and 3.5 per cent. The cost of cholestyramine per death from myocardial infarction prevented was $2 068 300 and per deaths from any cause prevented, $9 307 500.[7] In the UK one fatal coronary event prevented with cholestyramine would cost about £1 million.[8,9]

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Wheezing in early childhood

Sir,

Dr Strachan's detailed study of wheezing in early childhood (April *Journal,* pp. 182-184) provides a useful account of the natural history of this common sign and gives the basis for a guardedly optimistic prognosis in younger children.

Perhaps it is not surprising that wheeze is so common in children, since relatively small absolute changes in airway diameter, due for example to virus infection, will lead to near closure with consequent wall oscillation.[1] The current tendency to equate all wheezing with asthma may not be appropriate. Certainly children aged seven years with a history of wheezing since starting school usually have asthma[2] and this diagnosis should be actively considered in all children with recurrent respiratory symptoms,[3] although asthmatics do not appear to present more frequently than controls before their illness becomes clinically overt.[4]

For general practitioners perhaps the best definition of asthma is that which responds to anti-asthma therapy, and we need clearer guidelines for the management of respiratory symptoms in the preschool child. Dr Strachan has provided the basis for this.

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Sir,

I was pleased to see the paper by Dr Strachan, (April *Journal,* pp. 182-184) on such an important topic. It set out to compare patient questionnaires with general practitioner records with regard to childhood wheezing. The main conclusions were that there was a surprising lack of overlap between the two methods of inquiry, and that the majority of children who develop wheezing in infancy appear to have a favourable outcome.

Other sources of bias should be considered regarding the conclusion that the two methods of inquiry were inconsistent. The author does not mention what the doctor actually diagnosed during those consultations for wheeze, and by implication, what the parents were told of the nature of the problem. In an audit on childhood asthma, we found a marked delay in the diagnosis of asthma and ascribed this to an unwillingness on the part of the doctor to record a diagnosis of asthma.[1] Our results and those of other workers showed that in the majority of cases those children who were diagnosed as asthmatic were likely to receive appropriate therapy (anti-asthma therapy).[2-4] In contrast, those undiagnosed asthmatic children consulting for respiratory symptoms were unlikely to receive appropriate therapy. These families are therefore unaware of their childs' asthma, and are unlikely to take much note of the respiratory symptoms because they have not been educated in this regard. I feel this factor will affect any questionnaire study because the parents are less likely to remember these consultations.

Another point I would like to make is that it has been well established that asthmatic children under ten years of age present for other reasons than wheeze. In our audit, before diagnosis, all but one of our 52 asthmatic patients had presented with cough at some stage, 25 per cent had not presented with wheeze and one third had presented with difficulty in sleeping. Inadvertent exclusion of children with these and other less stereotyped symptoms of asthma would also bias a study of this type. It would therefore be interesting to know how many of the 36 per cent population of wheezy children in the study by Dr Strachan had actually been diagnosed as asthmatic and what criteria were used to make the diagnosis.

Based on the conclusion that most wheezy children in infancy have a favourable outcome I would like to draw attention to a 20-year follow-up, by Blair[5] of 244 asthmatic children in an east London general practice. He found that there was no correlation between an early age of onset and severity of asthma either during the first five years of follow-up or with its persistence after 20 years. Of note, he found that after 20 years, only 28 per cent (68 patients), had been asymptomatic during the preceding two years. Asthmatic children therefore do not necessarily grow out of their asthma.

It is important therefore, to remember that although asthmatic children improve with age (in most cases), it still remains our duty as doctors to educate ourselves to make a positive diagnosis of asthma where appropriate, and to educate our patients about their illness. This will hopefully reduce the morbidity and mortality rates of childhood asthma.

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