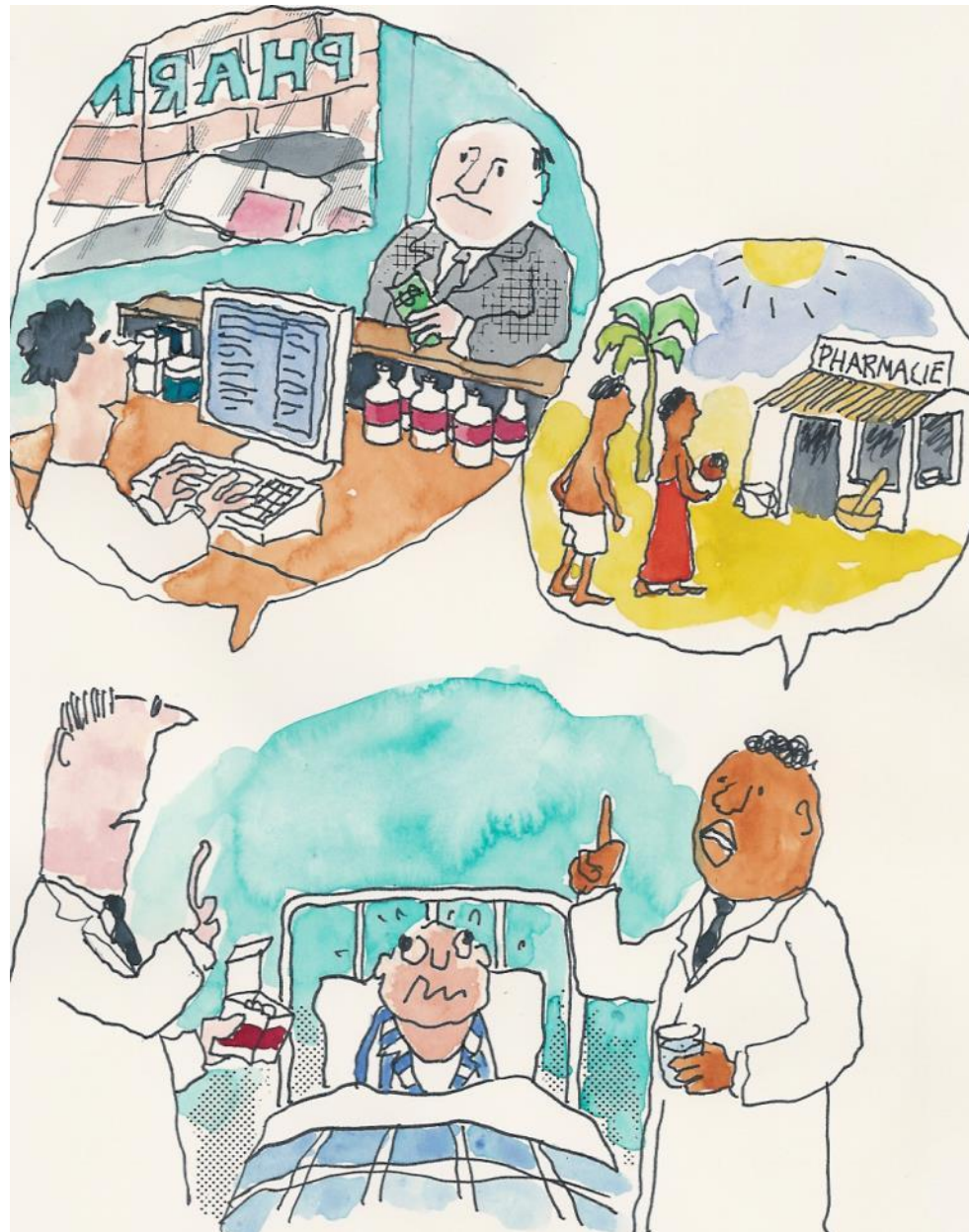


DEFINING DRP AND MEDICATION ERRORS AND THEIR RELATIONSHIP

PCNE WORKING SYMPOSIUM ON DRP 2009 WORKSHOP 1

Facilitators: Kurt Hersberger, Nina Griese
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Definitions and terminology

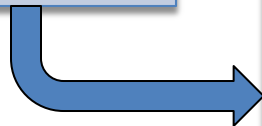
Aim of the workshop

3

- What are valid definitions for medication errors (ME)?
 - ▣ PCNE definition for ME ?
- What is the difference between DRP and ME, what are overlaps?
- Future: scientific article

The processes
in drug use

- Prescribing
- Dispensing
- Use



• Something
wrong in
the process
**Medication
Error**



Error but no (potential)
impact on outcome

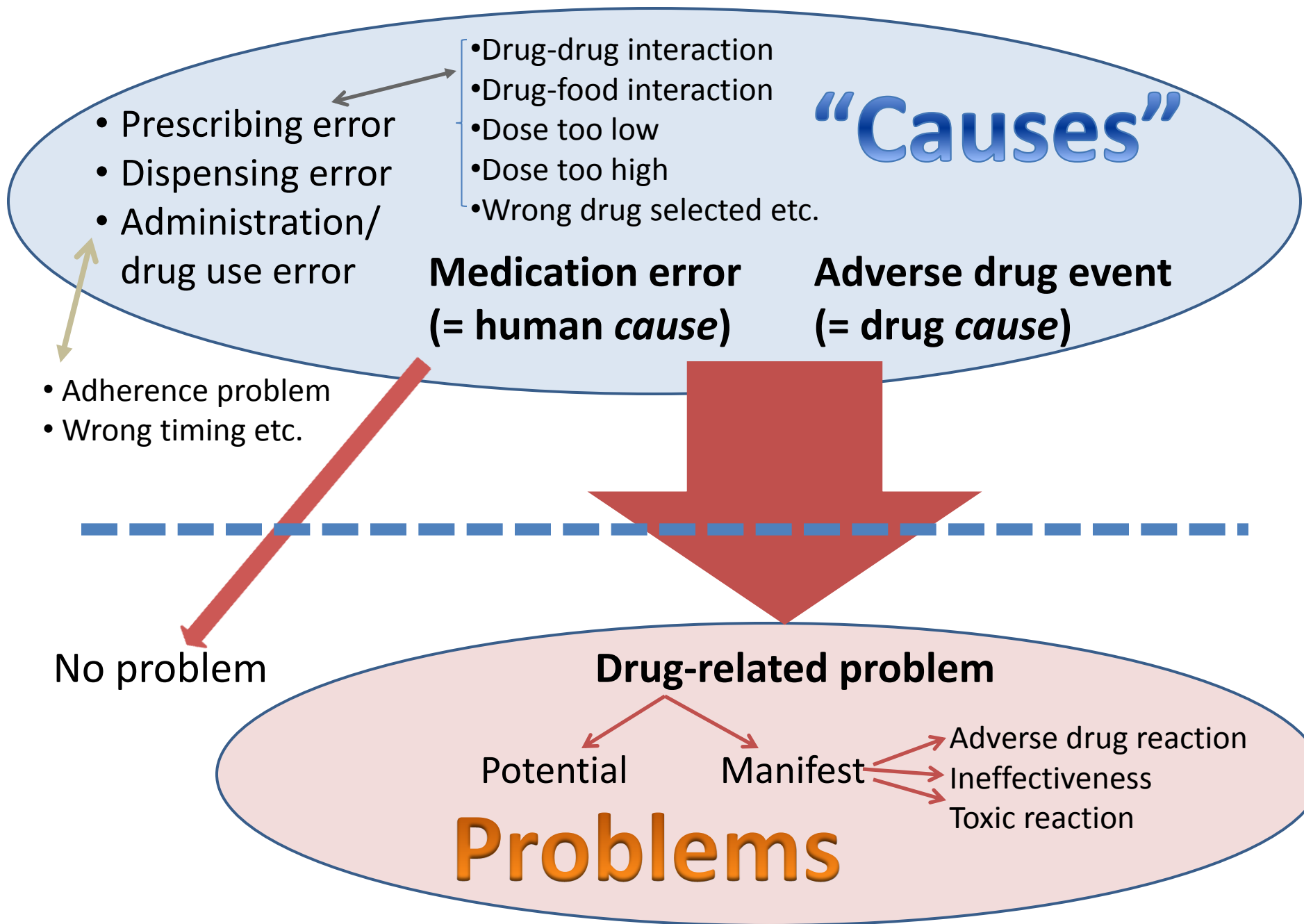
No error but not the
desired outcome



(Potential)
impact on
outcome



- Drug-related
problem



Error

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- ❑ Unintended act or an act that does not achieve its intended effect.
(Leape LL. Am J Health Syst Pharm 52, 1995, 379-382)

- ❑ Failure of planned actions to achieve their desired ends – without the intervention of some unforeseeable events.
(Reason 1997: see Glossary of terms, Council of Europe)

Medication error 1

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- Any **preventable event that may cause or lead to** inappropriate medication use or patient harm while medication is in the control of a health care professional, patient, or consumer.

(National Coordinating Council for Medication Error Reporting and Prevention, NCC MERP, USA)

- More process oriented – patients included

Medication error 2

8

- A medication error is any error in the process of prescribing, dispensing, or administering a drug, **whether there are any adverse consequences or not.**

(Leape LL. Am J Health Syst Pharm 52, 1995, 379-382)

- More process oriented – patients not mentioned

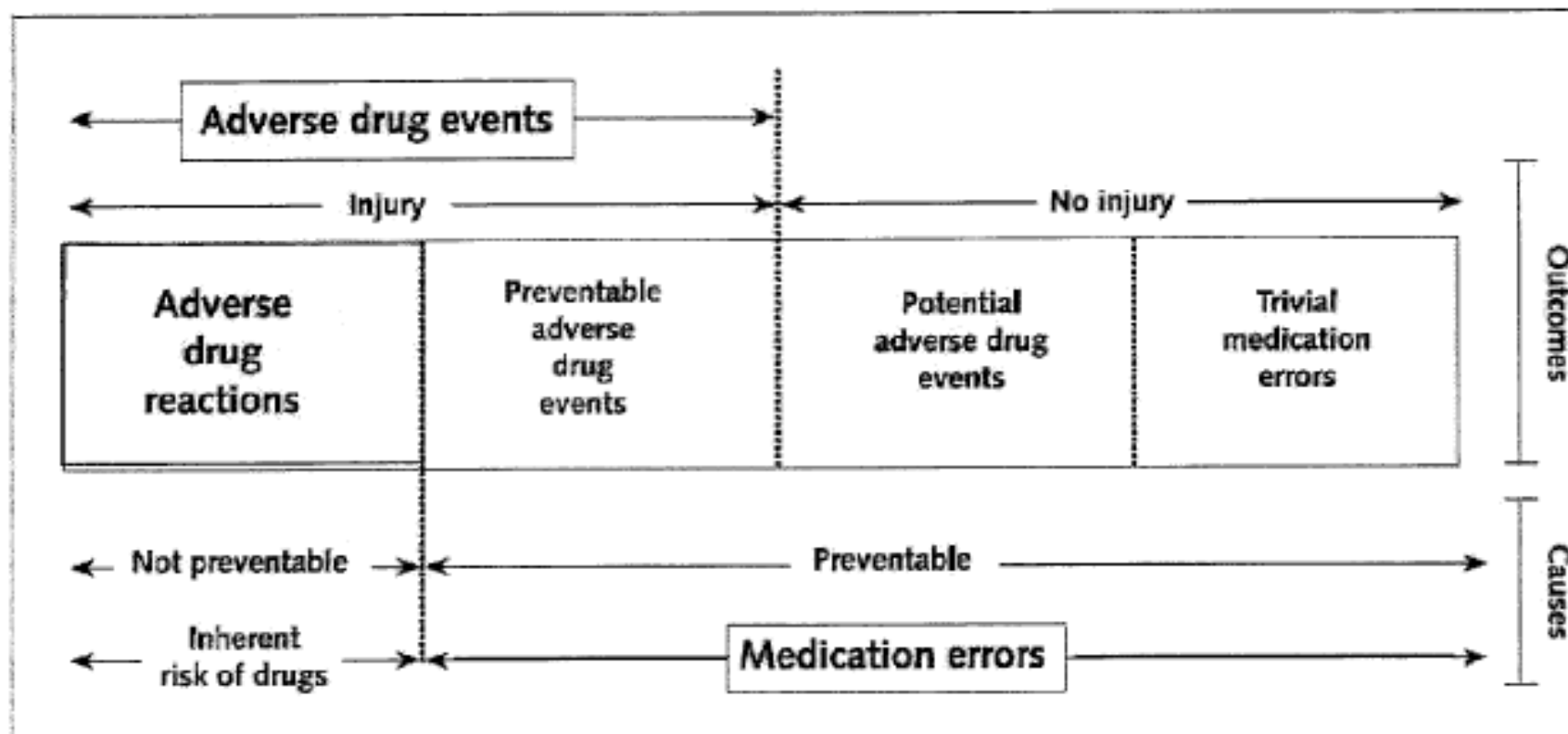
Medication error 3

9

- ❑ **Medication Errors**
- ❑ Links Errors in prescribing, dispensing, or administering medication with the result that the patient fails to receive the correct drug or the indicated proper drug dosage.
- ❑ Pubmed - MeSH
- ❑ Year introduced: 1967(1966)

Relationship between ME, ADE, ADR

10



Expert Group on Safe Medication Practices: Creation of a better medication safety culture in Europe: Building up safe medication practices, 2007:
<http://www.gs1health.net/downloads/medication.safety.report.2007.pdf> (Accessed 2008 June 19)

Adverse drug reaction (ADR)

11

- A response to a medical product which is noxious and unintended and which occurs at doses normally used in man for the prophylaxis, diagnosis or therapy of diseases etc. (Council of Europe)
- Non-preventable ADE due to side effects or allergic reactions (e.g. cough due to an ACE-inhibitor) (Morimoto et al, Qual Saf Health Care 2004)

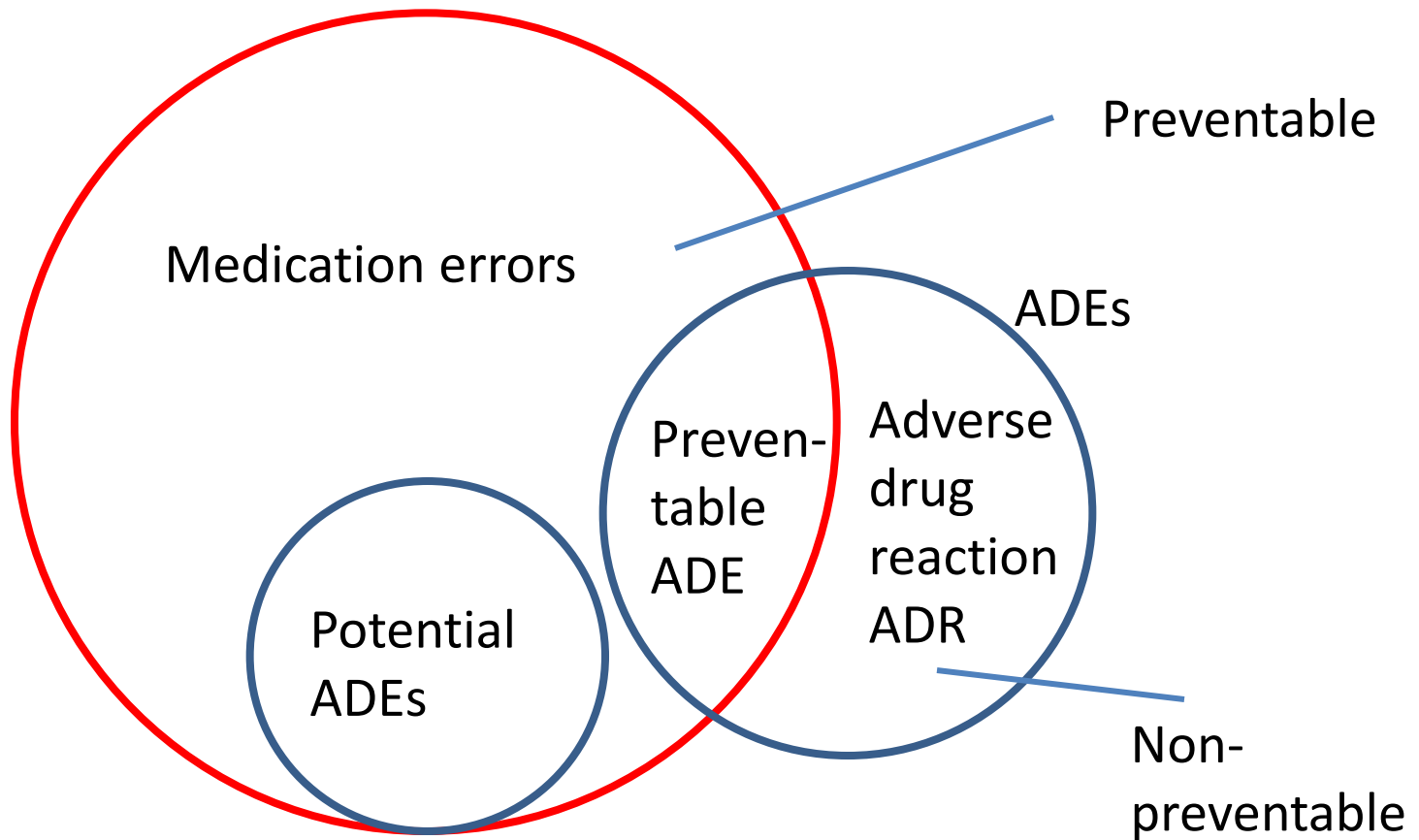
Adverse drug event (ADE)

12

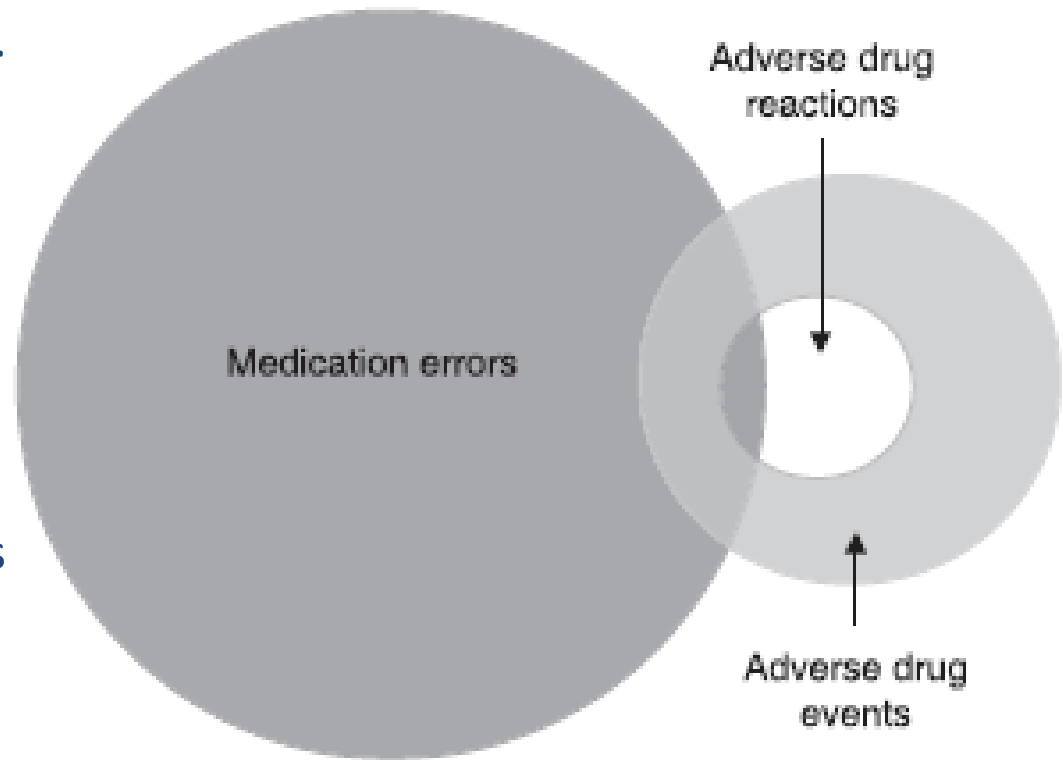
- An injury occurring during the patient's drug therapy and resulting either from appropriate care, or from unsuitable or suboptimal care. ADE include: the ADR during normal use of the medicine, and any harm secondary to a medication error, both errors of omission or commission. (Council of Europe)
- An injury that is the result of an error at any stage in the medication use or an injury of which the severity or duration could have been reduced if different actions had been taken (ameliorable). (Morimoto et al, Qual Saf Health Care 2004)

Relationship between ME, ADE, ADR

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DRP can be illustrated by the intersections of three circles representing ME, ADE and ADR. MR include every mistake in the medication process (prescribing, dispensing, administering of drugs). Only a minority of the MR result in an ADR or an ADE. ADE represent any injury related to the use of a drug, even if this relationship has not been proven to be causal?? (AE). ADR are noxious responses to a drug which are unintended and which occur at normally used doses of this drug. ADR are either predictable (and therefore mostly avoidable??; type A reactions), or unpredictable (idiosyncratic or type B reactions).



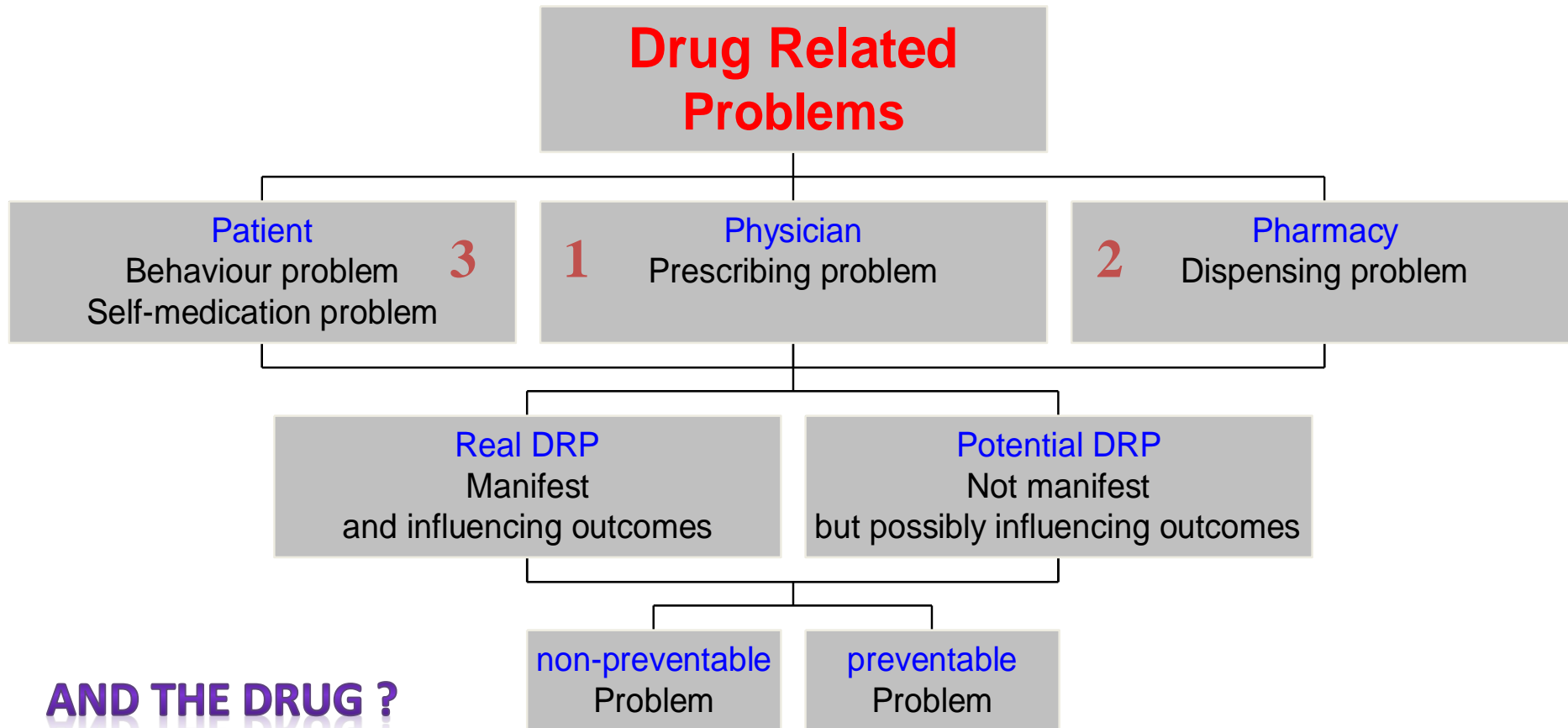
Points of discussions

15

- ❑ What are differences between both figures?
- ❑ Are all errors preventable?
- ❑ Is an error an error, whether there are any adverse consequences or not?
- ❑ Are there other causes for ADE than ME and the inherent risk of drugs?
- ❑ Are all ADR non-preventable?
- ❑ Are drug use errors medication errors? (Medication errors: patients included?)

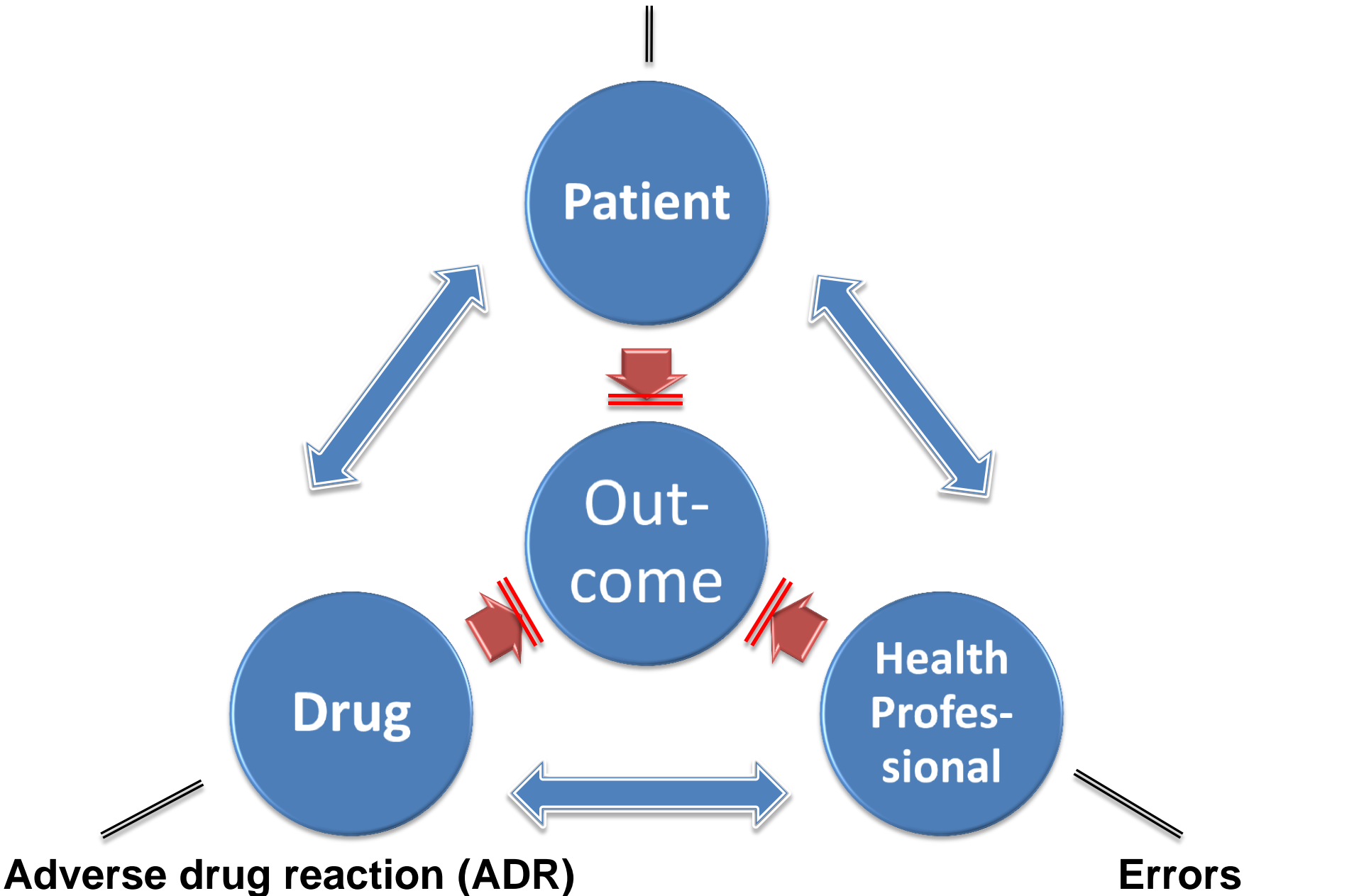
The scenery of Drug Related Problems

16



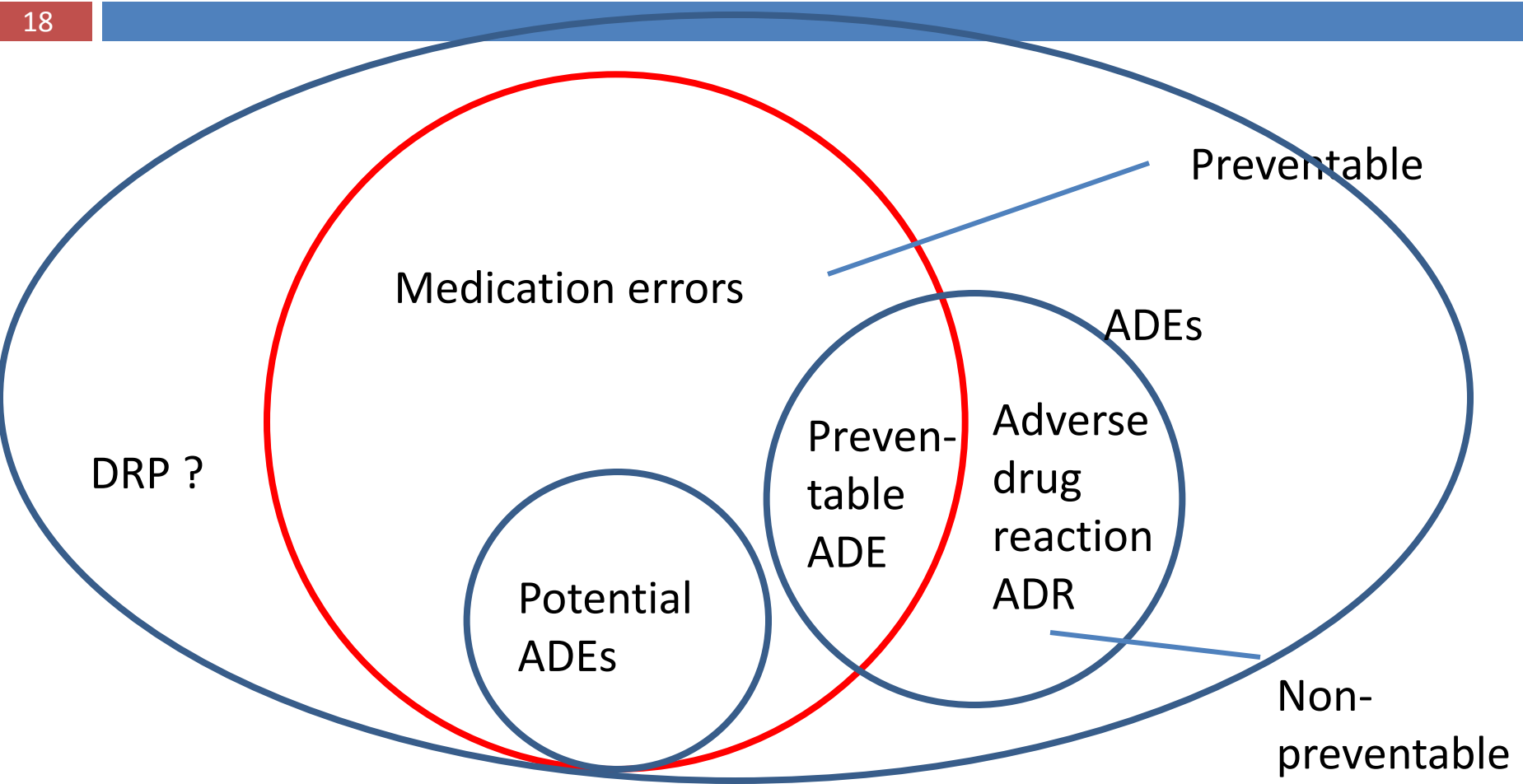
AND THE DRUG ?

Lack of adherence / knowledge



Relationship between ME, ADE, ADR and DRP ?

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Drug Related Problems

Medical Error

*„Errors or mistakes
Committed by health
professionals which
result in harm
to the patient.“*

Drug Therapy Problem

Medication Error

*Errors in prescribing, dispensing, or administering
medication with the result that the patient fails to
receive the correct drug or the indicated
proper drug dosage.“*

ADR

Adverse Drug Event (ADE)

Drug-Related Problem

*event or a circumstance involving drug therapy that
actually or potentially interferes with desired health
outcomes*

Preventable drug
related morbidity
(PDRM)

Points of discussions

20

- ❑ Are DRP always caused by errors?
- ❑ Do all problems have a cause that is related to the prescribing-dispensing process or the patient behaviour? Or
Are non-preventable side effects or ADR DRPs?
- ❑ Are ADE and / or potential ADE DRPs?
- ❑ Do all errors cause drug-related problems? (Or: Are trivial medication errors DRPs?)
- ❑ Is unintended non-compliance a DRP and a ME?

Results of the working group

21

- Definition DRP
- Decision for definition ADE
- Definition ME
- Relationship between ME, ADR, ADE, DRP

Drug Related Problem

22

- A drug related problem is an individual patient-related issue (event or circumstance) involving drug therapy that actually or potentially interferes with desired health outcomes (PCNE 1999)

DRP and ADE

23

- ❑ **DRP:** A drug related problem is an individual patient-related issue (event or circumstance) involving drug therapy that actually or potentially interferes with desired health outcomes.
- ❑ **ADE:** An injury occurring during the patient's drug therapy and resulting either from appropriate care, or from unsuitable or suboptimal care. ADE include: the ADR during normal use of the medicine, and any harm secondary to a medication error, both errors of omission or commission.

Summary definitions ME

24

- ❑ Any preventable event that may cause or lead to inappropriate medication use or patient harm while medication is in the control of a health care professional, patient, or consumer.
- ❑ A medication error is any error in the process of prescribing, dispensing, or administering a drug, whether there are any adverse consequences or not.
- ❑ A medication error is a failure in treatment process that leads to or has the potential to lead to harm to the patient.
- ❑ **A medication error is any error occurring in the medication use process (e.g. prescribing, dispensing, administering or monitoring). (assumptions patient included in administering/monitoring and therapy choices included, process of diagnosis not included)**

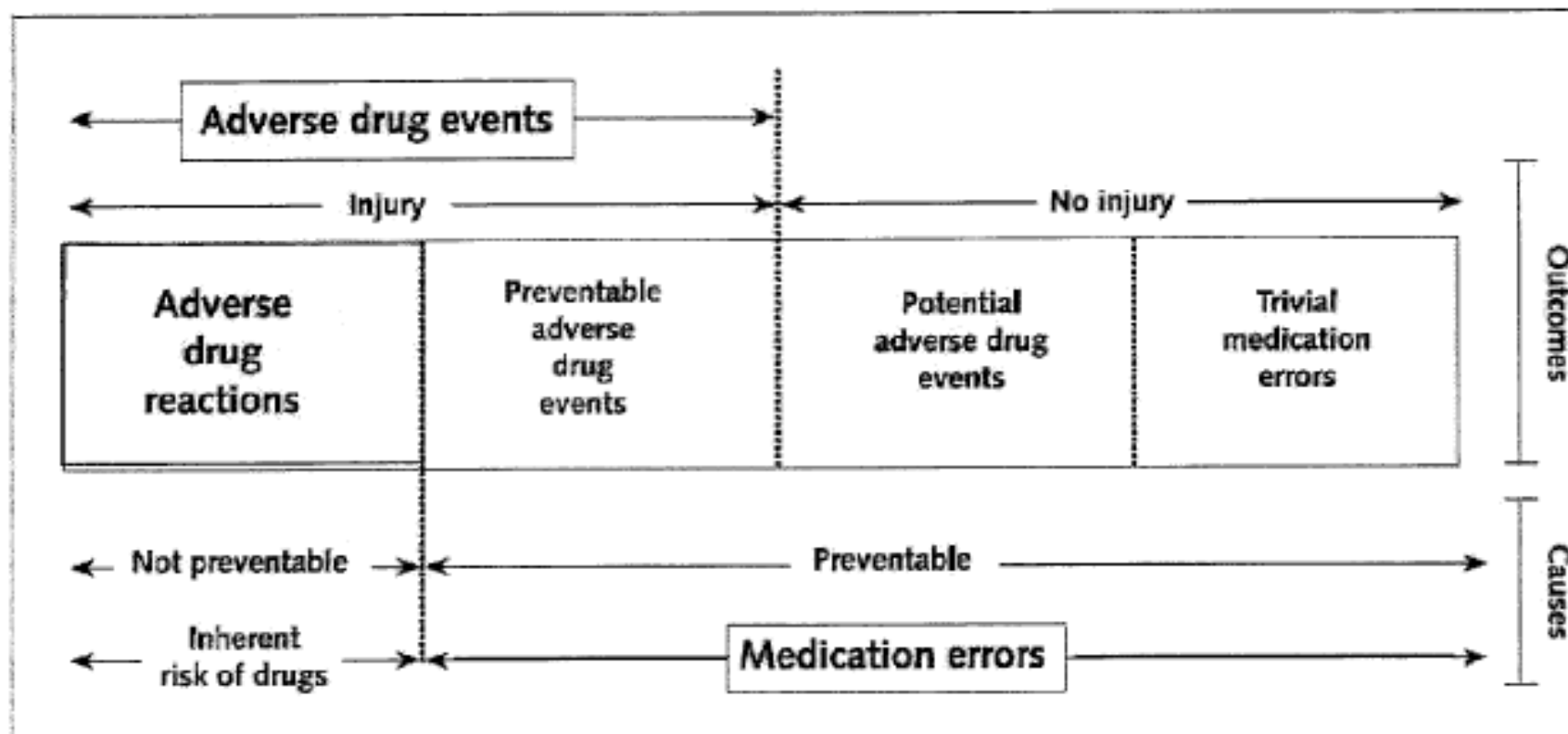
PCNE-definition ME

25

- **A medication error is any error occurring in the medication use process (e.g. prescribing, dispensing, administering or monitoring) (assumptions patient included in administering/monitoring and therapy choices included, process of diagnosis not included).**

Relationship between ME, ADE, ADR

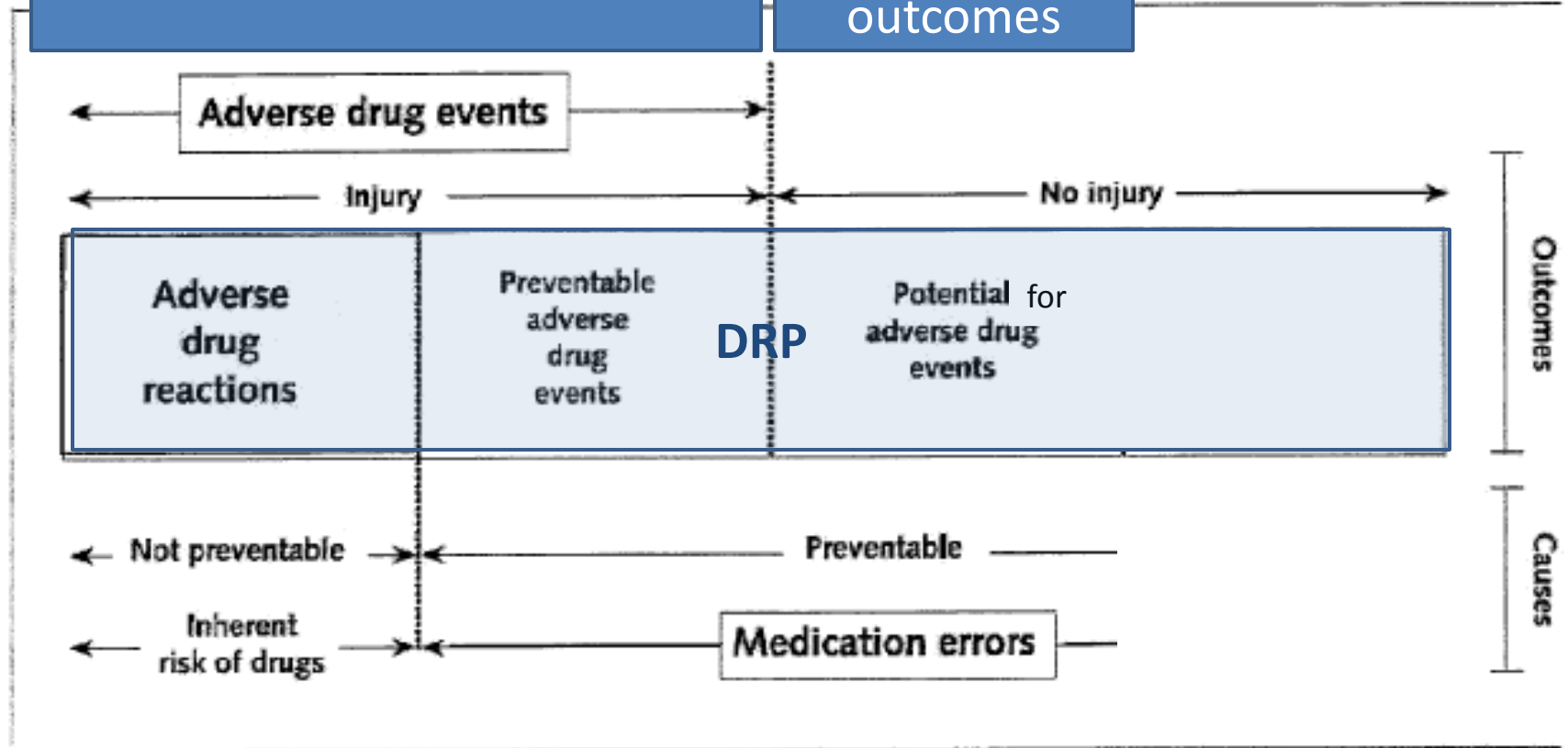
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DRP actually interferes with
desired health outcomes

DRP:
potentially
interferes with
desired health
outcomes



Response	Percentage
Yes	75%
No	25%



Further discussion

29

- Definition of ADR
- Are all ADR non-preventable?
- Do all errors cause drug-related problems? (Or: Are trivial medication errors DRPs?)
- Is unintended non-compliance a DRP and a ME?
- What are ADE not caused by ME or ADR?

Proof of definition

30

- Check the definitions and terminology by means of the PCNE DRP classification system e.g.:
 - ▣ Side effect suffered (allergic) or (non-allergic)
 - ▣ Inappropriate drug
 - ▣ Drug dose too low
 - ▣ Drug not taken
 - ▣ Potential interaction