Defining frequent attendance: evidence for routine age and sex correction in studies from primary care settings

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SUMMARY
Primary care patients who attend significantly more frequently than the norm present a clinical challenge and implications for resource usage. However, studies are methodologically diverse in their definitions of frequent attendance, and do not always standardise for age and sex. This study shows that studies that do not correct for age and sex variations in consultation will miss a significant proportion of patients whose behaviour differs widely from their peers. It suggests a simple correction that could be utilised in primary care studies without requiring sophisticated statistical analyses.
Keywords: *frequent attendance; research methodology; age–sex correction.*

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Submitted: 28 August 2001; Editor's response: 8 November 2001; final acceptance: 21 January 2002.

Introduction

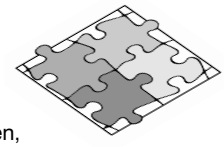
VARIOUS studies have demonstrated the workload related to a significant minority of patients who consult more frequently than their peers. Studies of frequent attenders in primary care suggest that consultation rates are higher in women, the elderly, the unemployed, and those with chronic illnesses.[1] Some frequent attenders in consultation are more likely than average to present with multiple, vague symptoms[2] or to show evidence of somatisation.[3] Service priorities, the response of the individual clinician to the frequent attender, and the attitude of the primary care team as a whole, may also influence consulting patterns.[4]

Any study into frequent attendance requires a definition for such patients. Many authors use an arbitrary definition to identify extremes of attendance; for example, patients who have 20 contacts with a doctor per year in a practice in which the mean is four. Age has been shown to be independently associated with frequent attendence,[5] but few authors have attempted to define how studies should allow for the impact of age and sex on the defined patient population. The aim of this study was to develop practical refinements to cohort definition of frequent attenders, so that the starting point of investigation by a practice or research team can be to identify those patients whose attendance patterns are unusual for their age and sex.

Method

The study utilised computerised attendance data with all staff over a one-year period in two practices in inner-city Sheffield that had similar sociodemographic profiles but no practice population overlap. The routine computerised attendance data of these practices had already been audited for accuracy as part of an ongoing inter-practice collaborative research network, and included encounter data with nurses and other team members as well as doctors. It was considered that most practices would be able to generate percentiles of attendance frequency for each of the age groups examined. The populations that were initially investigated were those with patients with the highest 2%, 3%, and 5% of number of encounters over a one-year period. The age groups considered were between 15 and 75 years of age; the latter cut-off was used because of the small numbers and atypicality of service usage patterns in later life. The mean consultation rate was defined for each ten-year age band for male and female attenders, a database compiled to indicate the number of attendances for each age band, and the 95th, 97th, and 98th percentiles were calculated. MIQUEST (Morbidity Information and Export Syntax) software was used to identify the patient cohorts, and SPSS

HOW THIS FITS IN



What do we know?

Various studies have shown that a significant minority of patients — women, the elderly, the unemployed, and those with chronic illnesses — consult more frequently than their peers. Service priorities and the attitudes of individual clinicians and the primary care team as a whole, may also influence consulting patterns.

What does this paper add?

This study suggests that considering female and male cohorts separately, identifying the top 3% of adult male patients from two different age ranges, plus the top 3% of all adult females, will pick up the extreme frequent attenders. This approach is easy to perform, it is possible to do it manually, and it clearly addresses the age–sex differences in consulting patterns.

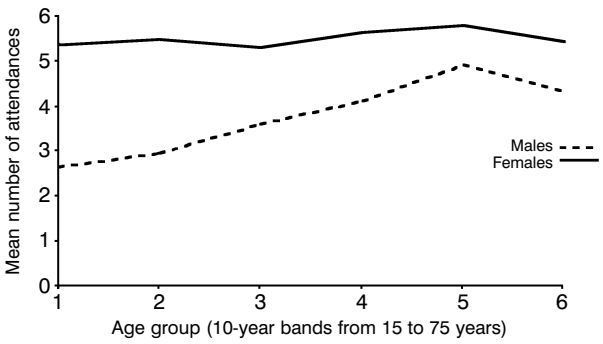


Figure 1. Mean attendance for age groups by sex (both practices).

and Excel were used for statistical analyses. Expert statistical advice was sought in order to derive a methodology for defining the data in a way that had practical utility.

Results

Between them the two practices had a population of over 10 000 patients: 5918 in one practice and 4732 in the other. Eighty per cent of the patients in each practice had consulted five times or less in the year studied, with 25% and 22%, respectively, not being seen at the surgery at all in the time period assessed. Both practices demonstrated a clear and consistent trend that women consult consistently more frequently than men in all age bands up to 65 years or older (Figure 1). Consultation rates among men increased with age, while the rates for women remained fairly constant regardless of age. Taking the top 3% of all frequently consulting patients would have identified a population that was biased towards older women unless age–sex correction was utilised (Table 1). Further analyses showed that separating the male and female populations, and taking only two different age groups for male frequent attenders (below and above 45 years of age) would include 95% of the total male patients identified as attending at or above the 97th percentile using the more complex procedure of ten-year groupings. No such division of the population was needed for females, as their consultation rate was fairly constant.

Table 1. Mean attendance by sex and age for top 3% of attenders (97th percentile).

	Sex	
Age in years	Male	Female
15 to 25	11	17
26 to 35	12	18
36 to 45	14	19
46 to 55	18	20
56 to 65	18	20
66 to 75	16	22

Discussion

Many of the characteristics that are apparently associated with frequent attendance derived from prior studies may be less significant when modified by age and sex correction. Increased chronic morbidity with age may mean that a practice that is interested in identifying patients with psychological problems will find that it is considering a large proportion of elderly people with physical reasons for their pattern of attendance, unless they moderate patient identification by age and sex.

With the advent of computerised data it should be possible to be more specific about the defining characteristics of patient populations. Nevertheless, most practices will want to be able to analyse patient subgroups without requiring sophisticated data management skills. This study suggests that a simple approach of considering female and male cohorts separately, identifying the top 3% of adult male patients from two different age ranges (below and above 45 years of age), plus the top 3% of all adult females, will pick up the extreme frequent attenders, whose consulting behaviours can then be reviewed in detail. This approach is easy to perform, it is possible to do it manually, and it clearly addresses the age–sex differences in consulting patterns. Further work in other populations needs to be done on the validity of the correction suggested here and on the validity of the descriptive profile from previous studies when applied to age- and sex-corrected populations.

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