extraction we have used the prevalence of cataract in the population and the methods to which the authors refer to derive estimates of the incidence.³ We adjust for ethnic origin, the discrepancy between diagnostic and operative thresholds, attrition by death, and the level of contraindicated operations. Our estimates also suggest that unmet need for cataract extraction exists but they are unaffected by factors such as knowledge of, or access to, services that may distort demand incidence among elderly people.

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EDITOR,—By using a defined population base and considering both hospital and primary eye care services in Nottingham J H Sheldrick and colleagues have made considerable advances on previous published work on the pattern of presentation of eye disease to health care services.¹ The study would have been further enhanced, however, by consideration of the role of the high street optician. It is not clear whether everyone referred by optometrists to the hospital eye service during the study was included. Although some reference is made to asymptomatic disease picked up by screening by the optometrist, it would have been interesting to see the impact of this route of referral presented separately.

Though appreciating the value of the work accomplished, we disagree with the authors that demand incidence and demand episode rate are useful variables on their own for the planning of eye health care services. Although the rationale for such measures—that only patients presenting for medical attention create work for medical services—seems to be common sense, it ignores the fact that one of the most potent influences on demand is actually supply of services. As A Ralph Rosenthal points out in his accompanying editorial,² supply is changing dramatically with the introduction of new technology. For example, the visual acuity thresholds at which cataract surgery is recommended have dropped over the past 10 years and will change more with the introduction of phako-emulsification. We have calculated that this will create over 80 000 potential extra cases of cataract surgery in North West Thames region alone (unpublished data).

Thus planning services based on activity has left purchasing health authorities in the position of watching their waiting lists for cataract surgery get longer, while contracts based on demand calculated from activity are exceeded. Even allowing for the known age related distribution of demand shown in Sheldrick and colleagues' paper does not alleviate this problem.

If we really wish to plan eye health services rationally we need to develop a model incorporating information on the structure of the population and projected demographic change, estimates of the incidence of visually disabling eye disease, and determinants of uptake of services. At present we can only guess at the parameters of this model.

Properly focused epidemiological and health services research—in particular, a well designed longitudinal study—providing estimates of incidence is urgently needed.

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EDITOR,—J H Sheldrick and colleagues' paper¹ and A Ralph Rosenthal's accompanying editorial on the demand for ophthalmic services² will be welcome ammunition to ophthalmologists seeking resources. Some of the equipment cited by Rosenthal as being desirable, however, will be nothing more than a pipe dream for those eye units whose financial masters do not even allow for the provision of proved technology already in widespread use, such as automated perimetry.

In my view the implications of excimer lasers differ greatly from those of other new modalities; there is more to this than "perfection of techniques" and "about £200 000 per machine"—more even than training staff and finding suitable space for such equipment in existing, often cramped, accommodation. The introduction of a new treatment for a potentially large market with a visually non-threatening condition must on no account be allowed to divert resources from the already overburdened provision for patients with non-refractive disorders. It must therefore be funded additionally, and justifying any source of finance other than that in force for the few lasers already in private use—namely, direct payment by the patient/client—may be difficult, certainly as far as low ametropia is concerned. Strategically located excimer units staffed by experts could thus emerge, providing also a service for the NHS to non-paying patients with certain other disorders for which excimer lasers hold promise.

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Paradoxical bronchoconstriction and salmeterol

EDITOR,—Brian H Davies¹ disputes the use of the word "paradoxical" in my and colleagues' report of bronchoconstriction after the use of salmeterol by metered dose inhaler² and our view that salmeterol has a slower onset of action than salbutamol.

I believe that our use of "paradoxical" in the title is appropriate in that the response expected after inhalation of a bronchodilator is bronchodilatation. Acute bronchoconstriction, be it due to the active drug or to other constituents in the formulation, might therefore reasonably be viewed as a paradoxical response to the medication. The same terminology has been used in previous reports of this phenomenon³ and is currently used in Allen and Hanburys' prescribing information.

More importantly, Davies is mistaken in believing that salbutamol and salmeterol share the same time of onset of action. I am unaware of the "accumulated evidence . . . in many comparative studies" to which he alludes. It seems at odds with Boyd *et al*'s finding of a median time to 15%

improvement in forced expiratory volume in one second of 7 minutes for salbutamol metered dose inhaler and 14 minutes for salmeterol metered dose inhaler ($p=0.04$),⁴ and of a median time to peak bronchodilatation of 60 minutes for salbutamol and 150 minutes for salmeterol metered dose inhaler ($p=0.036$).⁵

Information on these and the other single dose studies (which similarly show a differential onset of action) is available on request from Allen and Hanburys' medical information department, which has confirmed the slower onset of action of salmeterol (personal communication). This is consistent with our findings. Thus the view that bronchoconstriction induced by the vehicle may be unmasked is justified.

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Health effects of organophosphate sheep dips

EDITOR,—Virginia S G Wiseman and colleagues write of the adverse effects of organophosphate sheep dips on health.¹ Organophosphate insecticides have been used in crop production and livestock husbandry worldwide for over 40 years. The symptoms of human toxicity and the treatments are well recorded. Over the past three years the safety of workers using organophosphate sheep dips has received much publicity in the farming media. The Health and Safety at Work Act and Control of Substances Hazardous to Health Regulations require farmers to guard against chemical and biological hazards on farms.

In Britain sheep dips are classed as veterinary medicines and must be licensed under the Medicines Act 1968. Every label carries detailed advice on protective clothing and advice to doctors on treatment. This is regularly reviewed by the Veterinary Products Committee (on behalf of the Ministry of Agriculture, Fisheries and Food), the Health and Safety Executive, and the manufacturers of sheep dips—all of whom are members of the National Office of Animal Health.

There are 95 000 sheep farms in the United Kingdom. Last autumn dipping was compulsory and involved roughly 300 000 people. Murray and colleagues report 34 cases of exposure to organophosphate dips, of which three were accidents; the remaining 31 cases include 15 cases in which patients were not wearing protective clothing as instructed. Details of the 16 others are not reported. We share Murray and colleagues' concerns. The fact that half of the patients reported on had taken no safety precautions after great publicity may seem surprising but is supported by reports from the Health and Safety Executive and companies.

This year both the Health and Safety Executive and the National Office of Animal Health have commissioned trials from the Institute of Occupational Medicine to investigate dipping practices and protective clothing. This will be reported to the Ministry of Agriculture, Fisheries and Food; thus even more detailed advice on pro-