Guidelines Observance by General Practitioners: A quantitative Study using the "Small Samples Approach" for In-depth, Case-based Analysis of Prescription Behaviour for Respiratory-Tract Infections in French-speaking Belgium

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Background: do Belgian GP overprescribe antibiotics?

Actions of the authorities and Aims of the Study

Since 2000, annual public campaigns, with a positive impact on antibiotic sales decrease*

"Use antibiotics less frequently but better"

"Save antibiotics, they may save your life"

Actions of the authorities and Aims of the Study

- All Belgian GPs have been presented with guidelines for antibiotic use in respiratory tract infections using Evidence-Based Medicine data …
  (supported by the "Antibiotic Policy Coordination Committee", an official body with participation of the main Belgian experts in Infectious Diseases)

- Every Belgian GP receives at regular interval her/his individual "feedback" comparing her/his personal prescribing habits to an "average GP" in her/his local environment

➔ Are those guidelines and feed-backs conductive to a (more) rational prescription behaviour?
Method: Lot Quality Assurance Sampling [LQAS]

• Originally developed in Industry to assess the quality of a production in comparison with a pre-defined standard while limiting the size of the sample
  – a set of samples of limited size is taken at random and subjected to in-depth examination for pertinent criteria
  – if a predefined percentage of the samples fulfil the criteria, the whole lot is considered as acceptable

• Used in Public Health * to define extremes in behaviour and/or to assess the success of a given action (vaccination, e.g.)
  -- definition of a level of performance
    (e.g. > 75 % of vaccinated children in a region or a county …)
  -- known level of precision

• In our case, the analysis will examine the obedience of the GP to guidelines in her/his contact with actual patients
  – if 3/5 or more of the scripts are made according to guidelines, the GP will be considered with 90 % probability as following these guidelines for 75 % of his practice

LQAS: Application to this study

- Selection of GPs (30) at random in French-speaking Belgium for data collection from medical records and direct interview on 5 patients who were prescribed antibiotics for a respiratory tract infection.

- For each patient contact (total: 150), obtain pertinent data from the prescribing GP about:
  - medical history,
  - reasons for encounter,
  - symptoms and clinical examination,
  - patient’s demand,
  - imaging or laboratory tests,
  - diagnostic,
  - prescribed antibiotic and obedience to guidelines (as seen by the GP)
  - main reasons to have prescribed an antibiotic for this patient.

- Analysis of the data (after anonymisation) in a simple-blinded fashion by two independent researchers (both GPs) for assessment of guideline observance (antibiotic need and choice) against the Belgian published guidelines.
Results (1/5)

- Success in enrolment: 79% (30 agreeing / 38 approached) with good distribution throughout the French-speaking part of the country.

- Availability of records: 70%

- Time before consultation: 1-3 days
Results (2/5)

- Diagnostics made by the GP

- Certainty of the diagnostic (as assessed by the GP)
Results (3/5)

• Observance of the guidelines as assessed by the GP's (with CI 95%) for all contacts
  – YES: 41 % (33 - 49)
  – NO: 26 % (18-34)
  – guidelines not known: 32 % (24-40).

• Observance of the guidelines (need or choice) as assessed by the independent researchers for all contacts
  – NO : 59 % (51 - 67).

In these contacts, patients’ demand was the most frequent reason to prescribe.
Results (4/5)

Number of GP's following the guidelines for 3 out 5 patients of more (75% of the practice, precision level 90 %)

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<tr>
<td>total</td>
<td>19</td>
<td>11</td>
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Agreement between GP's and independent researchers: 18/30
Results (5/5)

• The most important discrepancies between guidelines and actual practice were:
  – Amoxicilline prescribed for sore throat (n = 31)
  – Amoxi-Clav prescribed for acute exacerbation of COPD (n=9), acute sinusitis (n=5) of sore throat (n=6)
  – Antibiotic prescribed for common cold (n=24)
Discussion

• Official guidelines and recommendations have only a very limited impact on actual prescribing behaviour (even if starting point not known)

• Self assessment of guidelines observance is not reliable

• There is always a high impact of patients’ demand

• Based on the present data and on previous research*, efforts to curb the overprescribing of antibiotics in respiratory tract infections in community patients must aim at
  – decreasing patients’ demands
  – using methods and messages that do not make the GPs guilty
  – making guidelines more convincing concerning their true value and independent from financial considerations

* this study is only one part of a more comprehensive programme; see previous data (qualitative analysis) presented at the 2007 RICAI (http://www.facm.ucl.ac.be/posters.htm)
Coherence with our former quantitative study*

- High impact of patients’ demand, context of liberal system in the patient – doctor relationship (« client »)
- Guidelines not trusted, suspected to be only economically oriented and potentially used as control tools
- Complementary test not often used (17 %)

- Non coherence: uncertainty in diagnostic
  (very high here – very low when asked in focus groups)

* présentation orale à la 27ème Réunion Interdisciplinaire de Chimiothérapie Anti-infectieuse (RICAI), Paris, 7 décembre 2007
Perspectives

- Current: questionnaire study to confirm the prescription determinants identified in the qualitative study
- Future: …
Acknowledgments and Transparency Declaration

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- the independent researchers have received indemnifications corresponding to the work made for the study
- the GP's participating to the study have received an indemnification corresponding to the time spent with the interviewer
- P.M. Tulkens and the Academic Centre of General Practice coordinate the study without payment