The Elicitation and Management of Multiple Health Concerns in GP Consultations

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1. Abstract

Objective: To describe the nature of patient concerns and to explore if, when and how they are addressed by GPs in the UK.

Methods: Detailed coding and descriptive analysis of 185 video recordings from the EPaC study (Elicitation of Patient Concerns, EPaC)

Results: An average of 2.1 concerns were raised per consultation and the most common concerns were musculoskeletal, administrative (e.g. test results and medication related issues), and skin symptoms. GPs who had been trained as part of the EPaC intervention to solicit for additional concerns in the opening phase of the consultation did so 92.6% of the time. In contrast, those in the control arm did so only 7% of the time. However, the particular formulation of the GP soliciting question does not seem to be associated with the likelihood of the patient volunteering an additional concern.

Conclusions: GP consultations are complex encounters in which multiple concerns are dealt with across a wide range of disease areas. GPs can be trained to solicit for problems/concerns early in the consultation.

Practice Implications: Soliciting for additional concerns is not routinely done. But very brief training can substantially help in eliciting concerns early in the consultation, which may help with organising the consultation.

2. Introduction

In the UK, primary care is usually a patient's first point of call for medical care and treatment. General Practice (GP) consultations are becoming increasingly complex [1] as many patients attend with multiple health-related problems and these can be difficult to manage within a time-limited appointment [2, 3]. If given appropriate opportunity, research suggests that patients with multiple issues will raise an average of 1 to 3 problems/concerns per consultation [4-7]. However, when physicians solicit for patient concerns at the start of the consultation (e.g. "what can I do for you today?"), this typically elicits a single concern [6]. This may be the only clear opportunity for patients to raise their problems/concerns as the rest of the consultation is often characterised by GPs gathering further information about the first problem presented (e.g. questions during history-taking and the physical examination)[1, 8]. This can result in patients raising their problems/concerns near the end of the consultation, which the GP may not then have time to explore[9]; or the patient may not raise their concerns at all [1, 6]. Unvoiced medical concerns/problems have been associated with worsening of symptoms, increased patient anxiety and the need for additional primary care visits which are costly both in terms of patient time and limited medical resources [6, 10].

Early knowledge about the patient's agenda (i.e. all the problems/concerns they want to discuss during their appointment) near the beginning of the consultation can help physicians and patients prioritise the problems/concerns that are to be explored during the consultation. This agenda-setting can result in timely management of patient problems/concerns, facilitate appropriate diagnosis and treatment, prevent late-arising concerns; and thus, lead to increased satisfaction for both patients and GPs [11-14]. However, GPs are not currently trained to elicit patient agendas in this way, and many solicit further concerns near the end of the consultation (e.g."Anything else you want to discuss?" "Any questions?"). While these solicitations may appear to solicit for additional concerns, research by Robinson [15] and later by Robinson and Heritage [16] found that they are

commonly used near the end of the consultation and understood by patients as statements to bring the appointment to a close.

Robinson et al. [16] recently identified that most of our knowledge of concern solicitation comes from a small number of studies, most of which look at agenda setting in specialist areas. This study and Salisbury et al [1] are two of the few studies which explore agenda setting and/or the content Primary Care physician-patient consultations. Whilst findings from Robinson et al's study support the relative rarity of physicians soliciting additional concerns at the beginning of the consultation, the sample was entirely US based[16]. Therefore, the extent to which these practices reflect UK physician's approaches to concern solicitation is unknown. Salisbury et al's [1]UK based study was the first to give a detailed indication of patient-physician consultation content and suggested discussion of multiple concerns was common, with a mean of 4.1. issues and 2.1 problems per consultation. However, no information was included as to where (in the consultation) or how, multiple concerns were solicited, and so to date routine agenda setting practices amongst UK physicians remain unclear. Whilst providing valuable insight, this was only the first study of its kind in the UK and it is possible that variation in relation to solicitation approaches may exist. As such, further research into routine solicitation practices is required to produce a more comprehensive picture.

Although research about communication and training for physicians about how to elicit a patient's agenda near the start of the consultation is limited, there is some evidence that physicians can be successfully trained to change their communicative behaviour to incorporate agenda-setting into their routine medical practice. For example, a study in the United States tested the use of two solicitations to elicit additional patient concerns/problems near the start of the consultation: "Are there ANY other concerns you would like to discuss" versus "Are there SOME other concerns you would like to discuss". The physicians who were randomised into one of the two intervention arms were instructed to elicit for further concerns after the patient had presented their first problem. The

study found that the SOME intervention was more successful at soliciting further problems/concerns and the authors theorised this was due to the linguistic design of SOME, which is commonly associated with positively framed sentences (e.g. I have some questions); versus ANY, which is commonly associated negatively framed sentences (e.g. I don't have any questions)[6].

More recently, the same authors used the same dataset for further detailed analyses using Conversation Analysis (CA) and characterised the two main types of solicitations physicians commonly use to elicit patient agendas as "concern-seeking" questions (Do you have other concerns?) and "question-seeking" questions (Do you have other questions?). They found that patients were more likely to volunteer a new medical concern/ problem after a "concern-seeking" question; explained by the design of the question-seeking question which is understood by patients as 'backward' looking. In other words these kinds of solicitations tend to be understood by patients as referring to questions about topics/concerns/problems described earlier in the consultation. They recommended that physicians employ a similar design near the start of the consultation to elicit the full spectrum of the patient's agenda.[17]

A study led by Leydon et al. [18] conducted a similarly designed trial (called Eliciting Patient Concerns, EPaC) to explore the feasibility of GPs using the same two brief communication interventions (ANY/SOME) within UK-based primary care practices.

GPs were randomised to one of three groups:

a. A negatively-polarised solicitation: "Are there ANY other concerns that you'd like to discuss today?"
b. A positively-polarised solicitation: "Are there SOME other concerns that you'd like to discuss today?"
c. A control condition, where no intervention was administered and usual care provided.

Intervention arm GPs watched a training video which mirrored the training used by Heritage et al. [13] and were asked to deploy the intervention question as soon the patient had given their presenting concern(s) and before the GP explored the concern.

The study collected 320 video-recorded consultations. This trial incorporated patient self-report questionnaires before and after their consultation to explore the problems/concerns the patient planned to discuss with the GP versus what concerns they actually discussed during the consultation. The EPaC study team found that the intervention was feasible, with GPs correctly delivering the communication intervention. Fidelity checks showed that 86% (75/87) of the "Some" group and 88% (70/80) of the "Any" group delivering the intervention as instructed[18]. But the trial did not reveal significant differences in elicitation, satisfaction or consultation time between the use of ANY or SOME in the soliciting question and usual care. [18].

While this research has shown the acceptability and feasibility of the intervention based on

questionnaire data, little is still known about the types of problems presented during UK-based

primary care consultations: what they are, how they were raised, by whom and where in the

consultation. This study uses the corpus of video data collected by the EPaC study and, based on

direct observation and coding of the video-recorded consultations, presents a more comprehensive

description regarding presentation and management of multiple concerns.

Aims and Objectives

The objectives of this study were to:

i.   Detail the number and type of patient concerns voiced within GP-patient consultations as

      observed during video-analysis using a standardised coding framework.

ii.   Describe if, when and how GPs solicit for additional patient concerns within the consultation

      and to explore whether there were any differences between those in the intervention arms

      of the study compared to usual care.

3. Methods

3.1 Study population

320 consultations were recorded between August 2013 and March 2014 by 21 GPs across Southern

England recruited for the EPaC study.   Of these 320 consultations, 186 patients and 15 GPs (5

Control, 5 "ANY", 5 "SOME") consented to their data being used for further research. There were 23

recordings of GPs' consultations at baseline, prior to being randomised to either intervention or

usual care, 53 in the SOME intervention, 37 in the ANY intervention and 72 in the Usual Care arm.

Videos of consultations were only viewed and coded if both the GP and the patient had consented for their consultations to be used for future research.

To be included in the EPaC study, GPs had to be fully qualified and Health Care and Professions Council (HCPC) registered, working in a practice within Dorset, Hampshire, or Wiltshire. Patients had to be over 18 years old, fluent in English and attending for a GP consultation. Practices were selected to include a range of patient list sizes and a mix of urban/rural settings. Depending on the practice appointment system and preference, eligible patients on participating GP lists were recruited either by advanced invitation (written or telephone) or on the day of their appointment. Hampshire-B Research Ethics Committee (REC Ref: 12/SC/0678) granted ethics approval. Further information on the EPaC study can be found in Leydon & Stuart et al [18] and Summers et al [10].

3.2 Video coding framework development

In order to address the research objectives set out above, it was necessary to watch all video-recorded consultations and record key data systematically. For each problem/concern voiced, we recorded whether the problem/concern was attended to by the GP, postponed for addressing at a later date or not attended to. All key terms are defined in the coding manual (Appendix 1) which was developed by the full research team to inform the coding process.

A coding framework was developed, which was initially informed by the research objectives and Salisbury et al's study [1] which used the International Classification of Primary Care (ICPC) to code the types of problems/concerns discussed. In this paper we will be referring to problems/concerns because during the course of data coding it became clear that 'concerns' convey a psychosocial issue on its own, but that people can have medical problems with a psychosocial element (e.g. I'm worried about my bowels). There are other approaches to coding in the literature but for the purposes of this study the consensus was to determine a coding scheme inductively to suit the data and our aims (e.g. see Procter et al. 2014 [19] who distinguish 'problems' and 'issues').

Consultations with multiple concerns proved difficult to code, as problems/concerns were not always attended to fully before another problem/concern was voiced and discussed, so the framework was further developed inductively over several iterations by watching 30 consultations from the dataset. Videos were watched and coded by a single team member to ensure consistency

of approach (EG), apart from 17 videos which were coded by another team member (CJW) due to a conflict of interest. As part of the development process, 2 team members coded 20% of the consultations to verify the framework and the coding (BS, CJW). Discrepancies were discussed and resolved by the research team. Full details of the coding procedure are set out in Appendix 1.

The latest version of ICPC-2 classification of disease was used (Appendix 2) to classify the type of problems/concerns voiced in the coding framework for this study. For the purposes of coding when key activities of volunteering/soliciting additional problems/concerns occurred, the consultation was divided into 6 phases: opening, history taking, physical examination, diagnosis, treatment recommendations and closing.[1] The activity of 'history taking' by a GP through to the activity of a GP making a 'treatment recommendation' could occur for each individual patient concern, but the activities of opening and closing consultations only occurred once at the initiation and termination of each consultation respectively.

3.3 Analysis

Data were entered into an Excel spreadsheet as videos were viewed and then transferred to SPSS version 22.0 for statistical analysis. Descriptive statistics were used to explore the number and type of concerns discussed in consultations as well as GP response to concerns. Means and standard deviations are presented for continuous variables and proportions for binary and categorical variables and chi-squared tests used to explore any statistically significant differences between categories.

4. Results

There were 186 video consultations with consent to analyse them as part of this study, but one consultation could not be viewed due to equipment failure. The characteristics of the patient sample are summarised in Table 1. Patient characteristics from the main EPaC study are comparable

to those of the patient subsample who participated in this further research. In this study sample, most patients were female (60%), white (71%), and consulted for a new problem (51%).

4.1 Incidence and type of problems/concerns

Within the 185 video-consultations, 382 problems/concerns were voiced. This equates to an average of 2.1 problems/concerns per consultation (SD 1.2, range 1-6), compared to an average of 1.83 (SD 0.94) problems/concerns per consultation reported by patients in post-consultation questionnaires in the main EPaC study[18]. In 116/185 (62.7%) of the consultations more than 1 problem/concern was voiced, and in 45/185 (24.3%) of these consultations, 3 or more problems/concerns were voiced (Table 2).

The most common types of problems/concerns were musculoskeletal 77 (20.2%), administrative (e.g. test results and medication related issues) 66 (17.3%) and skin 55 (14.4%). These categories accounted for over half 198/382 (51.9%) of all problems/concerns voiced. The least common types of problem/concern were male genital, blood/immune related and pregnancy/childbearing/family planning, with each of these categories accounting for 4/382 (1.1%) (see Table 3).

There were 11 psychological problems/concerns raised. These included 5 patients who specifically mentioned depression and 3 who mentioned anxiety. The other patients spoke more generally about "stress" or "pressure". All of these concerns were attended to by the GPs, regardless of when during the consultation they were raised.

4.2 Positioning of questions

In pre-intervention baseline recordings, only 2/19 (10.5%) consultations included GPs soliciting for additional concerns during the opening. Similarly, only 5/78 (6.4%) of the control consultations included asolicition for additional concerns during the opening (see Figure 1). This suggests in routine practice GPs do not ask patients for additional concerns/questions early in the consultation. Of the 95 consultations where GPs solicited for additional problems/concerns in the opening phase,

88 (92.6%) were by GPs randomised to one of the two intervention groups (i.e. they asked early on if patients had other things they wished to discuss).

In the 185 video recordings, patients volunteered a total of 197 additional problems/concerns without being asked by the GP. These tended to be raised during the opening of the consultation (40%) or during the later phase of the consultation (46%), when treatments or further investigations were being discussed (see Figure 2). In this, there was a clear split between the intervention groups and the usual care group. Patients who saw a GP in the intervention groups tended to voice their additional problems/concerns during the opening phase. Of the 72 problems/concerns volunteered in the opening phase, 61 (72.2%) were in the intervention group. In contrast, those in the usual care group were much more likely to raise their problems/concerns in the later phases of the consultation. Of the 90 problems/concerns raised during the treatment recommendations phase, 65 (72%) were from the usual care groups i.e. pre-intervention and control groups. This again suggests that the intervention shifted the voicing of additional problems/concerns to the beginning of the consultation which may be very helpful for GPs in planning the consultation.

4.3 Question type

Following the initial problem presentation, GPs initiated 114 questions about additional problems/concerns. Of these, 76 (67%) were a reiteration of the "ANY" or "SOME" question by an intervention GP. In the baseline and control groups, GPs often did not initiate a solicitation for additional problems. Where they did this was usually by using a general enquiry such as "Anything else?" or "Otherwise are you okay?" (n=15, 13%). Unfortunately numbers were too small to allow meaningful comparison between the different question types outlined in previous work. Indeed, just 5 solicitations (4%) were "question-seeking" - for example "have you got any questions about any of that?" or "Is that okay? Any questions?". From these data it seemed the form in which the enquiry was made by the GP was not associated with the likelihood of the patient volunteering an additional

problem/concern ($\chi2$=3.0615, p= 0.382). But, no conclusions can be drawn from such small numbers and findings need to be read with caution.

4.4 Response to concerns

95.3% of voiced problems/concerns were attended to by GPs during the consultation regardless of how many problems/concerns were voiced (see Table 5). Patients who attended with a large number of problems/concerns were more likely to have these postponed or not attended to. There was no association between the timing of the solicitation for problems/concerns and whether the problem/concern was attended to between the intervention and non-intervention groups.

5.0 Discussion and conclusion

5.1 Discussion

A detailed analysis of video recordings of consultations allowed a unique insight into the content of the consultation and the way in which problems/concerns are raised by patients and GPs in the UK. We found an average of 2.1 problems/concerns voiced per consultation, in line with the average found in some previous studies of 1 to 3 [1, 4, 20] but slightly higher than the average of 1.6 problems/concerns found in the recent study by Jepson et al.[7]. It is possible that such difference can be accounted for by coding differences or due to different data collection periods and issues of seasonality.

In the opening phase of the consultation, 92.6% of GP solicitations for additional problems/concerns were by GPs from intervention groups. In contrast, just 11% of GPs in their pre-intervention recordings and 7% of GPs from the control group solicited for additional problems/concerns during the opening phase. This suggests that the communication intervention changed the way in which

GPs solicited for additional problems/concerns. Additional problems/concerns voiced during the 'opening' phase of the consultation were overwhelmingly from intervention groups compared with concerns voiced during the 'treatment recommendation' phase, which were much more likely to be from non-intervention groups. This suggests that early solicitation for additional problems/concerns by GPs may encourage patients to voice these at an earlier junction in the consultation. Previous research indicates that patients who voice more problems/concerns early on voice significantly fewer later during consultations [12, 14] and that late arising problems/concerns are less common when physicians solicit for additional problem/concerns during consultations [9] This study supports the evidence that early solicitation can help physicians identify the 'full' extent of patient problems/concerns early on, which has been shown to facilitate diagnosis and treatment, as well as allowing prioritisation and effective time management[6].   This is particularly true for psychosocial issues, where research has shown that addressing these problems/concerns with patients early in consultation decreases the number of new problems/concerns expressed in the closing environment [21] and that those presented later on in the consultation are less likely to be attended to or effectively managed due to time constraints.[1, 6, 21] This early identification of problems/concerns is particularly important in the context of sensitive topics such as psychosocial issues which may require more time to manage.

The most common types of problems/concerns voiced in the consultations analysed for this study were musculoskeletal, administrative (e.g. test results and medication related issues) and skin problems. Salisbury et al reported similar results in an earlier study in which the most common problems were musculoskeletal, general/unspecified and skin problems (42.2%)[1]. Jepson et al also found that musculoskeletal problems were the most common but had far more consultations for psychological issues, 12.2% compared to only 2.9% in this study [7]. Bjorland et al reported that just under half of all problems raised were somatic in nature, and that in 25% of consultations a mental health issue was presented[4]. The lower incidence of consultations for psychological issues in this study could be because fewer patients with psychological/psychosocial concerns consented to

participate in the study compared to those with somatic concerns, or because patients were more inclined to voice somatic than psychological/psychosocial concerns during consultations. Previous research suggests that common problems/concerns overlooked by healthcare providers are primarily psychosocial in nature, including problems such as sleep, sexual dysfunction, financial difficulties and care-giving related stress [22-24].

The vast majority (95.3%) of patient problems/concerns were attended to by GPs regardless of how many were voiced. Bjorland et al also reported a majority (96.9%) of problems attended to during consultations[4]. Perhaps unsurprisingly, more problems/concerns were postponed or not attended to in the consultations when patients voiced more problems/concerns. GPs usually operate on a 10 minute appointment window and therefore have limited time to address all the patient's problems/concerns, so if more are voiced, it is likely that GPs may not have time to address them all. Research suggests that primary care patients are increasingly complex to manage due to the many needs of an aging population, an increase in co-morbidity and continuing advances in healthcare. This presents challenges not least not having enough time during consultations to address all of the patient's problems/concerns[22]. Very few patient problems/concerns were unattended to by GPs, rather they were more likely to explicitly suggest postponing than leave them unattended to. Speculatively, it is possible that GPs perceived it as preferable to postpone certain problems/concerns and fully address them in a subsequent consultation rather than manage them partially within the time constraints of the current consultation. Also, postponing rather than simply not attending to a voiced problems/concern may help communicate to patients that a problem/concern has been heard and will be dealt with, hence validating their problem/concern as 'doctorable' or worthy of discussion [25] .

5.1.1 Limitations

Limitations of coding the consultations are recognised, particularly the study's inability to capture the fluid and complex nature of interactions between GPs and patients. One challenge this study

posed was defining a 'problem' or 'concern'. Definitions are inconsistent between studies, which may account for some discrepancies in results between studies, this may in particular account for the lower number of psychological presentations found in this study when compared to previous work. Equally, our sample size was such that it was impossible to produce a meaningful insight into the value of using different kinds of question type 'question seeking' vs. 'concern seeking' question formulations for enhancing the elicitation of patient concerns. More data would be needed to explore the effects of question formulation on problem elicitation. Although a robust two-stage process was developed for coding consultations, with disagreements resolved by discussion, we did not record these disagreements quantitatively. It is therefore not possible for us to quantify levels of inter-rater reliability. There is possible selection bias regarding the video-data included in this study. Consent was gained from patients and GPs in order to record consultations. Those practitioners willing to take part may be particularly passionate or interested in 'effective communication' and likewise patients who participate may be more comfortable voicing their concerns or have concerns they are more comfortable discussing. Consent for secondary analysis of 185 out of 320 original videos was also obtained; similar limitations may have resulted although patient characteristics were comparable between studies.

5.2 Conclusion

This study adds to the body of evidence demonstrating that most GP consultations are complex encounters in which multiple problems/concerns are dealt with across a wide range of disease areas. This study provides an insight into the presentation, content and management of multiple patient problems/concerns, which, alongside further directed qualitative analysis of the video-consultations, will ultimately contribute to the development of strategies to improve effective management of multiple problems/concerns in time-limited GP consultations in the UK.

5.3 Implications for practice

This paper indicates that despite evidence of the potential to elicit patients' additional problems/concerns early on in the consultation to facilitate more effective and efficient agenda-setting, GPs do not routinely do this in their practice. It is also clear that very brief training can substantially help in eliciting problems/concerns early in the consultation.

In methodological terms the paper signals the importance of conducting observational research that allows in-depth coding work to understand the complexities and challenges faced in general practice. Such work has the benefit of providing new understanding of the primary care visit which in turns opens up opportunities for improved evidence based training resources for GPs to facilitate agenda setting in the consultation. This empirically driven approach is an important complement to the self -report data available in the literature about patient and practitioner views.

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Conflict of interests

None.