Indicators for preventable drug-related morbidity: Applying in practice

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Implications

Drug-related problems a frequent cause of hospital admissions

• Improve QoL of patients

• Improve quality and safety of health-care system

• Impact positively on health-care resources
PDRM Definition

A foreseeable adverse outcome, preceded by a recognizable drug-related problem, with a probable cause related to medicine use which is both reasonably identifiable and reasonably controllable.

(Hepler & Strand 1990)
Indicator examples

**Outcome:**
Acute urinary retention

**Process of care:**
Use of an anticholinergic agent in a patient with a current \( \triangle \) or PMH of BPH

**Outcome:**
Dyspepsia / upper GI bleed / GI perforation / GI ulcer / anaemia

**Process of care:**
Use of 2 or more NSAIDs concurrently for at least 2 weeks
Indicator examples

Outcome:
A minor or major haemorrhagic event

Process of care:
Concurrent use of warfarin and an antibiotic without monitoring the INR within five days

Outcome:
A second MI

Process of care:
In the absence of any contraindication, failing to prescribe aspirin in a patient with a history of MI
Review of events

Defined by 29 indicators of PDRM
(Morris et al. Int J Qual Health Care 2002

- EPR of patients > 18 years
- 9 GP practices
- MIQUEST software
- Between 01.11.99 & 31.01.02
Results

9 GP practices / ~ 50,000 EPRs

- 507 PDRM events identified
- Incidence of PDRM = 1.0%
- 4 indicators represented ~ 60% of the events
- Less than 10 events were identified for 15 indicators
Most frequently occurring events (1)

**Outcome:** GP practice or hospital contact due to CHF or fluid overload.

**Process of care:** Use of an oral / topical NSAID for 3 months or more in a patient with hypertension and / or CHF.

**Outcome:** Raised serum creatinine (> 150 micromol/l)

**Process of care:** Use of an ACEI without monitoring the creatinine level before starting therapy, within 6 weeks of commencement & at least annually thereafter.
Most frequently occurring events (2)

**Outcome:** Hyperkalaemia (> 5.5 mmol/l)
**Process of care:** Use of an ACEI without monitoring the potassium level before starting therapy, within 6 weeks of commencement & at least annually thereafter.

**Outcome:** Fall or broken bone
**Process of care:** Use of a long half-life hypnotic-anxiolytic.
Discussion

- Substantial number of PDRM events occurring in primary care
- Follow-up of individual patients
- Formalised feedback
  - multidisciplinary discussion forum
  - “systems” approach
  - principles of root cause analysis