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ORIGINAL ARTICLE

"I'm Dr Jekyll *and* Mr Hyde": Are GPs' antibiotic prescribing patterns contextually dependent? A qualitative focus group study

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Abstra

Objectiv ibiotic prescribi s groups represer open-ended questi lentify mea ghout the analysis ubjects. Two grou , men and women me measure of models. Results. etween GP and pati process by

Several factors influence the meeting and contribute to enhancing the conditions for rational prescribing. These conditions are connected to the GP, the relationship, and the setting; organization as well as professional culture. The findings indicate synergies between the factors, and that one factor can sometimes compensate for lack of another. Continuity and mutual trust can make a brief consultation successful, but lack of continuity can eliminate the effects of knowledge and professional skills. Conclusions. The findings emphasize the importance of the encounter between the GP and the patient for prudent antibiotic prescribing. Furthermore, the importance of an appropriate organization of primary care, which promotes continuity and encourages professional autonomy, is demonstrated.

Key Words::

Antibiotic prescribing | consultation | doctor–patient relationship | general practice | primary health care | respiratory tract infections | Sweden

In spite of numerous efforts to reduce unnecessary antibiotic prescribing, the proble

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Introd

Respirat encounters in prima e bacterial infectior s over-use

has increased antibiotic resistance, and there is evidence that resistance develops not only on the aggregated level but also in the individual [2].

The reasons for prescribing antibiotics contrary to current guidelines have been discussed and studied extensively [3–6]. In a Canadian historical cohort it was shown that inappropriate antibiotic prescribing increased with time in practice and was also more frequent among foreign medical graduates and among primary care physicians with a high practice volume [3].

A well-known problem is the constant prescribing pattern on an individual basis. Cars and Håkansson concluded that “Doctors have an individual and very constant pattern of prescribing antibiotics, and it seems that the diagnoses are often given to justify the treatment, rather than the other way around” [4]. Some other studies concluded that a high frequency of prescriptions of antibiotics may reflect a general disposition among GPs to give priority to maintaining good relations with the patients [5,6]. They suggest that low antibiotic prescribing and high patient satisfaction could be combined if sufficient time were spent on listening to patients. Patient satisfaction was not related to the prescription of antibiotics, but to a better understanding of their illness.

Numerous efforts have been made to reduce unnecessary and potentially harmful antibiotic prescribing. These include education for providers, near-patient tests, and the introduction of financial incentives, as well as information to patients and public [7–10]. Case-ba proving prescribi responded with alte ted combine ish follow-up study af was seen, and the

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Material and methods

The APO method

This paper reports on one component of the EU project HAPPY AUDIT [13].The Audit Project Odense (APO) method was tested to change antibiotic prescribing habits in six countries, chosen for their differing prevalence of antibiotic resistance. The audit was performed twice, with a year's interval during which an intervention took place. Considerable changes in prescribing habits were registered [13,14]. However, in Sweden, substantial differences between practices remained after the intervention. This suggests that the application of guidelines varies due to factors other than medical.

Study design

Focus groups were used to explore GPs' perceptions of antibiotic prescribing for RTIs in primary care. Focus groups are effective for exploring the meaning of conceptions and definitions of important phenomena in health care [15,16].

The interactive discussions of focus groups generate valuable details of complex experiences and reasons behind actions, beliefs, perceptions, and attitudes [17,18]. Focus-group interaction facilitates in-depth discussions through a sequence of open-ended questions that encourage participation within the group. Group dynamics create a synerg s of individua es. A central element etween particip

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questions [20]. Topics for the focus group discussions were (i) Experiences of antibiotic prescribing for RTIs and personal behaviour, (ii) Experiences of deviating from national and local guidelines, (iii) The impact of educational interventions such as the Happy Audit project.

Table I. Distribution of participating GPs.

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A moderator introduced each focus, and made sure that participants did not deviate from the research question and that everyone was able to take part in the discussion. An assistant took notes, which were added to the data from the audiotaped discussion that was transcribed verbatim. To validate the focus-group data, ELS and AB did three individual telephone interviews with Happy Audit participants from a third Swedish region.

Data analysis

An editing analysis style according to Miller and Crabtree [21] was used starting with a naive reading followed by repeated readings of all transcripts that were examined indepen nd on their own and rior to reading egories in an iterat hors explored dels. The continue). ELS and AB met sed until cons ants for feedb hat they containe

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When referring in the results to the participants' statements, these are written in the past tense, while interpretations of statements are in the present tense.

Ethical considerations

According to Swedish legislation, ethical approval was not necessary for this study since it was considered a quality improvement project. All participants were informed that participation was voluntary, that they could withdraw at any time, that all data would be handled confidentially, and that the results would be presented in a non-identifiable way.

Results

We found that the most significant and important factor concerning antibiotic prescribing for RTIs is what happens when the GP meets the patient (Table II). Our main finding concerns two dimensions of this encounter: characteristics of the meeting depending on the interaction with the patient (Figure 1) and influencing factors (Figure 2).

Figure 1. Characteristics of the encounter between the GP and the patient.

Figure 2. Factors influencing the encounter between the GP and the patient.

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Table III. Factors and sub-factors influencing the encounter between the GP and the patient.

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GPs themselves. Our interpretation is that clinical skills and knowledge of guidelines are important factors for making decisions about whether to prescribe antibiotics for RTIs or not. Self-efficacy, i.e. not losing confidence in one's own capability, is important in spite of all possible tests, near-patient tests and others. Such clinical tests are not always used. Professional autonomy was expressed to be of importance for prudent prescribing of antibiotics, as was the GP's professional authority in the clinical situation for trustworthiness with the patient. Prudent prescribing is not always about reducing prescribing rates, but prescribing for the right indications. All GPs have their own strategies for making the consultation a success. Our participants talked about short cuts – being lazy and obedient to guidelines for treating RTIs, and guidelines and rules of thumb could save time and energy. It was considered useful to give the patient a couple of minutes' extra time for reasoning about antibiotics and resistance problems. Safety netting through possible follow-up was mentioned as a strategy in itself, but difficult when meeting the patient in the emergency centre. Information about the risks of exces

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of evidence-based medicine, as a GP always has to take into account the patient in front of him/her. Professional performance is about being able to judge what is best for the patient.

Setting of the encounter. The organization of the work may facilitate or complicate the rational use of antibiotics for RTIs.

A facilitating factor that was mentioned is the overall consensus at the primary health care centre (PHC) about how to treat patients with RTIs. Overall consensus and a common professional culture are achieved through local professional discussions and exchange of experience. Teamwork with primary nurse assessment and return visits for follow-up are also considered facilitating.

The availability of ordinary GPs is a facilitating factor as well. A primary care practice with ordinary GPs promotes continuity of care. Many Swedish physicians today are hired for a shorter period of time without a list of patients of their own and they are, according to our participants, the ones who usually meet the RTI patients, a kind of fragmentation of the workload. According to the participants, they seem to have a tendency to prescribe more antibiotics for RTIs than the ordinary GP.

GPs who reported that they normally follow the guidelines admitted that they prescribe more antibiotics when on call or at the emergency centre. This is due to lack of time and poss f the patient:

Discus

Summa

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Strengths and limitations

This study is part of a multi-method approach to deepen the understanding of circumstances favourable to rational antibiotic prescribing. Focus groups were chosen for data collection. We planned for and conducted two groups and were prepared for a third if the data achieved proved to be insufficient. This method has the advantage of producing ample data in a limited time, and the group process between the participants stimulates the sharing of experiences. The participants were strategically chosen among those who participated in both registrations in the Happy Audit project, indicating that they were actively and practically engaged in rational prescribing and thus could be expected to prescribe antibiotics more prudently. We recruited participants to get as broad a representation as possible from the Happy Audit material, which means that the invited participants represented both urban and rural areas as well as low-prescribing and high-prescribing districts/areas. According to the literature there is no magic number concerning sample size in focus-group interviews. A common recommendation is two to five groups [22]. Sample size is not, according to Crabtree and Miller [21], "the determinant of research significance in a qualitative study; the major concern is with information richness".

The GPs had voluntarily participated in the Happy Audit project including the intervention. It is therefore likely that they have more knowledge and are more reflectiv is, they share nu lieve that these ex

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One result was the importance of the knowledge level of the GP, also corroborated in a previous study [24]. The findings indicate that continuity is favourable for the relationship between GP and patient, but it is obvious from another study [25] that when patients do not get well, continuity is not sufficient.

The participants in this study revealed experiences concerning the consequences of the organization for prescribing of antibiotics. The organization of primary care may be important in at least two ways. It can facilitate a good relationship between the GP and the patient by promoting continuity. A stable relationship based on continuity increases the chances of a smooth encounter. Thus, inappropriate organization may indirectly contribute to increased antibiotic resistance.

Second, stable staff at a PHC is a prerequisite for the formation of a professional culture with a local common policy. This can be labelled continuity on the aggregated level. The findings of this study indicate that a common policy in a primary care centre is a success factor in the task of improving prescribing habits. Corresponding results have been found in previous research as well as in a focus-group study on similar topics among Happy Audit participants in Lithuania and the Kaliningrad region [26,27].

A professional culture with a common policy may not simply be regarded as a result of adherence to guidelines, but also as an autonomous attitude: a genuine desire to do things right and make a difference [28].

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In se y in practice, for insta d there is widespre purpose [29,30].

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Our findings emphasize the importance of the encounter between the GP and the patient for decisions concerning antibiotic prescribing. A stable relationship between the two and the GP's knowledge of guidelines contribute to prudent prescribing. Furthermore, the importance of appropriate organization of primary care, which promotes continuity of care and encourages professional autonomy, is demonstrated.

Authors' contributions

ELS and AB were equally involved in study design, conducted and analysed the focus groups and interviews, wrote the paper, and will serve as guarantors for the integrity of the data. CH and KH did the literature search. MT contributed to editing the paper. All authors have read and approved the final manuscript.

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Capturing the Group Effect in Focus Groups: A Special Concern in Analysis

Source: Qualitative Health Research

Improvements in antimicrobial prescribing for treatment of upper respiratory tract infections through provider education

Source: Journal of General Internal Medicine

Antibiotics Prescription in Primary Care: A 5-Year Follow-up of an Educational Programme

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Awareness of antibiotic resistance and antibiotic prescribing in UTI treatment: A qualitative study among primary care physicians in Sweden

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Antibiotic Use for Emergency Department Patients With Upper Respiratory Infections: Prescribing Practices, Patient Expectations, and Patient Satisfaction
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The effect of financial incentives on the quality of health care provided by primary care physicians
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Effect of antibiotic prescribing in primary care on antimicrobial resistance in individual patients: systematic review and meta-analysis

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