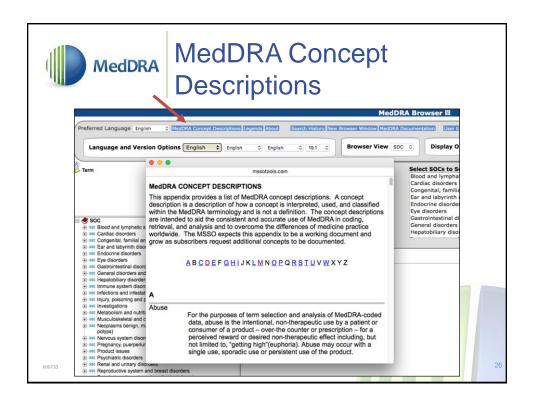
- Some PTs are not specific and therefore useful in situations where we are unsure if the event was accidental or not and whether an intentional deviation was for therapeutic reasons
 - -PT *Product use issue*
 - -PT *Intentional product use issue*
- When the background is clear, "neutral" terms can also be selected in combination with another MedDRA term for the misuse, off label use or medication error. They allow us to capture the details of what actually happened.

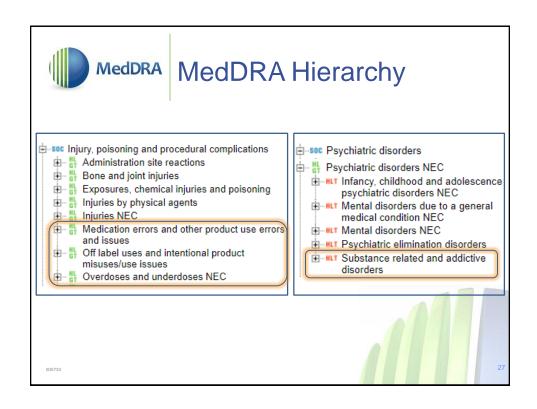


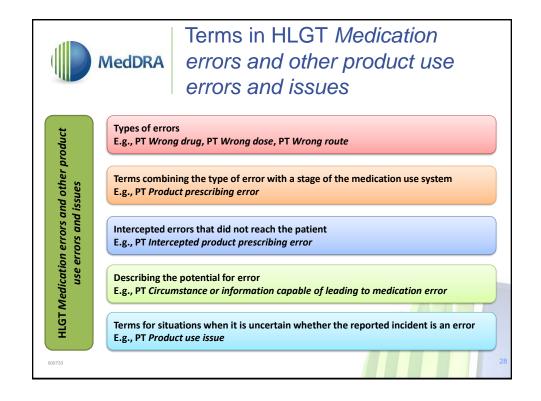


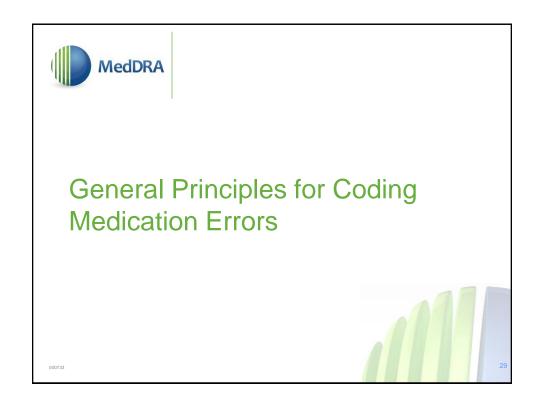


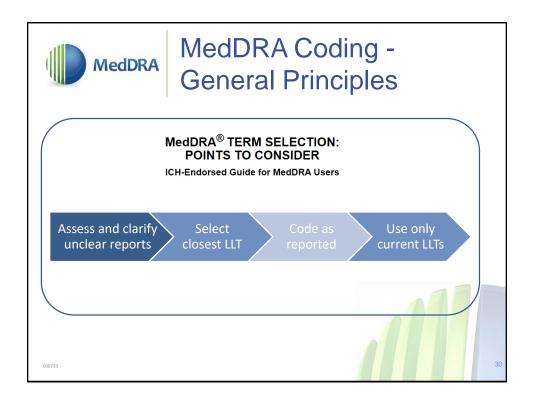


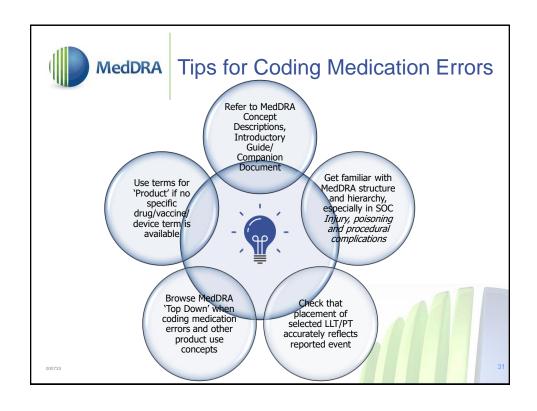


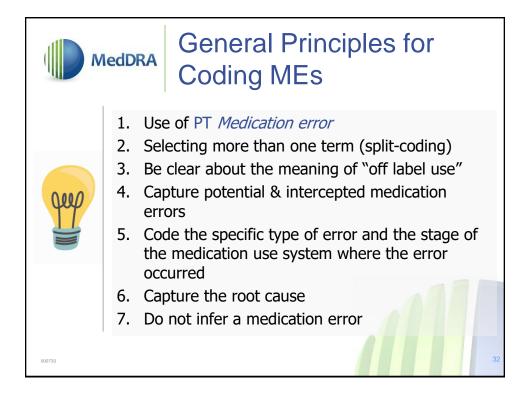


















the use of LLT *Medication error*

unless there is NO other information reported

- Check all the LLTs in HLGT Medication errors and other product use errors and issues for the most specific term possible
- If a specific error is reported but no suitable LLT is available, submit a Change Request

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1 - Use of PT Medication error (cont.)



"Patient inadvertently didn't use the medication as prescribed, no further information available."



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Sometimes the initial error results in consequent errors



The **initial error** should be coded as the **priority**

Consequent errors can be coded **if** they are stated in the report



Do not use multiple LLTs to capture a singular error that is reported with both a general and a specific verbatim



2 - Split-Coding of Chain of Events (cont.)



"Nurse miscalculated the dose and the patient received 40 mg instead of 20 mg of his medication. He experienced severe hypotension."

- LLT *Dose calculation error* (PT is the same)
- LLT *Incorrect dose administered* (PT is the same)
- LLT *Hypotension* (PT is the same)





3 - Be Clear about the Meaning of PT Off-label use

Off-label use terms should only be selected when:

- -Off-label is specifically reported or
- -when case information provides all details needed for classification as off label use



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 - Be Clear about the Meaning of PT Off label use (cont.)



"Pediatrician decided to use COVID-19 vaccine for his 10year-old high risk patient, although not yet approved for this age group."



• LLT Off label use in unapproved age group ▶ PT *Off label use*





4 - Potential Medication Errors

- Potential errors should be designated as such by selecting
 - LLT Circumstance or information capable of leading to **medication error**
 - LLT Circumstance or information capable of leading to **device use error**
- Terms that represent information about the contributing scenario should also be selected
 - e.g. (LLT Drug label look-alike)



- ✓ Potential error LLT
- ✓ Contributing factor



4 - Potential Medication Errors (cont.)



"Pharmacist reported that the blurred print on the drug label could lead to the wrong dose being given."



- ✓ Potential error
- LLT Circumstance or information capable of leading to medication error
 - ➤ PT Circumstance or information capable of leading to medication error
- ✓ Contributing scenario



LLT Product label text illegible

→ PT *Product label issue*





• An intercepted medication error refers to the situation where a medication error has occurred, but is prevented from reaching the patient



 The intercepted error term should reflect the stage at which the error occurred, rather than the stage at which it was intercepted



4 - Intercepted Medication Errors (cont.)



"Pharmacist dispensed the wrong drug, but the nurse identified the error and did not give it to the patient."



LLT Intercepted drug dispensing error PT Intercepted product dispensing error





5 - Stages of the Medication Use System



Some MedDRA terms capture:

- ✓ both the type of error and stage of the medication use system (e.g., LLT Wrong drug prescribed)
- ✓ others only the type of error (e.g., LLT Wrong drug) and
- ✓ others only the stage (e.g., LLT *Drug prescribing error*)



Capture both the stage and the type of error where it is known

If the stage is not known, use the terms for the type of error only

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5 - Stages of the Medication Use System (cont.)



Capture both the stage and the type of error where it is known

Using a single LLT

"Pharmacy dispensed the wrong drug"

Both the stage and the type of error can be captured using LLT *Wrong drug dispensed* (instead of two LLTs: LLT *Wrong drug and LLT Wrong drug dispensed*)

Using more than one LLT

"Mistakenly prescribed the wrong strength"

Code to LLT *Wrong strength* and LLT *Drug prescribing error* because no available single term captures the reported information in full





6 - Coding the Root Cause

- Root causes are critical to understanding why an error occurred and identifying interventions that can be undertaken to prevent the error
 - When the root cause is provided, select a term for the root cause if possible
 - Capture the resulting error in addition





✓ Resulting error

✓ Root Cause

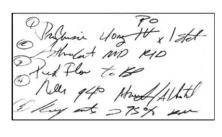
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6 - Coding the Root Cause (cont.)



"The doctor wrote a prescription for 40 mg Drug X for angina. But, because of the illegibility of the prescription, the nurse administered the same dosage of Drug Y, a calcium channel blocker used in the treatment of hypertension, for which the maximum daily dose is only 10 mg. A day after taking overdose of Drug Y, the patient had a heart attack and died."



//

Root Cause

- · LLT Angina pectoris
- LLT Written prescription illegible
- · LLT Wrong drug administered
- LLT Accidental overdose
- LLT Heart attack

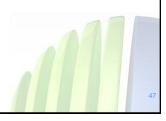




7 - Do not Infer a Medication Error

- The selected LLTs should reflect only the information stated in the case report
- It should not be assumed that a medication error occurred if this is not clearly reported as such

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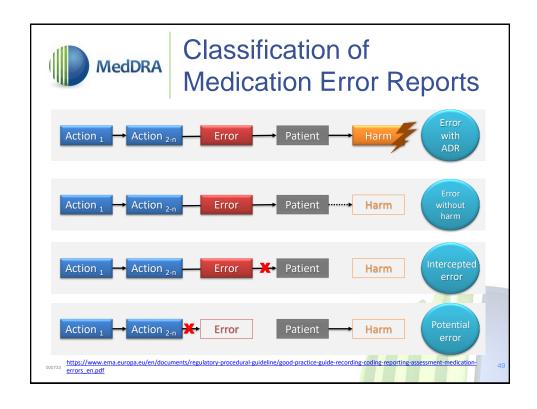
7 - Do not Infer aMedication Error (cont.)

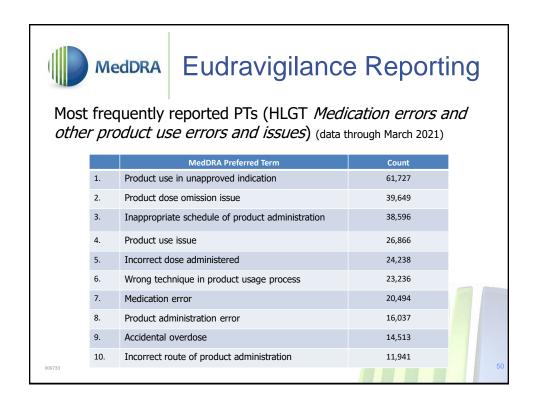


"The nurse administered 50 mg of Drug X."



This is not an informative report and should not be submitted as such; further information should be sought or a dose qualification referencing the prescribing information should be provided in the narrative.







Medication Errors and other Product Use Concepts – Coding Demonstrations

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Assessing the Reported Information

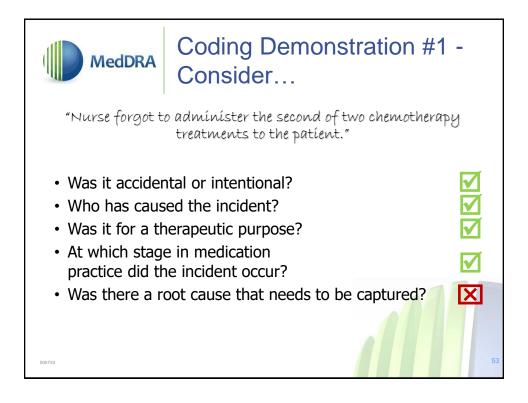
- · Consider what is being reported:
 - Did the incident occur intentionally or unintentionally?
 - Who has caused it?
 - Was there a therapeutic purpose?
 - At which stage in medication practice?
 - Did the initial incident lead to subsequent errors?
 - Did it lead to harm in the patient?
 - What were the contributing factors?
 - Were only circumstances reported, that COULD lead to a medication error?
 - Was the incident intercepted before reaching the patient?

3

The type of report will influence the way you search for suitable LLTs.

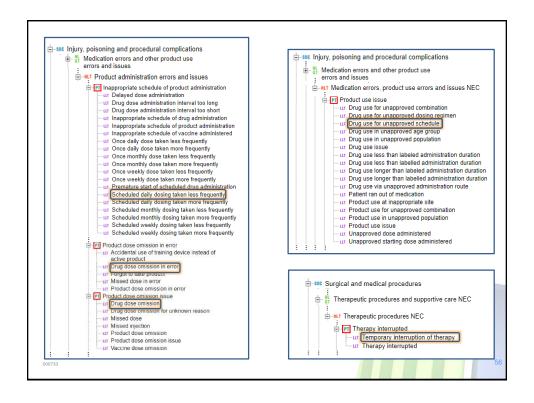
It may indicate where

you expect to find the closest matches.











Coding Demonstration #1 - Final Proposal

"Nurse forgot to administer the second of two chemotherapy treatments to the patient."



+ LLT Drug dose omission in error

PT Product dose omission in error

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Coding Demonstration #2 - Consider...

"Patient did not read instructions thoroughly and took drug X for prophylaxis instead of treatment of the approved indication."

Was it accidental or intentional?

Y

· Who has caused the incident?

• Was it for a therapeutic purpose?

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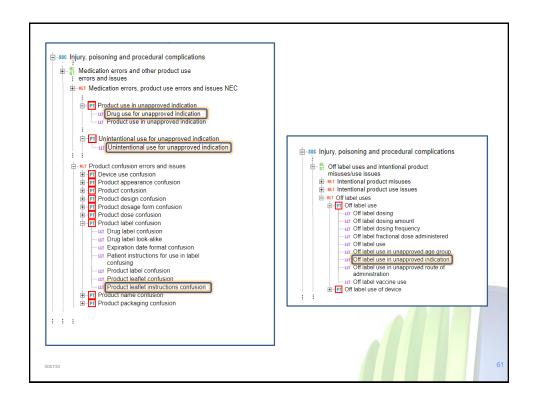
 At which stage in medication practice did the incident occur?

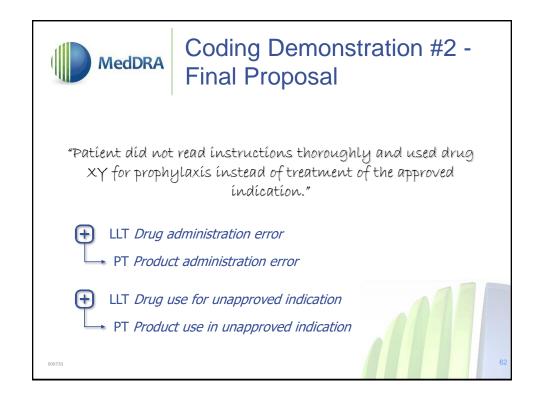
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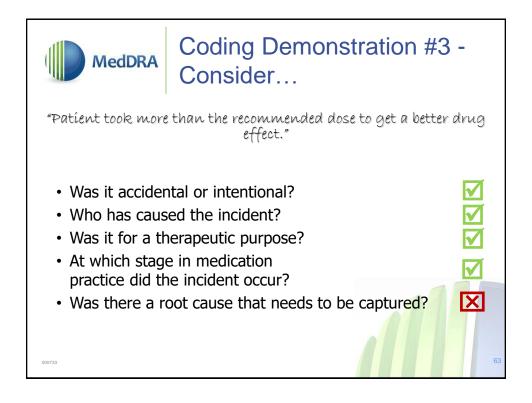
Was there a root cause that needs to be captured?

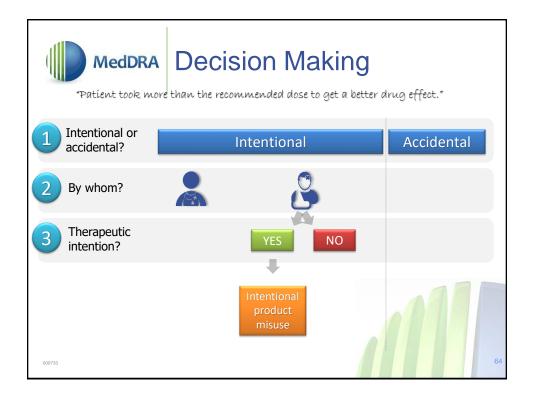




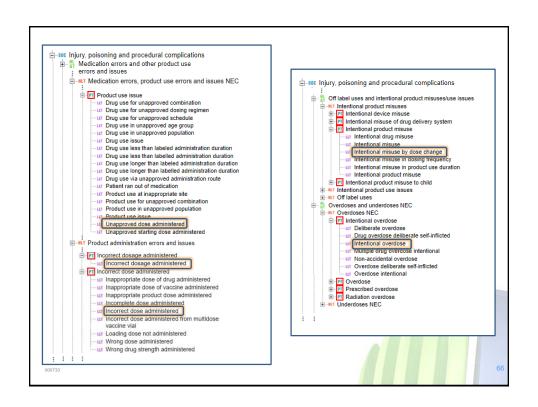














Coding Demonstration #3 - Final Proposal

"Patient took more than the recommended dose to get a better drug effect."



LLT Intentional misuse by dose change

PT Intentional product misuse

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Coding Demonstration #4 - Consider...

"Doctor prescribed drug A to suppress pre-term labor after careful risk/ benefit assessment (not covered by label)."

Was it accidental or intentional?

Y

· Who has caused the incident?

Was it for a therapeutic purpose?

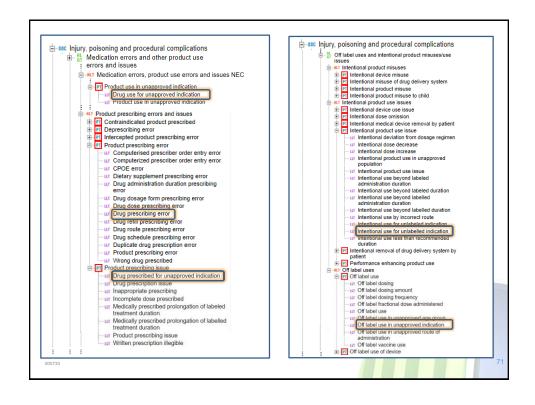
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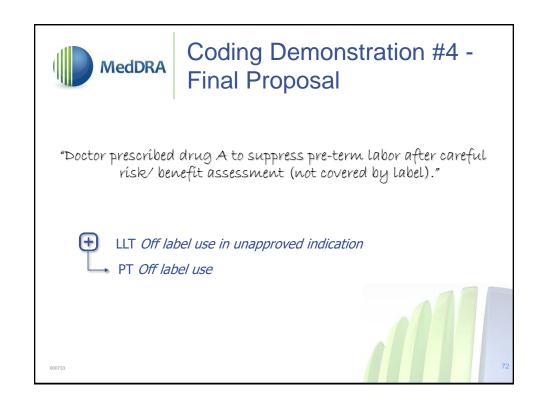
 At which stage in medication practice did the incident occur?

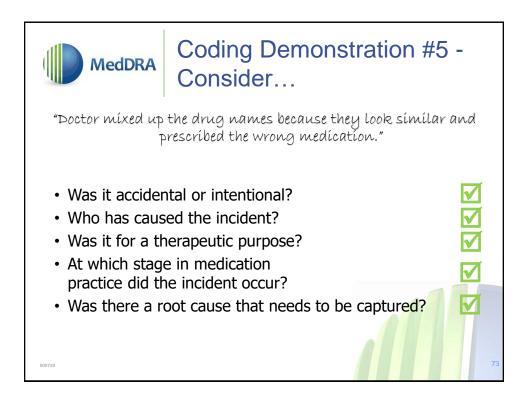
- X
- Was there a root cause that needs to be captured?





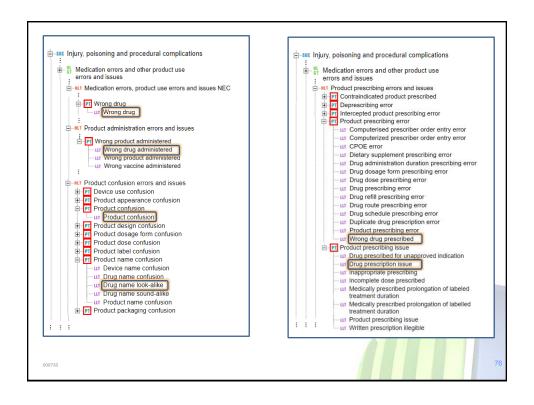














Coding Demonstration #5 - Final Proposal

"Doctor mixed up the drug names because they look similar and prescribed the wrong medication."

- LLT Wrong drug prescribed
 PT Product prescribing error
- + LLT *Drug name look-alike*PT *Product name confusion*

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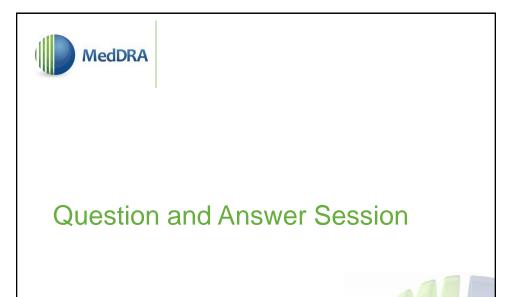


Summary

In this course, we:

- Discussed the regulatory background for the topic "Medication errors"
- Introduced helpful ICH Guidance documents
- Discussed definitions for product use concepts and related MedDRA Concept Descriptions
- Discussed the general principles for coding of medication errors and looked into related coding demonstrations

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