

Supplemental Table 2. Key model input data parameters. Data sources: Facility Level Data; Wait Times Information System, Ontario Health (Cancer Care Ontario); Expert Opinion; Published Guidelines; Literature

Variables	Cataract	Retina	Glaucoma	Cornea	Oculoplastics	Strabismus	Distribution
Prob. of Urgency							
Urgent	0.01	0.15	0.04	0.02	0.01	0	Beta [†]
Semi-urgent	0.24	0.12	0.04	0.05	0.2	0.01	Beta [†]
Non-urgent	0.75	0.73	0.92	0.93	0.79	0.99	Beta [†]
Prob. of Anatomical Success							
Semi and Non-urgent							
Primary Surgery	0.98	0.85	0.8	0.95	0.9	0.9	Beta [†]
Second Surgery	0.9	0.9	0.8	0.9	0.8	0.9	Beta [†]
Third Surgery	0.8	0.6	0.8	0.8	0.9	0.9	Beta [†]
Urgent	0.85	0.85	0.8	0.85	0.85	0.85	Beta [†]
Prob. Two-step Surgery	0.03	0.03	0.03	0.03	0.03	0.03	Beta [†]
Target Wait Times*							
Urgent	3	3	3	3	30	183	Normal [‡]
Semi-urgent	84	14	30	84	60	365	Normal [‡]
Non-urgent	182	90	120	182	180	370	Normal [‡]
Time to Deterioration**							
Urgent	6	6	6	6	60	366	Normal [‡]
Semi-urgent	168	28	60	168	120	730	Normal [‡]
Non-urgent	364	180	240	364	360	740	Normal [‡]

*Sources:

1. The Vision Task Force Committee. Quality-Based Procedures Clinical Handbook for Cataract Day Surgery. Ministry of Health and Long-Term Care. http://www.health.gov.on.ca/en/pro/programs/ecfa/docs/qbp_cataract.pdf. Published 2018. Accessed December 28, 2020.
2. The Vision Task Force Committee. Quality-Based Procedures Clinical Handbook for Integrated Retinal Care. Ministry of Health and Long-Term Care.
3. The Vision Task Force Committee. Quality-Based Procedures Clinical Handbook for Integrated Corneal Transplant Care. Ministry of Health and Long-Term Care. http://www.health.gov.on.ca/en/pro/programs/ecfa/docs/hb_corneal.pdf. Published 2017. Accessed December 28, 2020.

**Cases are prioritized in a higher level of urgency once the maximum 'Time to Deterioration' in their initial priority level is reached.

[†] Beta distribution with 20% variability around the parameter value, which was used to calculate the cumulative probability by α and β , as exponents of the random variable and control of the shape of the distribution.

[‡] Normal distribution with 20% variability (standard deviation) around the parameter value. Given that wait times have to be positive, with a normal distribution, the $\max(0,x)$ function in TreeAge was used to prevent the possibility of a negative wait time.

Notes: A variability of 20% was chosen to allow for an anticipated degree of deviation from the available parameters. For all wait times, the standard deviation reported in the provincial Wait Time Strategy database was used.