

# Antibiotics for respiratory tract symptoms in general practice

IN the light of the report from the House of Lords Select Committee on Science and Technology, which warns that resistance to antibiotics is continuing to increase,<sup>1</sup> the discussion by Butler *et al* in this issue of the *Journal* contains timely and important information for all general practitioners (GPs).<sup>2</sup> There is an increasing realization that, for most acute respiratory illnesses — sore throat, otitis media, sinusitis, respiratory tract infection — treatment with antibiotics is likely to be of only marginal benefit to individual patients. For many patients, the benefits may well be outweighed by the side effects from treatment.<sup>2</sup> However, this realization appears to have had little impact on the prescribing of antibiotics within the UK,<sup>3</sup> Europe,<sup>4</sup> and the US.<sup>5</sup> Furthermore, the proportion of newer and more expensive broad spectrum agents is increasing in tandem with this volume of prescribing.<sup>3,5,6</sup>

The consequences of antibiotic prescribing are now clearly defined. Observational research shows that above average prescribing for acute respiratory illness is associated with higher consultation rates.<sup>7</sup> This medicalizing effect of prescribing antibiotics has been confirmed in an open trial of prescribing strategies for sore throat.<sup>8</sup> Prescribing for the current episode of illness, or a past history of receiving antibiotic for sore throat, increased re-attendance when compared with a delayed or 'no prescribing' strategy.<sup>8</sup> Therefore, the economic impact of antibiotic prescribing is to increase consultations for acute respiratory illness and subsequent prescribing costs. Because respiratory illness is common, these economic repercussions have been substantial.<sup>5</sup>

Why, then, do GPs continue to prescribe antibiotics for what, in most cases, are self-limiting conditions? As outlined by Butler *et al*, the decision to prescribe antibiotics or not is governed by a complex interaction between the patient and doctor. Negotiation takes place against a background of epidemiological evidence, psychological and contextual understanding about the likely nature and course of respiratory illness, and previous experience of receiving antibiotics for a similar episode of illness.<sup>2</sup> If an impact on the volume and quality of antibiotic prescribing for respiratory tract symptoms is to be made in the future, greater knowledge and understanding about diagnostic uncertainty, patients' understanding of illness, and the effect of sharing information with patients will be needed.

The diagnosis of acute respiratory illness is most frequently based solely on elicitation of symptoms and signs from the patient without recourse to further investigations. For some acute respiratory illnesses, clinical findings may have a useful predictive value; for example, the presence of maxillary toothache in acute sinusitis. Furthermore, the presence of a combination of specific symptoms and signs increases the likelihood of diagnosis.<sup>9</sup> Unfortunately, the predictive value of clinical findings for most acute respiratory illnesses is poor. For example, in patients with lower respiratory symptoms, no individual clinical finding, or combinations of findings, can confirm the diagnosis of pneumonia,<sup>10</sup> while in children with red ear, the severity of inflammation of the tympanic membrane is a poor predictor of subsequent clinical course.<sup>11</sup> This variability in the diagnostic utility of clinical findings has consequences in the diagnostic labelling of respiratory illness. There is evidence that diagnostic labelling bears no clear relationship with symptoms and signs of illness.<sup>12</sup> Furthermore, when antibiotics are prescribed, they appear to be

prescribed on the basis of the diagnostic label, or in the belief that a clinical feature elicited has a strong relationship to clinical outcome, when in fact this is not the case.<sup>13</sup>

Such diagnostic uncertainty inevitably means that other factors, such as patients' expectations and time constraints during the consultation, have a major impact on the likelihood of prescribing antibiotics.<sup>6,14</sup> A recent study in the UK revealed that, although GPs prescribed antibiotics for 75% of patients presenting with acute lower respiratory tract illness, they felt that in only one-third of these cases were antibiotics definitely indicated. Other factors such as patients' expectations, time constraints, and previous experience with the patient were independent factors in the decision to prescribe antibiotics.<sup>6</sup> Therefore, recognizing and exploring patients' understanding about the nature and cause of their illness, its likely clinical course, and treatment options is essential if antibiotic prescribing for acute respiratory illness is to be curtailed.

Qualitative work has explored some of these issues. Patients presenting with lower respiratory symptoms often believe that infection is the cause of their symptoms, and that antibiotics are required.<sup>15</sup> However, patients may also attribute their symptoms to other causes, such as cancer or heart disease.<sup>16</sup> Failure to elicit patients' concerns about the cause of their illness may be an obstacle to a joint solution to their respiratory symptoms.<sup>16</sup> Indeed, simply prescribing an antibiotic for respiratory infection, without further exploration of patients' concerns, is not associated with increased patient satisfaction.<sup>17</sup> Parents with pre-school children express concerns about understanding the nature of their child's illness. Effective negotiation, communication, and information sharing appears to be crucial when dealing with parents and their young children with acute respiratory illness.<sup>18</sup> Clearly, this patient-centred approach requires an adequate amount of consultation time. Observational research into the quality of consultations in general practice has shown that, when psychosocial problems are addressed and dealt with, prescribing of antibiotics falls.<sup>19</sup> It follows that exploration and explanation of respiratory tract symptoms will require that adequate time is spent with patients.

Effective strategies to reduce antibiotic prescribing have been evaluated. As Butler *et al* point out, despite the reported trend of increasing volume, complexity, and cost of antibiotics, there is room for cautious optimism.<sup>2</sup> On a region-wide level, national or regional policies can be effective. In Finland, nationwide recommendations to reduce the use of macrolide antibiotics resulted in a significant reduction in the use of this class of drugs, with a consequent fall in the prevalence of erythromycin resistance in group A streptococci.<sup>20</sup> Within practices, a general awareness about the problems associated with inappropriate antibiotic prescribing does not appear to be sufficient. Substantial between-doctor variation in the prescribing of antibiotics has been described, with three-fold variations being reported in one study,<sup>21</sup> while a Dutch study estimated that half of all antibiotic prescriptions were generated by one-quarter of GPs.<sup>22</sup> More recently, sharing of information by means of a patient information leaflet has been shown to reduce the re-consultation rate for respiratory tract illness,<sup>23</sup> and the use of a computer-assisted management programme for antibiotics in a hospital setting has improved the quality of patient care and costs.<sup>24</sup>

An immediate consequence of concerns about increasing

antimicrobial resistance is that the Standing Medical Advisory Committee (SMAC) has made four specific recommendations that relate to antibiotic prescribing in primary care:

- no prescribing of antibiotics for simple coughs and colds;
- no prescribing of antibiotics for viral sore throats;
- limit prescribing for uncomplicated cystitis to three days in otherwise fit women; and
- limit prescribing of antibiotics over the telephone to exceptional cases.

Furthermore, it is recommended that a national campaign will be aimed specifically at the public in supporting these recommendations.

In summary, ongoing critical analysis and examination of prescribing practice will be required if the volume and cost of antibiotic prescribing is to fall in primary care. Acute respiratory illness is an example of a condition that requires acknowledgment and understanding of qualitative and quantitative aspects of evidence during the consultation.<sup>25</sup> Qualitative studies point the way to a more patient-centred approach. The results of clinical trials and systematic reviews have set these qualitative aspects against a background of poor evidence of efficacy of antibiotic treatment for most patients.<sup>2</sup> Further studies will be needed to elucidate the role of prognostic factors and explore the efficacy of antibiotics in higher-risk groups; for example, the elderly. If practice guidelines are to be considered, equal consideration should be given to the epidemiological evidence, patients' concerns about their diagnosis and prognosis, adequate time in the consultation for exploration of these issues, and practice-based aids such as leaflets and computers to facilitate sharing of information.

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# Forty-seven minutes a year for the patient

AT several recent national conferences, speakers, all from outside general practice, have referred to the 'seven-minute consultation' as the norm in general practice in the British NHS. The reaction — in most cases by general practitioner (GP) audiences — has been interesting. Nothing has ever been said, but the non-verbal communication from varying audiences has signalled unease. What does this mean?

General practice has expended a great deal of effort in the last two decades in concentrating research and teaching on the con-

sultation, from which consultation theory has subsequently been derived.<sup>1-6</sup> Some GPs have themselves emphasized the brevity of the consultation in general practice, most notably Balint and Norell in their book, entitled *Six Minutes for the Patient*.<sup>7</sup>

GPs can hardly complain now if others take general practice on its own values. So perhaps the so-called seven-minute consultation now needs more thought.

First, seven and a half minutes is probably the most common booking time in routine NHS GP surgeries. Eight patients an

hour has emerged as the mode, but GPs have always allocated more time here, and less time there, according to need. It has been known for years, for example, that patients with emotional problems receive longer time.<sup>8</sup>

However, the problem with the seven-minute figure is the fact that a substantial number of practices offer ten-minute consultations. This is particularly true in training practices, which Baker<sup>9</sup> and Baker and Thompson<sup>10</sup> have shown are more highly developed, and are likely to be providing better care. Although to those outside general practice the preoccupation with a minute or two on the average consultation time seems strange, it is critical to colleagues who may be providing around 150 consultations a week. Time is the GP's most precious resource, and it has to be carefully used. Even in arithmetical terms, ten minutes is over 40% more than seven minutes.

The unease of GPs over the seven-minute figure as a summary statistic surely lies first, in its appearance as a fact, and secondly, in its connotations. Seven minutes is so obviously a short period of time that it inevitably trivializes the consultation for both patient and doctor. How can any serious thought and action be done in so short a time? Brevity of time on this scale diminishes patients, who may feel inhibited about raising problems, and it may also constrict the GPs' ability to examine, investigate, and treat appropriately. General practice has suffered throughout this century from Allbutt's<sup>11</sup> crushing comment on it: 'perfunctory work... of perfunctory men!'

The 'seven-minute consultation' has thus become a summary statistic in general practice. The challenge for those who seek to question it is to find another and better summary figure. To do this, the first logical starting point is the *General Household Survey*: this carefully constructed annual review is based on randomly selected individuals, and is published by the Office of National Statistics. The 1998 edition, entitled *Living in Britain*,<sup>12</sup> shows that, on average, in 1996, people (all ages combined) consulted GPs in the NHS five times a year.

Another national source of importance is the Review Body on Doctors' and Dentists' Remuneration.<sup>13</sup> This prestigious, nationally respected organization, reports that the average duration of the consultation for NHS GPs in 1997 was 9.4 minutes. Thus, it is reasonable to state on good authorities, that the average amount of time spent by patients with NHS GPs is  $5 \times 9.4 = 47$  minutes per year. Could this be a new and better summary statistic?

However, like all summary statistics, it has its problems. Like the seven-minute figure, it averages across both sexes and all diseases, and it does not deal with which doctor actually sees the patient, any more than the seven-minute figure does. It does, however, have national validity, since it is directly derived from public and reputable national sources, whereas, with the seven-minute figure, it is unclear exactly which reference is being used. Moreover, as the Review Body has shown, the figure of seven minutes itself is already 2.4 minutes per consultation, and therefore 12 minutes a year out of date. If this became acceptable, a method would exist of calculating a figure quickly and easily each year.

Apart from the arithmetical advantages, the professional gains would be clearer still. A figure of 47 minutes a year on average for the whole population, once stated openly, would help to make people think more clearly about general practice. It would immediately indicate that family doctor care does not usually focus on a single consultation, but builds up over many consultations over time. It would help to explain why some issues are not dealt with in single consultations — which external observers may expect — because they may have been dealt with in the previous consultation, or have been planned for the next one.

Most important of all, 47 minutes is a serious amount of time. It is certainly not a trivial figure. Its dissemination might help to make it more generally understood just how great is the commitment of the GP branch of the medical profession to the public, and why general practitioners appear busy at times. It should empower GPs by reminding them of their opportunities as well as their burdens, and how much can be achieved, once repetitive and unproductive consultations are avoided.

Once people start to realize that it is also 47 minutes on average in each and every year, and for all members of the family too,<sup>14</sup> then real gains in public understanding of the discipline of general practice should accrue.

Beginning with the RCGP in 1972 in *The Future General Practitioner*,<sup>1</sup> general practice has been busy building the tools of its craft — models and means of assessing the consultation. Many of these are excellent, and are now in use educationally all over the world. Such a focus on the single consultation was much needed; the discipline could not progress until the single consultation was analysed, understood, and capable of being researched and taught.

Now, however, it may be time to move on. In particular, it seems necessary to start to recognize and measure the essential nature of general practice, namely that for most people, for most of the time, it consists of a series of consultations over varying units of time. The new challenge is thus to analyse, understand, research, and teach the significance of the series, as well as its individual components. This may mean more focus on continuity and relationships.

As a first step, in dealing both with the difficulties with the seven-minute figure and as a way of expressing the reality of general practice, a new summary statistic is needed. Would 'forty-seven minutes a year for the patient' be acceptable as a start?

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