Criteria for Cataract Surgery – London

1 Background:

1.1 Commissioning negotiations for cataract surgery (in England) are currently being conducted within the context of improving efficiency, focusing on effectiveness, and interventions of clinical value. Given the severe financial constraints in the NHS, prioritisation for surgery has also become a topical and significant issue.

1.2 The situation in London is no different, but there is a recognised need for consistency across London for delivering care to patients.

1.3 Within London, Moorfields is the single largest provider of cataract surgery. Moorfields has proposed, discussed and obtained broad agreement on evidence-based criteria for surgery with ophthalmologists, commissioners and public health colleagues in the North West and North Central sectors of London.

They have been discussed by the Clinical Quality Review Group, NCL Clinical Cabinet and are supported by Dr Andrew Burnett, Director of Public Health, Barnet, who is leading on commissioning for cataract services in NCL.

1.4 These are the criteria that were adopted in the capital. They take account of clinical advice as well as the evidence base and implications for population health [Appendix 1]; and reflect what was broadly accepted i.e. -

   i. Cataract surgery is effective for first and second eyes
   ii. Surgery is offered for symptomatic cataract and is not based on visual acuity
   iii. There are no patient related outcome measures that are currently suitable for use in routine clinical practice.
   iv. Visual acuity represents a quantifiable indicator of visual function that could be used for audit purposes and monitoring surgical activity
   v. Projected demographic trends are likely to necessitate current surgical rates

2. The London Criteria:

I. Cataract surgery to be considered for patients with a best corrected visual acuity of 6/9 or worse in either the first or second eye, AND have impairment in lifestyle such as substantial affect on activities of daily living, leisure activities, and risk of falls

II. Surgery is indicated for management of ocular comorbidities such as control of glaucoma, view of diabetic retinopathy etc.

III. Patients with cataract having visual acuity better than 6/9 does not imply automatic exclusion. In this circumstance, where there is a clear clinical indication or symptoms affecting lifestyle, surgery should still be
considered. For example, the patient with the 6/6 *symptomatic* posterior subcapsular cataract, affecting activities of daily living and driving.

2.1 *Commissioners accept* that clinical decisions for cataract surgery are based on symptoms, but also call for service providers to demonstrate appropriate thresholds for interventions (including referrals). Both of these perspectives are taken into account in these criteria which are based on *symptomatic cataract impairing acuity to 6/9 or worse*. The acuity criterion is included as it represents a quantifiable *indicator* of vision that can be routinely audited (for referrals and surgical intervention), whereas symptoms are more challenging to audit in practice in the absence of pragmatic and standardised tools to measure them. Such audit findings should be shared with Commissioners.

The level at 6/9 also takes account of the requirements for driving. *(78% of persons aged 60-69 years and 54% of persons aged 70 years and over in Great Britain held a full driving licence in 2009 – source National Travel Survey Update 2010 – www.dft.gov.uk)*

2.2 *Of particular note:*

i. There is agreement that there should be *no difference between first and second eye*. This in itself is a major step forward given that in other areas in England as well as within London, there is pressure to prioritise surgery in favour of first eyes.

ii. These criteria broadly reflect existing practice within London – from a recent audit of a sample of over 2000 cataract operations in 2010 at Moorfields, about 5% had pre-operative acuity of better than 6/9.

2.3 The criteria are succinct by design, to allow for clinical flexibility to make the right decision for individual patient circumstances based on clinical need, lifestyle etc.

3. **Current Status :**

3.1 **Context** - The Department of Health has asked Strategic Health Authority (SHA) Medical Directors in England to take a lead in developing a more consistent and coordinated approach to commissioning whilst optimising use of NHS funds. Whilst the focus will be on effectiveness and interventions of lower clinical value, the outputs of the work are to inform the broader commissioning process for the 2012-13 rounds. Each SHA is to lead on one or more specialties on behalf of NHS England, producing guidance in a standardised format to be shared across SHAs and to be utilised by the national commissioning board.

NHS London is leading on ophthalmology, ENT and orthopaedics.

3.2 **The Ophthalmology Advisory Group** has been set up (and is chaired) by the Medical Director of NHS London. Its membership is made up of ophthalmologists across the London sectors and the Royal College of Ophthalmologists.
At its first meeting on 1st June, the main item for discussion was the criteria for cataract surgery:

i. There was broad consensus on the proposed criteria and recognition that these were more inclusive than those being proposed in some areas in London.

ii. It was recognised that criteria provide guidance (not rules) for intervention, and that clinical judgement would need to be applied in determining where exceptions were to be applied.

iii. It was also recognised that criteria supported by clinical consensus, were more likely to be accepted by commissioners, and as such reduce the need for advance approval of referrals and treatment, and the associated administrative burden and delays.

iv. Also highlighted was the need to consider the whole pathway for commissioning cataract surgery, and not just the emphasis on surgical activity.

Within London up to 50% of referrals for cataract surgery from primary care do not require or proceed to intervention, highlighting the potential for improving patient experience as well improving efficiencies and making better use of resources at the start of the care pathway.

4 **Implications for Patients:** Within London there are about 880,000 persons of 65 years of age and over, They represent the population at risk that is likely to need a cataract operation within their lifetime, and who would benefit from having consistent access and availability of surgery when it is needed, informed by clinically driven evidence based criteria supported by broad consensus amongst clinicians and commissioners.

---

Miss Parul Desai  
Consultant in Ophthalmology and Public Health  
Moorfields Eye Hospital, London

Director of Population Health  
NHS Information Centre for health and social care, Leeds

September 2011
APPENDIX 1

Cataract Surgery - Evidence of Effectiveness

Summary –

- Visually impairing cataract is common in persons of 65 yrs and over
- The effectiveness of cataract surgery (first and second eye) is established
- Up to one third of cataract operations are for second eye surgery
- Delay in second eye surgery is associated with poorer quality of life and functioning

1. Epidemiology -

A cross-sectional population-based study in North London with a “needs assessment” perspective reported that in persons of 65 yrs and over, the estimated prevalence of 1:

- visually impairing cataract in one or both eyes is 30% (95% CI 25.1- 35.3).
- cataract surgery in one or both eyes is 10% (95% CI 8.5-12.4)

* visually impairing was defined as acuity of worse than 6/12.

The average age for persons having cataract surgery is 76 years, as reported in large observational studies of routine NHS practice. 2,3

2. Surgical Activity -

Cataract extraction (phako-emulsification) with intra-ocular lens implantation for age-related cataract is the commonest surgical intervention performed in the NHS. 4 In 2008-09, over 300,000 operations were performed in England, predominantly as a day-case procedure (97%). 4 About 30% of all cataract operations are those performed on the second eye, and this has remained consistent within the NHS for the past 10-12 years. 2,3

There is a consistent x1.5 variation in the rate of cataract surgery across the nine NHS English Regions over the past five years (2003-08), with a wider 8-fold variation between English local authorities. 5 London and the North East of England have the highest rates with the West Midlands having the lowest rates of cataract surgery during this period. 5 These variations are likely to be influenced by a number of factors which would include local demography, local needs, access and uptake of NHS services.

Waiting times for cataract surgery have fallen sharply as a result of successive policies starting with Action of Cataract (2000) 6 to the most recent 18 week patient pathway, in the presence of lowering of surgical thresholds for intervention. Action on Cataract 6 set a new national target for cataract surgery at 3,200 per 100,000 population aged 65yrs or more, to ensure that a 6 month waiting time for cataract surgery could be achieved. With the estimated demographic changes in the population, this age group is expected to increase from 16%-23% of the total population by 2033 (ONS).

A combination of both demographic need and avoidance of long waiting times for elective surgery is likely to necessitate at least maintenance of current levels of surgical activity, otherwise the level of avoidable visual impairment from cataract will increase and tackling the backlog will require additional resource and capacity.
3. Effectiveness of cataract surgery

Large well conducted observational studies consistently provide evidence for the clinical effectiveness of cataract extraction in routine practice, and demonstrable improvement in patient reported outcomes (in patients with and without comorbid ocular conditions). 7,8,9,10,11

3.1 Effectiveness of second eye surgery:
Randomised trials and rigorously conducted observational studies provide evidence for the benefit (clinical and patient reported outcomes) of second eye surgery. 11,12,13.

4. Effect of waiting for surgery

There is evidence from a systematic review that patients who wait more than 6 months for cataract surgery may experience negative outcomes during the wait period, including vision loss, a reduced quality of life and an increased rate of falls. 14

Patients having expedited (in about 4 weeks) first eye surgery may experience: a 40% reduction in the risk of recurrent falls (hazard ratio 0.60 [95% confidence interval 0.36–0.98], log rank test 4.3, 1 df, p = 0.04); a 34% reduction in the overall rate of falling (rate ratio 0.66 [95% confidence interval 0.45 to 0.96], p = 0.03, by negative binomial regression); and a reduction in the fracture risk (risk ratio 0.33 [95% confidence interval 0.1 to 1.0] Fisher’s exact test, p = 0.04); in the 12 months following surgery compared to those who had routine surgery (12 months wait). 15

Laidlaw et al 13 reported that 4 components of vision (distance, near reading, contrast sensitivity, stereoaucuity) were significantly poorer among patients still waiting for second-eye cataract surgery at a 6-month follow up visit than among patients who had received expedited surgery (p < 0.005)

This will clearly have an impact on activities of daily living and on safety (personal and to others) – e.g. driving. Persons with cataract who have had surgery may have half the rate of motor vehicle collision compared with cataract patients who did not undergo surgery. 16 This is likely to be due to severe contrast sensitivity impairment due to cataract, even when present in only one eye. 17

5. Economic Appraisals

A recent cost benefit analysis used the English Longitudinal Survey of Ageing (ELSA) to explore the self-reported effect of cataract operations on eyesight. 18 The sample was drawn from previous respondents to the Health Survey of England in 1998, 1999 or 2001, and respondents were interviewed every two years in three waves between 2002-03 to 2006-07. The survey did not distinguish first and second operations. The cohort included 4308 people who provided complete records of their experience with cataracts in all three waves, together with records on their self-assessed eye-sight. Overall the results indicated that cataract surgery is good value in terms of benefits to costs –

“The average expected welfare gain from surgery is valued at £1,110 in the year after surgery costing £672, but the benefits probably continue for the whole of the patient’s life. Only in the case of very elderly patients reporting excellent eye-sight ahead of surgery does it seem likely that the benefits exceed the costs. This finding does not rule out the possibility that some patients are operated on unnecessarily although these cannot be identified from ELSA. Identification of any such patients would, of course, be helpful but the magnitude of the average
**expected life-time gain in welfare relative to the cost of surgery suggests that, overall, the widespread provision of cataract surgery is easily justified.**”

### 5.1 Second eye specifically

#### a.
A cost-utility analysis using data and costs from the USA, reported that second-eye cataract surgery, at $2727 per QALY gained, seemed to be nearly as valuable as initial cataract surgery, at $2023 per QALY gained. It concluded that patients with good vision in one eye and visual loss from cataract in the fellow eye derive substantial benefit from cataract extraction.\(^{19}\)

#### b.
A more recent, smaller UK-based study including females of 70yrs or over, with minimal dysfunction at baseline reported cost-effectiveness of second-eye cataract surgery is in excess of the prevalent £20 000–30 000 WTP (willingness to pay) threshold value used by NICE (at the time of the study). In the longer term i.e. over the remaining lifetime of the woman, surgery was shown to be cost-effective at a WTP threshold of £20 000 from a health and social services perspective.\(^{20}\)

### 6. Driving

#### 6.1 Visual Standards for Driving

*Group 1 drivers (cars and other light vehicles)* - the number plate test at a distance of 20.5 metres approximates to 6/10 Snellen visual acuity.\(^{21}\) (However, this acuity level is not routinely measured on a standard Snellen chart)

*Group 2 drivers (large goods and passenger carrying vehicles)* - visual acuity of at least 6/9 in the better eye.\(^{21}\)

#### 6.2 Social trends in driving

From the National Travel Survey 2009, the number of older people holding a full driving licence is seen to be rising steadily.\(^{22}\)

- 78% of people aged 60-69 years held a full licence in 2009 compared to 63% in 1995-97
- In the same period the proportion of people aged 70 years and over holding a full licence increased from 38% to 54%.
- The most notable increase was amongst older women with 67% of women aged 60-69 years holding a licence in 2009 compared to 45% in 1995-97 and 25% in 1985-86.
- The proportion of men aged 60-69 years increased from 72% in 1985-86 to 82% in 1995-97 to 90% in 2009.

### 7. Recommendation

Cataract surgery (first or second eye) should be considered in those patients with visually impairing cataract (i.e. that reducing visual acuity to 6/9 or worse). This level of acuity pragmatically takes account of the requirements for driving for the population at risk of needing a cataract operation.
8. References

4. HES online NHS Information Centre  www.hesonline.nhs.uk