


EVISA

Patient safety between primary care and hospitals

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Root cause analysis of Adverse Events(AE)


An innovative approach to
evaluate the performance of the
health system

Professional practices, healthcare
organisation and management




Objectives

- To find out about adverse events related to non hospital based healthcare
 - Frequency, severity, preventability
- To understand the circumstances in which such events occur, the difficulties which are met by the primary care practitioners and the other contributing factors
 - Through the root cause analysis (RCA)
- Evaluate the cost of hospital care resulting from these AE's










Survey design

- Longitudinal prospective incidence survey of a population of patients who were admitted between 19/05/08 and 11/07/08
- Sample: all admitted medicine and surgery patients
- Root cause analysis of the events with the primary care practitioners




Hospital phase

Random sample of hospitals
7/8 participants


- CHU Bordeaux 
- CH Périgueux 
- CH. D'Arcachon 
- Centre Wallerstein 
- Cl. Mutualiste Médoc 
- Cl. Bordeaux Nord 
- Cl. Sainte Anne 


Random sample of care units
22/25 participants

Admitted in medicine



Admitted in surgery





Epidemiological results

Results similar to those of the ENEIS 2004 survey

2946 patients included (100% exhaustiveness)

1798 in medicine (Eneis : 1 968) 1178 in surgery (Eneis : 2 871)

2,0 to 3,6% of medicine admissions were caused by preventable adverse events

54% were linked with death, vital threat or disability at discharge

67% of AE's are therapy related and 29% are linked with prevention or monitoring

Hospital cost of avoidable AE's

- Average cost per avoidable AE:
 - between €2,000 and €3,500
- Maximum cost of AE: €100,000

% of unit's budget dedicated to AE management (in 16 out of the 22 units) → between 0,5 and 4% in five units → between 8 and 9,5% in three units

Calculation method of cost was number of hospital days attributed to AE * cost of hospital stay

Primary care phase

Root cause analysis (RCA) for 47 of the 59 eligible AE's with the primary care practitioners

Supported by six trained physicians and one pharmacist

Massive ischaemic stroke in an 80 year old female patient receiving AVK treatment (INR 1.1)

Results of the root cause analysis

Massive ischaemic stroke in an obese insufficiently anti-coagulated female patient

- HBP, obesity, hyperlipidaemia, illiteracy
- 2004:** diagnosis of atrial fibrillation and prescription of Previscan® by a cardiologist.
- June 2007:** monitoring of general condition and evaluation of cognitive functions alteration in geriatrics (MMS of 10/30). Death of husband.
- March 2008:** INR of 1.31. Increased Previscan® dosage; no three-day-after monitoring was done.
 - Interruption of Lipantil® treatment which was prescribed for chronic pruritus; replacement of Odrik® by Triapin® due to poorly controlled blood pressure

Massive ischaemic stroke in an obese insufficiently anti-coagulated female patient

- April 2008:** the GP asks the patient's son (acromegalic, MDP) to lower his mother's Previscan® dosage further to the dermatologist's request for a skin biopsy planned on May the 6th, in order to establish the final diagnosis for her chronic pruritus.
- 15th of May 2008:** the GP asks the son to increase the dosage again. The prescribed INR monitoring is not done. The GP did not follow-up.
- 4th of June 2008:** hospitalisation following a massive ischaemic stroke. INR of 1.1 at the time of admission. Right hemiplegia, with no improvement 12 months later.

Cause Analysis

General background

Work environment
Absence of patient's medical records during home visits, lack of automatic alerts

Task related factors
Lack of available information


Causal factors

Team related factors
Not enough home care nurses


Individual factors
Oral instructions, poor relationship with patient

Patient (and her son) related factors
Complex situation, difficulties to understand instructions


Immediate cause
Oral Prescription
Lack of monitoring

 CCECQA


Lessons to be learned for the management of primary care patient safety

 CCECQA **Risk management in primary care should not be modelled on that of hospitals**


- Patient compliance is rarely controlled.
- Patients with all types of symptoms, some questionable diagnostics and multiple co-morbidities
- Influences on the patients' and their relatives' preferences, influence of Internet
- Treatment episodes stretching over a long period of time

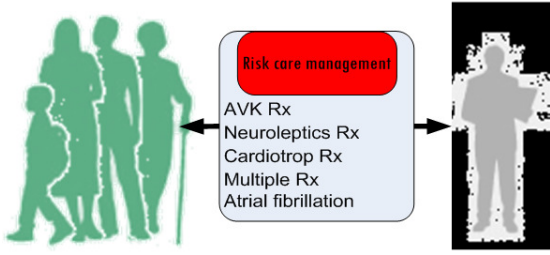
 CCECQA **Risk management in primary care should not be modelled on that of hospitals**

- Frequent isolation of general practitioners
- little collaboration with specialists
- absence of healthcare professionals at the patients' home at key moments (administration of medicines)
- Dramatically insufficient IT support, especially for vigilance reinforcing tools (appointment reminders, biological test or prescription follow-up, guidelines and drug interactions)

 CCECQA **Patients and their relatives/next of kin: major actors of prevention**


In 11 out of 47 cases (23%), their behaviour is exclusively and directly linked to the occurrence of AE's

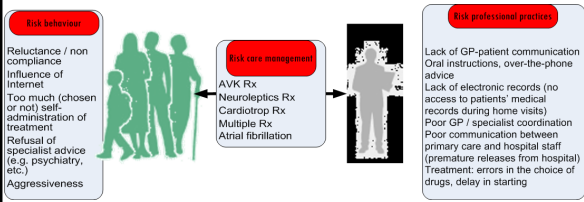
 CCECQA **Treatments with known risks**



Risk care management

- AVK Rx
- Neuroleptics Rx
- Cardiotrop Rx
- Multiple Rx
- Atrial fibrillation

 CCECQA **Risk behaviours (immediate causes)**



Risk behaviour

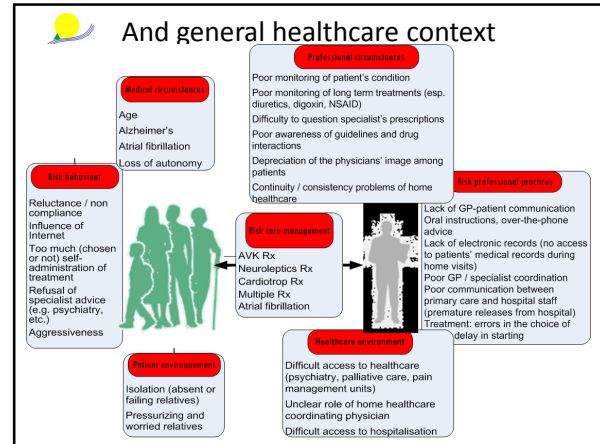
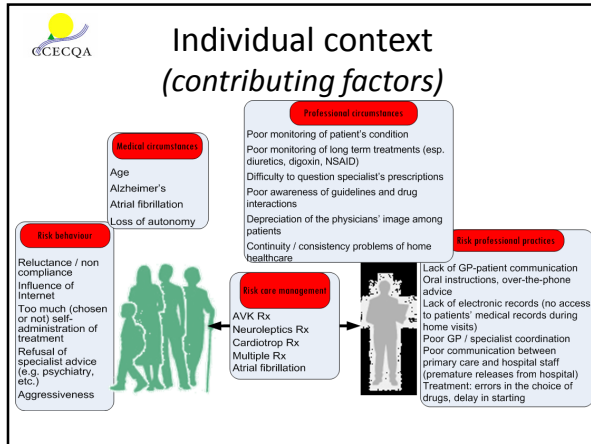
- Reluctance / non compliance
- Influence of internet
- Too much (chosen or not) self-administration of treatment
- Refusal of specialist advice (e.g. psychiatry, etc.)
- Aggressiveness

Risk care management

- AVK Rx
- Neuroleptics Rx
- Cardiotrop Rx
- Multiple Rx
- Atrial fibrillation

Risk professional practices

- Lack of GP-patient communication
- Oral instructions, over-the-phone advice
- Lack of electronic records (no access to patients' medical records during home visits)
- Poor GP / specialist coordination
- Poor communication between primary care and hospital staff (premature releases from hospital)
- Treatment errors in the choice of drugs, delay in starting



A unique vision of healthcare system performance especially patient management

An opportunity to use these results as a base for prevention programs which would associate hospitals and primary care physicians in the implementation process in a new French reform

Each of the cases was subjected to root cause analysis restituted in full in the following document: *EVISA : synthèse des analyses approfondies et leçons pour la gestion des risques liés aux soins extra-hospitaliers*. Mai 2009. www.ccecqa.asso.fr