

Cataract Services in the COVID-19 era: Risk, Consent and Prioritisation

K Cheng, M Anderson, S Vellisaris, R Moreton, A Al-Mansour, R Sanders, S Sutherland, P Wilson, A Blaikie



Background and Aims:

The COVID-19 pandemic resulted in cessation of elective cataract surgery. Biohazard measures created significant clinical and organisational challenges to restarting services. We describe the development of a risk stratification tool to prioritise patients for surgery and report the demographics and comorbidities of patients on the waiting list in NHS Fife.

Methods:

A review of electronic records of patients awaiting cataract surgery was performed. A stratification tool was developed based on available literature on risk factors for poor outcome from COVID-19 infection. Scores derived from the tool were used to generate 6 risk profile groups to call in time order for surgery. Data was analysed using R software (3.5.1, R Foundation for Statistical Computing, AUT, Vienna, Austria).

References:

1. Docherty AB, Harrison EM, Green CA, Hardwick HE, Pius R, Norman L, et al. Features of 20 133 UK patients in hospital with covid-19 using the ISARIC WHO Clinical Characterisation Protocol: prospective observational cohort study. BMJ. 2020 May 22;369:m1985.

2. Royal College of Ophthalmologists. Guidance on the Resumption of Cataract Services during COVID [Internet]. 2020. Available from: <https://www.rcophth.ac.uk/wp-content/uploads/2020/05/Resumption-of-Cataract-Services-During-COVID-1.pdf>

Results:

Characteristic	Score
Risk Score (Based on systemic risk to poor COVID-19 outcome)	
Age	
<70 years	0
70 to 79 years	5
> 80 years	10
Gender (Male)	1
Ethnicity (BAME)	1
Systemic Comorbidities	
Chronic respiratory disease (excluding mild asthma)	1
Chronic heart disease (excluding hypertension)	1
Chronic Kidney Disease	1
Malignancy	1
Diabetes	1
Other	1
Maximum Risk score	18
Need Score (Based on need and prognosis of cataract surgery)	
Vision 6/12 or worse OR anisometropia >3D	1
Lack of any of the following ocular comorbidities significantly affecting prognosis of surgery	1
Moderate to Advanced AMD	
Amblyopia	
Cornea opacification	
Retinal artery/vein occlusion	
Chronic retinal degeneration	
Central visual impairment	
Optic neuropathy	
Active uveitis	
Other maculopathy (excluding AMD)	
Only one good eye	1
Maximum Need Score	3

Table 1: ‘Risk’ and ‘Need’ Score For Cataract Surgery Prioritisation.

744 patients were awaiting cataract surgery. 132 (19.5%) patients had no systemic comorbidities, 218 (32.1%) patients had 1 and 316 (46.5%) patients had 2 or more.

Results:

Stage 1	• Risk Score =0 (Age < 70, No Systemic Comorbidities) • Needs score 2 or above (Good prognosis and/or VA 6/12 or worse, and/or anisometropia >3D and/or only eye)	28 (3.8%)
Stage 2	• Risk score =0 (Age < 70, No Systemic Comorbidities) • Any Need score (0-3)	37 (5.0%)
Stage 3	• Patients aged less than 70 with significant health conditions will be invited for cataract surgery.	106 (14.2%)
Stage 4	• Patients aged between 70 and 80 will be invited for cataract surgery. The patients are prioritised based on their total risk score vs need score.	278 (37.4%)
Stage 5	• Patients aged above 80 will be invited for cataract surgery. The patients are prioritised based on their total risk score vs need score.	229 (30.8%)
Stage 6	• Shielding patients will be invited for surgery.	66 (8.9%)

Figure 1: Cataract Surgery Prioritisation Stages and number (%) in each group

Demographics	Results
Sex (% Females)	393 (55.4)
Ethnicity (% Whites)	628 (98.4)
Age	76 (69 to 82)
Waiting List Duration in weeks	6.8 (3.9 to 9.6)
Ocular Comorbidities	
n (%)	
Moderate to severe AMD	31 (4.7)
Amblyopia	11 (1.7)
Cornea opacification	6 (0.9)
Retinal artery/vein occlusion	6 (0.9)
Chronic retinal degeneration	4 (0.6)
Central visual impairment	4 (0.6)
Optic neuropathy	2 (0.3)
Active uveitis	1 (0.2)
Other maculopathy (excluding AMD)	10 (1.5)
Systemic Comorbidities	
n (%)	
Chronic heart disease	194 (28.9)
Diabetes	148 (22.1)
Chronic kidney disease	139 (20.7)
Chronic respiratory disease	66 (9.9)
Malignancy	39 (5.8)
Others	458 (68.3)

Table 2: Demographics and frequencies of ocular and systemic comorbidities. Data presented in Median (IQR) unless specified otherwise.

Results:

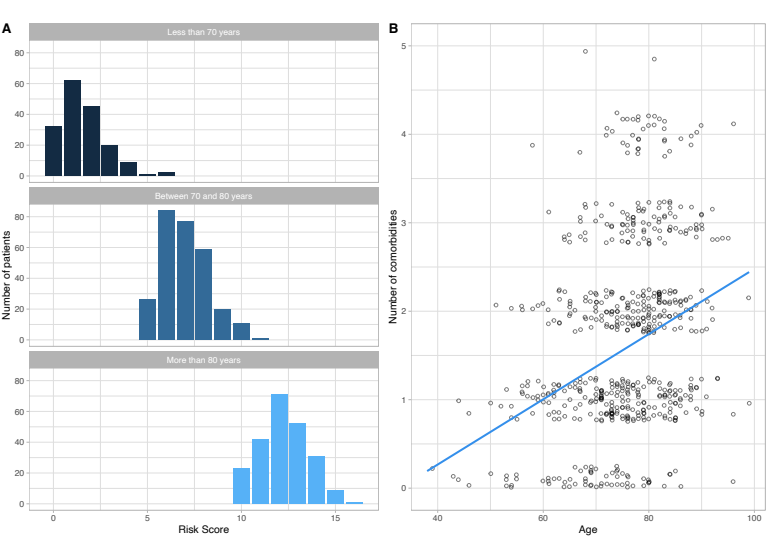


Figure 2: A. Risk Score of patients in each age group, B. With every year increase in age, the number of comorbidities increases by 0.037 (R²= 0.093, P<0.001).

Patient-Led Recall

53 (7.1%) patients contacted the department to discuss their allocated priority stage.

Conclusions:

The pandemic presented an urgent challenge to the burden of cataract surgery in the NHS. We present a pragmatic method of risk stratifying patients blending an evidence-based objective assessment of risk and patient need combined with a shared decision-making. This has helped us safely restart cataract service taking into account the new challenges of the COVID-19 era.