

## HOW TO PERFORM A MEDICATION REVIEW

### PCNE WORKING SYMPOSIUM ON MEDICATION REVIEW 2012 WORKSHOP 3

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## Aim of the workshop

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- Develop a standard (flowchart) for the process of medication review that is internationally applicable
- Aspects that could be discussed:
  - ▣ What are international differences?
  - ▣ Do we need instruments for the detection of DRP?
    - Can we develop a list of DRP that has to be checked depending on the MR type (hierarchy)?
  - ▣ What is the role of dispensing (prescribing) software?

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## PCNE Working Definition

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- Medication review is an evaluation of patient's medicines with the aim of identifying the risks and optimizing the outcome of medicine therapy by detecting drug-related problems and suggesting solutions. Medication review should be part of medication therapy management. (Manchester 2011)

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## Perspective of the medication review

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- Retrospective – what has been prescribed and can (or could we have) done better?
  - ▣ Often used in research
  - ▣ Use of indicators feasible

Additional perspective:

- Ad hoc – There is a problem now, how can we avoid that problem from now on?
- Prospective – Does the new proposed medicine fit in with the existing therapy?
  - ▣ When adding or stopping medication to an existing regimen
  - ▣ Often computerised

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## PCNE Guidelines for Retrospective Medication Review in Pharmacy

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- This approach to retrospective medication review assumes that (all) dispensing information for (all) medicines that a patient takes (receives)/has taken (received) in the recent past is available to the pharmacist.

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## PCNE types of medication review (MR)

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### Simple MR

- A simple medication review is based on the available medication history in the pharmacy.

### Inter-mediate MR

- An intermediate medication review can be performed when the patient can be approached for information. Such a review is based on medication history and patient information.

### Advanced MR

- An advanced medication review is based on medication history, patient information and clinical information.

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## What problems can be detected?

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### Simple MR

- drug interactions, some side-effects, unusual dosages and some adherence issues ?

### Inter-mediate MR

- drug interactions, some side-effects, unusual dosages, adherence issues, drug-food interactions, effectiveness issues, side effects, and problems with OTC ?

### Advanced MR

- drug interactions, some side-effects, unusual dosages adherence issues, drug-food interactions, effectiveness issues, side effects, problems with OTC, indication without a drug and drugs without indication, dosage issues ?

## Questions to discuss

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- How to perform the different types of medication review?
  - How should a flowchart for a simple, intermediate and advanced medication review looks like? What different steps and data are necessary?
- What are the problems that can be detected / should be analyzed at each level? Can we suggest a hierarchy?

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MEDICATION REVIEW  
DEVELOP A STANDARD FOR  
A SIMPLE, INTERMEDIATE  
AND ADVANCED  
MEDICATION REVIEW.

## Question

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- How to perform the different types of medication review ?
  - What different steps and data are necessary?
  - Result Working Symposium 2009 - Geneva, Switzerland Workshop 3

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## Phase 1 – data collection

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- Identification of data sources such as pharmacy, GP and/or hospital databases, or patients medication charts in institutional settings
- Face-to-face interview with the patient in the health care institute or at home

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## Phase 2 - evaluation

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- Charting actual medication use
- Evaluating medication using your own existing specialist knowledge
- OR/AND evaluating medication using defined tools (MAI, Beers)
- Formulate a Medication Action Plan

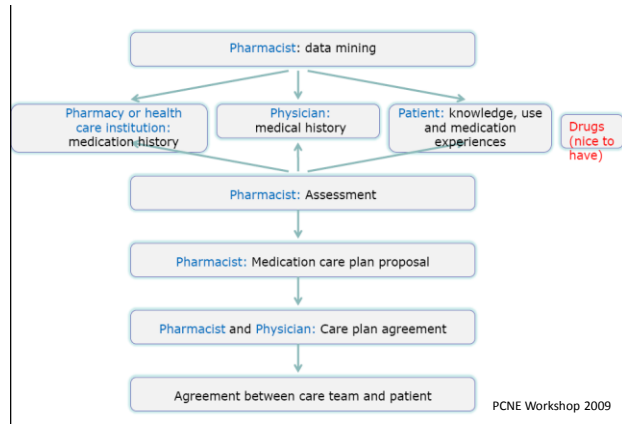
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### Phase 3 - conclusions

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- Discuss evaluation and action plan with prescriber patient (if necessary)
- Documenting findings and recommendations
- Discuss results with patient
- Planning evaluation of impact of recommendations and interventions

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### Question

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- How to perform the different types of medication review?
  - ▣ Develop a flowchart for a simple, intermediate and advanced medication review.

PCNE - MR

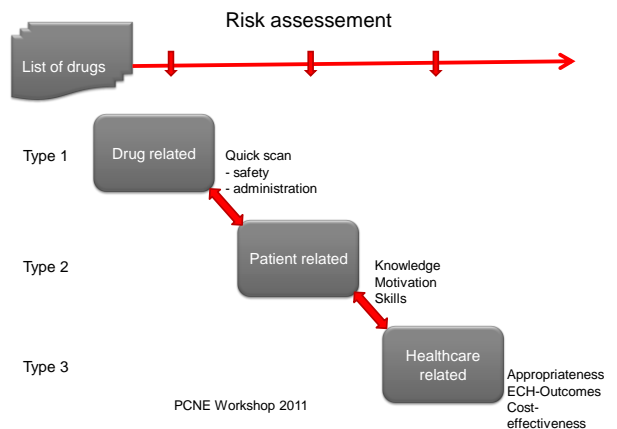
Instruments/software for the detection of DRP  
List of drug related problems in a hierarchy, that should be looked at in each type of medication review

### Question

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- What is the purpose of each type of medication review?
- What are the problems that can be detected? Can we suggest a hierarchy?
  - ▣ Result Working Symposium 2011 – Dublin, Ireland

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## Types of medication review

	Medication history in the pharmacy	Patient	Medical history (e.g. diagnosis, lab data)	Issues addressed
Simple MR	Yes	No	No	Drug-related issues
Intermediate MR	Yes	Yes	No	Plus patient-related issues
Advanced MR	Yes	Yes	Yes	Plus healthcare related issues

## What problems can be detected?

### Simple MR

- drug interactions, some side-effects, unusual dosages and some adherence issues ?

### Intermediate MR

- drug interactions, some side-effects, unusual dosages, adherence issues, drug-food interactions, effectiveness issues, side effects, and problems with OTC ?

### Advanced MR

- drug interactions, some side-effects, unusual dosages adherence issues, drug-food interactions, effectiveness issues, side effects, problems with OTC, indication without a drug and drugs without indication, dosage issues ?

## Question

- What are the problems that can be detected? Can we suggest a hierarchy?
  - Develop a list of DRP that has to be checked depending on the type of MR
    - Simple medication review
    - Intermediate medication review
    - Advanced medication review

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## MAI – Medication appropriateness index (1)

- Indication
- Effectiveness
- Dosage
- Direction
- Drug-drug interactions
- Drug-disease interactions
- Direction practicality
- Duplication
- Duration
- Medical expense

Samsa GP, et al. J Clin Epidemiol. 1994;47:891-896. PCNE - MR 28.05.2012

## Drug-related problems – Cipolle-Strand

- Categories and common causes
  - Unnecessary drug
  - Needs additional drug therapy
  - Ineffective drug
  - Dosage too low
  - Adverse drug reaction
  - Dosage too high
  - Noncompliance
  - Drug interactions

Strand LM, et al., Drug-related problems: their structure and function. *DI/CP*. 1990;24:1093-1097.

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## Software

- What is the role of dispensing software for the detection of DRP like DDI?
  - What do you expect of this software?
  - Do we need quality standards for the software?