

## Supplementary Results (online-only)

**Table S1.** Estimated unit costs in US\$, compiled from sources as referenced.**A) Australia**

Item	Expected cost (US\$)	Lowest likely cost (US\$)	Highest likely cost (US\$)
General ophthalmic examination costs			
Comprehensive, general ophthalmic exam <sup>1</sup>	\$47.14	\$40.08	\$56.46
Brief ophthalmic exam; <sup>1</sup> Low vision assessment; <sup>1</sup> Children's vision assessment <sup>1</sup>	\$23.61	\$20.08	\$28.23
Contact lens fitting, prescription and delivery <sup>1</sup>	\$117.01	\$99.47	\$141.14
Optical correction costs			
Single vision, stock, standard resin spectacle lenses (plano to -4D combined) <sup>2</sup>	\$76.62	\$65.66	\$87.57
Single vision, grind, standard resin spectacle lenses with basic anti-reflection coating (-4D to -6D combined) <sup>2</sup>	\$132.83	\$109.76	\$155.90
Single vision, grind, mid-index resin spectacle lenses with anti-reflection coating (-6D to -10D combined) <sup>2</sup>	\$224.41	\$203.28	\$245.55
Single vision, aspheric, high-index spectacle lenses with anti-reflection coating (-10D and stronger) <sup>2</sup>	\$306.27	\$219.75	\$392.80
Entry-level progressive addition lenses (-0.50D to -4D) <sup>2</sup>	\$232.25	\$180.41	\$284.09
Customised, free-form progressive addition lenses (-4D and stronger) <sup>2</sup>	\$376.84	\$265.44	\$488.25
Standard spectacle frames <sup>3</sup>	\$48.16	\$26.46	\$69.86
6-month supply of single vision, regular replacement silicone hydrogel contact lenses (plano to -12D) <sup>2</sup>	\$171.34	\$145.48	\$197.21
6-month supply of single vision, regular replacement silicone hydrogel contact lenses (-12D to -20D) <sup>2</sup>	\$212.77	\$173.19	\$252.34
Contact lens consumables (per quarter year of contact lens wear)	\$16.74	\$13.02	\$20.46
Magnifier (low vision aid) <sup>3</sup>	\$27.82	\$15.44	\$40.21
Magnifier with illumination (low vision aid) <sup>3</sup>	\$137.86	\$101.74	\$173.99
Loupe (low vision aid) <sup>3</sup>	\$82.57	\$82.57	\$82.57
Telescope (low vision aid) <sup>3</sup>	\$87.95	\$42.34	\$136.55
Anti-myopia management costs			
1 bottle of low-dose atropine eye drops <sup>4</sup>	\$21.52	\$19.76	\$23.29
Executive bifocal spectacle lenses <sup>2</sup>	\$211.71	\$211.71	\$211.71
6-month supply of daily disposable anti-myopia multifocal soft contact lenses (plano to -10D with various adds) <sup>2</sup>	\$332.93	\$219.66	\$446.20
Orthokeratology initial treatment fee (care and lenses for first year) <sup>5</sup>	\$837.76	\$739.92	\$987.26
Orthokeratology subsequent biennial treatment fee (care and lenses) <sup>5</sup>	\$599.85	\$493.99	\$705.70

Costs to manage myopia-related complications			
Sub-specialty ophthalmic examination <sup>1</sup>	\$112.91	\$62.28	\$137.61
Brief sub-specialty ophthalmic exam <sup>1</sup>	\$42.34	\$31.30	\$63.51
Optical Coherence Tomography <sup>1</sup>	\$63.51	\$28.69	\$84.68
Computerized perimetry <sup>1</sup>	\$63.51	\$48.59	\$84.68
Retinal angiogram <sup>1</sup>	\$108.96	\$92.62	\$176.43
Ophthalmic surgery – lens extraction and insertion of intraocular lens <sup>1</sup>	\$545.36	\$486.51	\$846.84
Anaesthesia to support lens and implant surgery <sup>1</sup>	\$70.92	\$60.30	\$119.97
Laser capsulotomy (1 eye) <sup>1</sup>	\$253.35	\$215.34	\$352.85
Vitrectomy <sup>1</sup>	\$959.65	\$719.74	\$1,411.40
Anaesthesia to support vitrectomy <sup>1</sup>	\$99.29	\$84.40	\$169.37
Paracentesis of anterior or posterior chamber, or intravitreal injection <sup>1</sup>	\$215.63	\$183.31	\$317.57
Pneumatic retinopexy for retinal detachment <sup>1</sup>	\$646.95	\$588.10	\$1,058.55
Retinal photocoagulation <sup>1</sup>	\$323.42	\$274.94	\$493.99
Removal of vitreous substitute from vitreous cavity <sup>1</sup>	\$452.95	\$339.72	\$677.47
Anti-glaucoma eye drops (1 bottle latanoprost) <sup>6</sup>	\$16.34	\$16.34	\$16.34
Antibiotic eye drops (1 bottle of broad-spectrum standard) <sup>6</sup>	\$15.30	\$15.30	\$15.30
Steroid eye drops (1 bottle of dexamethasone) <sup>6</sup>	\$15.06	\$15.06	\$15.06
Anti-vascular endothelial growth factor intravitreal injection doses (1.65mg/0.165mL single injection of Ranibizumab) <sup>6</sup>	\$764.70	\$764.70	\$802.53
Related and productivity costs*			
Travel cost per kilometre <sup>7</sup> (5km for general, 24km for sub-specialty, and 50km for orthokeratology care) <sup>8, 9</sup>	\$0.48	\$0.48	\$0.48
Median hourly income of an employed adult <sup>10</sup>	\$27.11	\$17.23	\$37.14

**B) China** (all costs from key informants,<sup>11, 12</sup> unless otherwise specified)

Item	Expected cost (US\$)	Lowest likely cost (US\$)	Highest likely cost (US\$)
<b>General ophthalmic examination costs</b>			
Comprehensive, general ophthalmic exam	\$15.58	\$6.21	\$24.95
Brief ophthalmic exam; Low vision assessment; Children's vision assessment	\$7.89	\$2.96	\$12.82
Contact lens fitting, prescription and delivery	\$49.19	\$16.74	\$81.63
<b>Optical correction costs</b>			
Single vision, stock, standard resin spectacle lenses (plano to -4D combined)	\$41.20	\$18.95	\$63.44
Single vision, grind, standard resin spectacle lenses with basic anti-reflection coating (-4D to -6D combined)	\$94.38	\$41.41	\$147.34
Single vision, grind, mid-index resin spectacle lenses with anti-reflection coating (-6D to -10D combined)	\$146.81	\$87.49	\$206.13
Single vision, aspheric, high-index spectacle lenses with anti-reflection coating (-10D and stronger)	\$373.01	\$201.41	\$544.61
Entry-level progressive addition lenses (-0.50D to -4D)	\$311.37	\$183.02	\$439.71
Customised, free-form progressive addition lenses ( $\leq -4D$ )**	\$896.38	\$425.10	\$1,231.61
Standard spectacle frames	\$35.95	\$19.47	\$74.15
6-month supply of single vision, regular replacement silicone hydrogel contact lenses (plano to -20D)	\$104.26	\$91.55	\$116.97
Contact lens consumables	Included with lenses in China		
Magnifier (low vision aid)	\$17.23	\$16.17	\$18.29
Magnifier with illumination (low vision aid)	\$52.28	\$1.50	\$103.06
Loupe (low vision aid)	\$10.79	\$6.74	\$14.83
Telescope (low vision aid)	\$20.97	\$19.47	\$22.47
<b>Anti-myopia management costs</b>			
1 bottle of low-dose atropine eye drops	\$1.50	\$1.35	\$1.65
Average of executive bifocal, Miyosmart and Stellest spectacle lenses	\$571.50	\$331.35	\$811.65
6-month supply of daily disposable anti-myopia multifocal soft contact lenses (plano to -10D with various adds)**	\$314.50	\$251.60	\$377.40
Orthokeratology initial treatment fee (care and lenses for first year)	\$1,225.99	\$915.82	\$1,536.17
Orthokeratology subsequent biennial treatment fee (care and lenses)	\$1,623.87	\$563.40	\$2,684.34
<b>Costs to manage myopia-related complications</b>			
Sub-specialty ophthalmic examination	\$17.08	\$7.71	\$26.45
Brief sub-specialty ophthalmic exam	\$9.39	\$4.46	\$14.31
Optical Coherence Tomography	\$35.88	\$34.75	\$37.00
Computerized perimetry	\$17.23	\$14.98	\$19.47
Retinal angiogram	\$49.06	\$26.96	\$71.16
Ophthalmic surgery – lens extraction and insertion of intraocular lens	\$441.92	\$367.77	\$516.07
Anaesthesia to support lens and implant surgery	\$1.05	\$0.94	\$1.15

Laser capsulotomy (1 eye)	\$250.17	\$201.45	\$298.90
Vitrectomy	\$396.98	\$259.27	\$534.69
Anaesthesia to support vitrectomy	\$77.90	\$70.11	\$85.69
Paracentesis of anterior or posterior chamber, or intravitreal injection	\$1.50	\$0.30	\$2.70
Pneumatic retinopexy for retinal detachment	\$299.61	\$257.24	\$341.98
Retinal photocoagulation	\$374.51	\$162.65	\$586.36
Removal of vitreous substitute from vitreous cavity	\$370.76	\$259.54	\$481.99
Anti-glaucoma eye drops (1 bottle latanoprost)	\$32.21	\$28.99	\$35.43
Antibiotic eye drops (1 bottle of broad-spectrum standard)	\$3.96	\$3.56	\$4.36
Steroid eye drops (1 bottle of dexamethasone)	\$5.54	\$4.99	\$6.10
Anti-vascular endothelial growth factor intravitreal injection doses (1.65mg/0.165mL single injection of Ranibizumab)	\$599.22	\$569.25	\$629.18
Related and productivity costs*			
Travel cost per kilometre (3km for general, 6km for sub-specialty care)	\$0.58	\$0.00	\$1.00
Median hourly income of an employed adult <sup>13</sup>	\$2.16	\$1.10	\$3.04

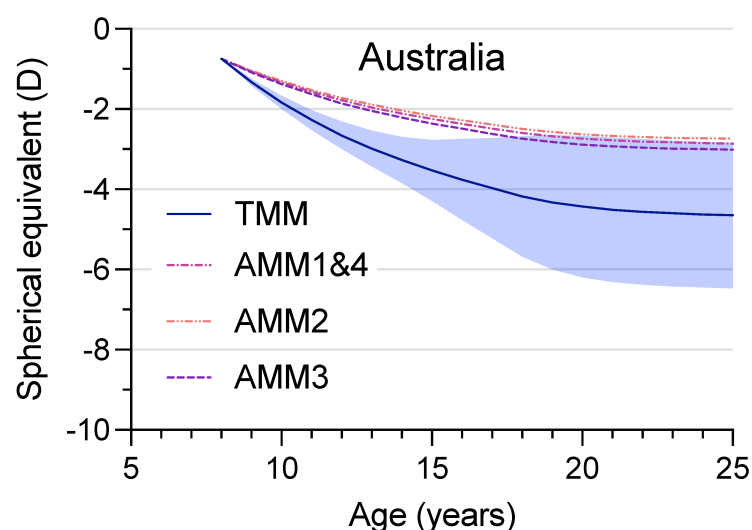
\* Travel cost and median income of an employed adult were converted to related and productivity costs using the following estimates:

- Australian labour force participation rates were 66% for all ages to 70 years, reducing to 7% for 70-79 year olds, and 2% for 80+ year olds;<sup>14, 15</sup>
- Chinese labour force participation rates were 75% for all ages to 70 years, reducing to 10% for 70-79 year olds;<sup>14, 16</sup>
- The employment rate was 94% in Australia and 96% in China;<sup>14, 15</sup>
- We used World Health Organization disability weights – 0.089 for moderate vision impairment, 0.314 for severe vision impairment, and 0.338 for blindness.<sup>17</sup>

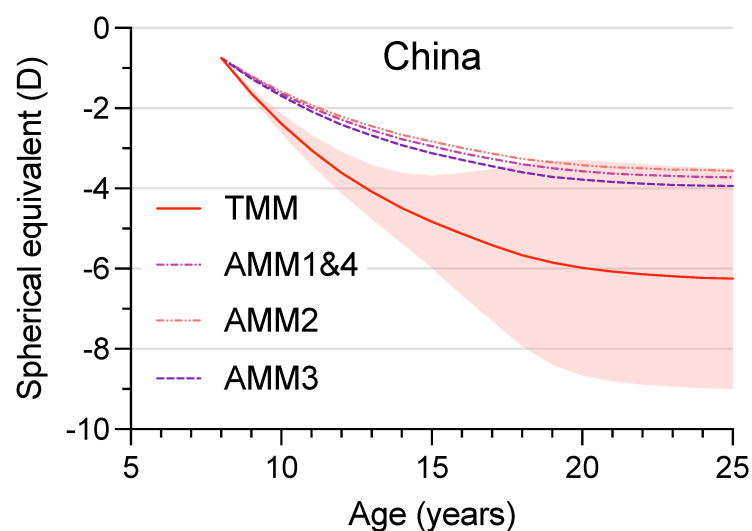
\*\* Two Chinese costs were flagged as outliers following our methodology: anti-myopia multifocal soft contact lenses used in active myopia management (AMM) option 3 were originally estimated to be almost 4 times more expensive in China than Australia, and customized free-form progressive addition spectacle lenses used after 45 years of age for simultaneous correction of myopia and presbyopia were originally estimated to be over 5 times more expensive in China than Australia. Following our methodology, we consulted a wider array of key informants. We were advised that anti-myopia multifocal soft contact lenses were rarely used in mainland China, probably due to both supply and demand issues. We replaced this outlier cost from mainland Chinese hospital systems with the retail cost of Coopervision MiSight anti-myopia multifocal soft contact lenses in Hong Kong Special Autonomous Region, China, which was similar to the Australian cost. We were advised that mainland Chinese hospital systems also rarely use customized free-form progressive addition spectacle lenses for myopic presbyopes. In response we added recommended retail prices for mainland Chinese optical shops from industry sources to the mix of prices and removed the highest hospital price.

**Figure S1.** Spherical equivalent progression from a starting point of an 8-year-old with -0.75D in Australia (A) and China (B), consisting of evidence-based progression from 8 to 17 years of age,<sup>18-20</sup> then exponential decay\* from 18 to 24 years of age. 95% confidence intervals are shown shaded for TMM (traditional myopia management) but omitted for clarity from AMM (active myopia management) options. AMM1 = low-dose atropine; AMM2 = anti-myopia spectacles; AMM3 = anti-myopia multifocal soft contact lenses; AMM4 = orthokeratology.

A)



B)



\* Annual spherical equivalent progression (17-25 years of age) =  $p * \text{EXP}(-0.33*y)$ , where  $p$  = the spherical equivalent progression of the 17-year-old, and  $y$  = the number of years after 17, up to a maximum of 7 (that is, at 24 years of age, the final year of progression).

**Table S2.** Myopia complications, protocols and vision impairment. (A) describes the complications and related protocols, while (B) and (C) provide estimates of vision impairment due to myopia in Australia and China respectively. MMD = myopic macular degeneration; POAG = primary open angle glaucoma; RRD = rhegmatogenous retinal detachment; MSVI = moderate and severe vision impairment.

**A) Myopia complications and related protocols**

When	While myopia-related complications are known to occur and to cause vision impairment in individuals younger than 55 years of age, <sup>21, 22</sup> population-level evidence suggests this is rare. <sup>23-28</sup> As such, we have assumed the potential for widespread myopia-related complications to start at 55 years of age. The upper age limit was taken as the life expectancy in each country – 83 years in Australia and 79 years in China. <sup>29</sup>
MMD	Presence of MMD was taken as zero for a spherical equivalent $>-1D$ then increased to 0.7% for $\leq -1D$ to $>-3D$ , 3.0% for $\leq -3D$ to $>-5D$ , 11.4% for $\leq -5D$ to $>-7D$ , 28.6% for $\leq -7D$ to $>-9D$ , and 52.4% for $\leq -9D$ . <sup>23</sup> The rate at which MMD needed treatment was taken as 0.1% when spherical equivalent $>-5D$ , and 11.6% for $\leq -5D$ . <sup>28</sup> MMD care followed evidence and accepted protocols. <sup>1, 11, 30-34</sup>
POAG	Myopia imparts increased risk for POAG. <sup>26, 35</sup> We represented the relative prevalence of POAG due to myopia as 0% for $>-1D$ , 2.7% of people with $\leq -1D$ to $>-3D$ , and 2.9% of people with $\leq -3D$ . <sup>24</sup> Glaucoma care followed evidence and accepted protocols. <sup>36, 37</sup>
RRD	Myopia imparts increased risk of vitreoretinal complications. <sup>26, 35, 38, 39</sup> Combining evidence on relative risk from myopia level, <sup>26, 40</sup> age and ethnicity, <sup>38, 41-43</sup> we estimated the relative chance of RRD occurring due to myopia between 55 and 83 years of age in Australia as 0% for $>-3D$ , 0.09% for $\leq -3$ to $>-6D$ , 1.8% for $\leq -6$ to $>-9D$ , 28.6% for $\leq -9$ to $>-15D$ , and 74.6% for $\leq -15D$ , and the chance of occurring between 55 and 79 years of age in China as 0% for $>-3D$ , 0.03% for $\leq -3$ to $>-6D$ , 0.8% for $\leq -6$ to $>-9D$ , 10.1% for $\leq -9$ to $>-15D$ , and 34.8% for $\leq -15D$ . Vitreoretinal care followed evidence and accepted protocols. <sup>44-52</sup>
VI	We added two low vision rehabilitation sessions per year spent with vision impairment, consisting of a combination of optometry, orthoptics, occupational therapy, and mobility instruction. <sup>1, 53</sup> Additionally, one magnifier, loupe or telescope every second year spent with vision impairment represented the range of assistive and adaptive device options. <sup>53</sup>

**B) Vision impairment due to myopia in Australia**

Spherical equivalent	Relative prevalence of vision impairment due to myopia			
	MSVI < 60yrs	MSVI $\geq$ 60yrs	Blind < 60yrs	Blind $\geq$ 60yrs
$\leq -0.50D$ to $>-3D$	0.00%	0.00%	0.00%	0.00%
$-3$ to $>-6D$	0.95%	1.03%	0.09%	0.10%
$\leq -6D$ to $>-10D$	2.94%	6.01%	0.29%	0.60%
$\leq -10D$	14.01%	28.88%	1.40%	3.20%

**C) Vision impairment due to myopia in China**

Spherical equivalent	Relative prevalence of vision impairment due to myopia			
	MSVI < 60yrs	MSVI $\geq$ 60yrs	Blind < 60yrs	Blind $\geq$ 60yrs
$\leq -0.50D$ to $>-3D$	0.00%	0.00%	0.00%	0.00%
$-3$ to $>-6D$	2.26%	2.45%	0.27%	0.29%
$\leq -6D$ to $>-10D$	7.01%	14.32%	0.84%	1.71%
$\leq -10D$	33.42%	38.10%	3.99%	9.10%

**Table S3.** Lifetime costs of myopia for five interventions in urban Australia (A) and China (B), at each discount rate, and providing cost type disaggregation details omitted from Figures 4, 5 and 6. TMM = traditional myopia management; AMM = active myopia management; AMM1 is low-dose atropine; AMM2 is anti-myopia spectacles; AMM3 is anti-myopia multifocal soft contact lenses; AMM4 is orthokeratology.

A) Australia

Estimates	European Australian without discounting					European Australian with annual discount of 3%					European Australian with annual discount of 5%				
Cost type	TMM	AMM1	AMM2	AMM3	AMM4	TMM	AMM1	AMM2	AMM3	AMM4	TMM	AMM1	AMM2	AMM3	AMM4
Ophthalmic exams	\$3,356	\$2,766	\$2,651	\$2,857	\$2,965	\$1,582	\$1,423	\$1,328	\$1,491	\$1,597	\$1,163	\$1,081	\$995	\$1,142	\$1,241
Optical corrections	\$11,043	\$9,454	\$9,268	\$10,088	\$8,673	\$4,678	\$4,134	\$3,998	\$4,654	\$3,447	\$3,165	\$2,831	\$2,712	\$3,303	\$2,198
Anti-myopia	\$0	\$2,037	\$1,260	\$5,746	\$3,228	\$0	\$1,789	\$1,107	\$5,048	\$2,836	\$0	\$1,651	\$1,022	\$4,659	\$2,617
Myopia-related complications	\$954	\$625	\$605	\$684	\$664	\$177	\$121	\$113	\$159	\$155	\$66	\$48	\$42	\$80	\$79
Related and productivity	\$3,028	\$1,995	\$1,756	\$2,107	\$2,569	\$1,000	\$898	\$733	\$929	\$1,402	\$2	\$664	\$519	\$683	\$1,129
Total	\$18,381	\$16,878	\$15,541	\$21,481	\$18,099	\$7,437	\$8,364	\$7,280	\$12,281	\$9,437	\$4,396	\$6,274	\$5,290	\$9,867	\$7,264

Lower limit	European Australian without discounting					European Australian with annual discount of 3%					European Australian with annual discount of 5%				
Cost type	TMM	AMM1	AMM2	AMM3	AMM4	TMM	AMM1	AMM2	AMM3	AMM4	TMM	AMM1	AMM2	AMM3	AMM4
Ophthalmic exams	\$2,279	\$2,279	\$2,201	\$2,332	\$2,504	\$1,180	\$1,180	\$1,111	\$1,227	\$1,378	\$900	\$900	\$837	\$944	\$1,083
Optical corrections	\$7,058	\$7,058	\$6,842	\$7,247	\$6,586	\$3,102	\$3,102	\$2,913	\$3,269	\$2,688	\$2,128	\$2,128	\$1,954	\$2,282	\$1,746
Anti-myopia	\$0	\$1,109	\$834	\$3,552	\$3,125	\$0	\$974	\$732	\$3,121	\$2,745	\$0	\$899	\$676	\$2,880	\$2,533
Myopia-related complications	\$549	\$408	\$404	\$440	\$440	\$104	\$80	\$76	\$109	\$109	\$40	\$32	\$29	\$58	\$58
Related and productivity	\$1,706	\$933	\$865	\$966	\$1,237	\$567	\$472	\$413	\$502	\$740	\$1	\$361	\$306	\$389	\$608
Total	\$11,592	\$11,786	\$11,145	\$14,538	\$13,892	\$4,953	\$5,809	\$5,246	\$8,227	\$7,660	\$3,070	\$4,321	\$3,802	\$6,553	\$6,029

Upper limit	European Australian without discounting					European Australian with annual discount of 3%					European Australian with annual discount of 5%				
Cost type	TMM	AMM1	AMM2	AMM3	AMM4	TMM	AMM1	AMM2	AMM3	AMM4	TMM	AMM1	AMM2	AMM3	AMM4
Ophthalmic exams	\$4,555	\$3,388	\$3,253	\$3,481	\$3,557	\$2,054	\$1,755	\$1,636	\$1,836	\$1,903	\$1,480	\$1,333	\$1,223	\$1,408	\$1,470
Optical corrections	\$15,745	\$12,031	\$11,970	\$13,076	\$10,916	\$6,605	\$5,284	\$5,231	\$6,202	\$4,305	\$4,471	\$3,625	\$3,575	\$4,472	\$2,721
Anti-myopia	\$0	\$3,359	\$1,726	\$8,464	\$3,461	\$0	\$2,951	\$1,517	\$7,437	\$3,041	\$0	\$2,724	\$1,400	\$6,863	\$2,806
Myopia-related complications	\$2,578	\$989	\$980	\$1,037	\$1,037	\$458	\$188	\$181	\$231	\$231	\$161	\$73	\$66	\$112	\$112
Related and productivity	\$5,074	\$4,315	\$3,941	\$4,265	\$5,422	\$1,623	\$1,652	\$1,323	\$1,608	\$2,624	\$3	\$1,154	\$850	\$1,113	\$2,051
Total	\$27,952	\$24,083	\$21,871	\$30,323	\$24,393	\$10,740	\$11,831	\$9,888	\$17,314	\$12,104	\$6,115	\$8,908	\$7,115	\$13,968	\$9,160

## B) China

Estimates	Han Chinese without discounting					Han Chinese with annual discount of 3%					Han Chinese with annual discount of 5%				
Cost type	TMM	AMM1	AMM2	AMM3	AMM4	TMM	AMM1	AMM2	AMM3	AMM4	TMM	AMM1	AMM2	AMM3	AMM4
Ophthalmic exams	\$1,862	\$994	\$939	\$1,133	\$974	\$805	\$508	\$468	\$569	\$490	\$552	\$381	\$347	\$424	\$365
Optical corrections	\$18,940	\$9,301	\$10,304	\$11,303	\$10,286	\$6,504	\$3,458	\$4,549	\$4,567	\$4,323	\$3,918	\$2,181	\$3,229	\$3,075	\$2,979
Anti-myopia	\$0	\$141	\$2,203	\$5,080	\$6,542	\$0	\$124	\$1,936	\$4,463	\$5,748	\$0	\$114	\$1,786	\$4,119	\$5,304
Myopia-related complications	\$1,133	\$462	\$444	\$517	\$475	\$210	\$88	\$88	\$107	\$100	\$73	\$32	\$30	\$45	\$43
Related and productivity	\$1,701	\$628	\$545	\$784	\$646	\$488	\$275	\$217	\$315	\$292	\$274	\$199	\$148	\$220	\$215
Total	\$23,636	\$11,526	\$14,434	\$18,818	\$18,923	\$8,006	\$4,453	\$7,253	\$10,023	\$10,952	\$4,817	\$2,908	\$5,539	\$7,884	\$8,905

Lower limit	Han Chinese without discounting					Han Chinese with annual discount of 3%					Han Chinese with annual discount of 5%				
Cost type	TMM	AMM1	AMM2	AMM3	AMM4	TMM	AMM1	AMM2	AMM3	AMM4	TMM	AMM1	AMM2	AMM3	AMM4
Ophthalmic exams	\$452	\$339	\$327	\$351	\$340	\$213	\$182	\$171	\$192	\$182	\$155	\$140	\$130	\$149	\$140
Optical corrections	\$7,483	\$4,455	\$6,139	\$5,120	\$4,640	\$2,685	\$1,798	\$3,279	\$2,383	\$1,962	\$1,655	\$1,176	\$2,542	\$1,715	\$1,326
Anti-myopia	\$0	\$77	\$2,169	\$3,618	\$2,423	\$0	\$67	\$1,906	\$3,178	\$2,129	\$0	\$62	\$1,759	\$2,933	\$1,964
Myopia-related complications	\$392	\$314	\$313	\$321	\$320	\$73	\$59	\$58	\$65	\$64	\$26	\$21	\$20	\$27	\$26
Related and productivity	\$194	\$57	\$76	\$60	\$64	\$54	\$30	\$47	\$33	\$37	\$0	\$23	\$39	\$26	\$29
Total	\$8,521	\$5,241	\$9,025	\$9,469	\$7,788	\$3,026	\$2,136	\$5,461	\$5,851	\$4,374	\$1,836	\$1,422	\$4,489	\$4,850	\$3,486

Upper limit	Han Chinese without discounting					Han Chinese with annual discount of 3%					Han Chinese with annual discount of 5%				
Cost type	TMM	AMM1	AMM2	AMM3	AMM4	TMM	AMM1	AMM2	AMM3	AMM4	TMM	AMM1	AMM2	AMM3	AMM4
Ophthalmic exams	\$3,523	\$1,960	\$1,891	\$2,026	\$1,914	\$1,499	\$930	\$869	\$988	\$890	\$1,015	\$677	\$620	\$730	\$639
Optical corrections	\$30,617	\$20,468	\$21,113	\$21,551	\$22,139	\$10,776	\$7,165	\$7,732	\$8,117	\$8,634	\$6,637	\$4,386	\$4,909	\$5,264	\$5,741
Anti-myopia	\$0	\$231	\$2,245	\$6,956	\$11,682	\$0	\$203	\$1,973	\$6,112	\$10,264	\$0	\$187	\$1,820	\$5,640	\$9,472
Myopia-related complications	\$1,624	\$539	\$535	\$1,085	\$560	\$303	\$106	\$103	\$222	\$124	\$107	\$40	\$38	\$92	\$57
Related and productivity	\$3,752	\$1,586	\$1,342	\$1,682	\$1,705	\$1,130	\$710	\$496	\$733	\$815	\$4	\$520	\$323	\$531	\$617
Total	\$39,517	\$24,784	\$27,126	\$33,300	\$38,000	\$13,707	\$9,115	\$11,172	\$16,172	\$20,727	\$7,762	\$5,810	\$7,709	\$12,257	\$16,526



## References for Supplementary Results (online-only)

1. Australian Government, Department of Health. Medicare Benefits Schedule (MBS) Online (including Medicare Benefits Schedule Book 2019). Accessed 13 June 2019, Available from: <http://www9.health.gov.au/mbs/fullDisplay.cfm?type=note&q=AN.0.10&qt=noteID&criteria=optometry>.
2. Optical Distributors and Manufacturers Association. EyeTalk Reference Guide, April 2019 ed. Terrey Hills, NSW, Australia: ODMA, 2019.
3. Victorian State Government, Australian College of Optometry. Victorian Eyecare Service. Melbourne, VIC, Australia. Accessed 1 November 2020, available from <https://www.aco.org.au/victorian-eyecare-service/>.
4. Fricke T. Informal survey of low-dose atropine prices at major Australian compounding pharmacies (<https://customcarepharmacy.com.au/>, <https://sladepharmacy.com.au/>, <http://www.pharmacysmart.com.au/>). 2020.
5. Orthokeratology Society of Australia. Key informant advice. 2020.
6. Australian Government, Department of Health. PBS - The Pharmaceutical Benefits Scheme. Canberra, Australia: Australian Government. Accessed 23 June 2020, Available from: <https://www.pbs.gov.au/browse/medicine-listing>.
7. Australian Taxation Office. Travel expenses. Canberra, ACT, Australia: Australian Government. Accessed 18 July 2019, Available from: <https://www.ato.gov.au/Business/Income-and-deductions-for-business/Deductions/Deductions-for-motor-vehicle-expenses/Cents-per-kilometre-method/>.
8. Healy E, Kiely PM, Arunachalam D. Optometric supply and demand in Australia: 2011-2036. *Clinical Exp Optom* 2015;98(3):273-82.
9. Kiely PM, Chakman J. Optometric practice in Australian standard geographical classification—remoteness areas in Australia, 2010. *Clinical and Experimental Optometry* 2011;94(5):468-77.
10. Australian Bureau of Statistics. ABS statistics on Australian earnings and work hours. Belconnen, ACT, Australia: Australian Bureau of Statistics. Accessed 23 October 2020, Available from: <https://www.abs.gov.au/statistics/labour/earnings-and-work-hours>.
11. Zhongshan Ophthalmic Center. Zhongshan Ophthalmic Center; Sun Yat-Sen University. Guangzhou, Guangdong, China: ZOC. Accessed 1 November 2020, Available from: <http://www.gzzoc.com/>.
12. Aier Eye Hospital. About Aier Eye Hospital Group. Guangzhou, Guangdong, China: Aier Eye Hospital. Accessed 1 November 2020, Available from: <http://en.aierchina.com/about>.
13. National Bureau of Statistics of China. Households' income and consumption expenditure in the first quarter of 2020. Beijing, China: National Bureau of Statistics of China, 2020. Release issued 20 April 2020, Available from: [http://www.stats.gov.cn/english/PressRelease/202004/t20200420\\_1739771.html](http://www.stats.gov.cn/english/PressRelease/202004/t20200420_1739771.html).
14. World Bank. World Development Indicators. Washington DC, USA: World Bank, 2017; Accessed 23 March 2020, Available from: <http://data.worldbank.org/products/wdi>.
15. Australian Bureau of Statistics. Labour force Australia. Belconnen, ACT, Australia: Australian Bureau of Statistics, Accessed 14 August 2019, Available from: <https://www.abs.gov.au/statistics/labour/employment-and-unemployment/labour-force-australia/latest-release>.
16. United Nations. Labour force participation rate (ILO\_KILM database 5th edition) from UNdata. Accessed 9 November 2020, Available from: <https://data.un.org/Data.aspx?q=labor+force+participation&d=GenderStat&f=inID%3a106>.
17. World Health Organization. WHO methods and data sources for global burden of disease estimates 2000-2015 (Global Health Estimates Technical Paper WHO/HIS/IER/GHE/2017.1). Geneva: WHO Department of Information Evidence and Research (available from [http://www.who.int/gho/mortality\\_burden\\_disease/en/index.html](http://www.who.int/gho/mortality_burden_disease/en/index.html)), 2017.

18. Holden B, Sankaridurg P, Smith E, et al. Myopia, an underrated global challenge to vision: where the current data takes us on myopia control. *Eye (Lond)* 2014;28(2):142-6.
19. Sankaridurg PR, Holden BA. Practical applications to modify and control the development of ametropia. *Eye (Lond)* 2014;28(2):134-41.
20. Donovan L, Sankaridurg P, Ho A, et al. Myopia progression rates in urban children wearing single-vision spectacles. *Optometry Vis Sci* 2012;89(1):27-32.
21. Avisar R, Friling R, Snir M, et al. Estimation of prevalence and incidence rates and causes of blindness in Israel, 1998-2003. *Isr Med Assoc J* 2006;8:880 - 1.
22. Farber MD. National Registry for the Blind in Israel: estimation of prevalence and incidence rates and causes of blindness. *Ophthalmic Epidemiol* 2003;10(4):267-77.
23. Vongphanit J, Mitchell P, Wang JJ. Prevalence and progression of myopic retinopathy in an older population. *Ophthalmology* 2002;109(4):704-11.
24. Mitchell P, Hourihan F, Sandbach J, Jin Wang J. The relationship between glaucoma and myopia: The Blue Mountains Eye Study. *Ophthalmology* 1999;106(10):2010-5.
25. Nirmalan PK, Katz J, Robin AL, et al. Prevalence of vitreoretinal disorders in a rural population of southern India: the Aravind Comprehensive Eye Study. *Arch Ophthalmol* 2004;122(4):581-6.
26. Flitcroft DI. The complex interactions of retinal, optical and environmental factors in myopia aetiology. *Prog Retin Eye Res* 2012;31(6):622-60.
27. Tideman JW, Snabel MC, Tedja MS, et al. Association of axial length with risk of uncorrectable visual impairment for Europeans with myopia. *JAMA Ophthalmol* 2016;134(12):1355-63.
28. Wong YL, Zhu X, Tham YC, et al. Prevalence and predictors of myopic macular degeneration among Asian adults: pooled analysis from the Asian Eye Epidemiology Consortium. *Br J Ophthalmol* 2021;105(8):1140-8.
29. United Nations. United Nations World Population Prospects estimate from UNdata. United Nations, 2020. Accessed 13 November 2020, Available from: <https://data.un.org/Data.aspx?q=life+expectancy&d=GenderStat&f=inID%3a36>.
30. Cheung CMG, Arnold JJ, Holz FG, et al. Myopic choroidal neovascularization: review, guidance, and consensus statement on management. *Ophthalmology* 2017;124(11):1690-711.
31. Chan NS, Teo K, Cheung CM. Epidemiology and diagnosis of myopic choroidal neovascularization in Asia. *Eye Contact Lens* 2016;42(1):48-55.
32. Lai TY, Cheung CM. Myopic choroidal neovascularization: diagnosis and treatment. *Retina* 2016;36(9):1614-21.
33. Leveziel N, Caillaux V, Bastuji-Garin S, et al. Angiographic and optical coherence tomography characteristics of recent myopic choroidal neovascularization. *Am J Ophthalmol* 2013;155(5):913-9.
34. Kasahara K, Moriyama M, Morohoshi K, et al. Six-year outcomes of intravitreal Bevacizumab for choroidal neovascularization in patients with pathologic myopia. *Retina* 2017;37(6):1055-64.
35. Flitcroft DI, He M, Jonas JB, et al. IMI - Defining and classifying myopia: a proposed set of standards for clinical and epidemiologic studies. *Invest Ophthalmol Vis Sci* 2019;60(3):M20-M30.
36. Australian Government National Health and Medical Research Council. NH&MRC Guidelines for the screening, prognosis, diagnosis, management and prevention of glaucoma. Canberra, ACT, Australia: Commonwealth of Australia, 2010.
37. Tang W, Zhang F, Liu K, Duan X. Efficacy and safety of prostaglandin analogues in primary open-angle glaucoma or ocular hypertension patients: A meta-analysis. *Medicine (Baltimore)* 2019;98(30):e16597.
38. Mitry D, Charteris DG, Fleck BW, et al. The epidemiology of rhegmatogenous retinal detachment: geographical variation and clinical associations. *Br J Ophthalmol* 2010;94(6):678-84.
39. Kim MS, Park SJ, Park KH, Woo SJ. Different mechanistic association of myopia with rhegmatogenous retinal detachment between young and elderly patients. *Biomed Res Int* 2019;2019:5357241.

40. Ogawa A, Tanaka M. The relationship between refractive errors and retinal detachment--analysis of 1,166 retinal detachment cases. *Jpn J Ophthalmol* 1988;32(3):310-5.
41. Wong TY, Tielsch JM, Schein OD. Racial difference in the incidence of retinal detachment in Singapore. *Arch Ophthalmol* 1999;117(3):379-83.
42. Polkinghorne PJ, Craig JP. Northern New Zealand Rhegmatogenous Retinal Detachment Study: epidemiology and risk factors. *Clinical & Experimental Ophthalmology* 2004;32(2):159-63.
43. Li X, Beijing Rhegmatogenous Retinal Detachment Study Group. Incidence and epidemiological characteristics of rhegmatogenous retinal detachment in Beijing, China. *Ophthalmology* 2003;110(12):2413-7.
44. Wakabayashi T, Oshima Y, Fujimoto H, et al. Foveal microstructure and visual acuity after retinal detachment repair: imaging analysis by Fourier-domain optical coherence tomography. *Ophthalmology* 2009;116(3):519-28.
45. Stirpe M, Heimann K. Vitreous changes and retinal detachment in highly myopic eyes. *Eur J Ophthalmol* 1996;6(1):50-8.
46. Heimann H, Bartz-Schmidt KU, Bornfeld N, et al. Scleral buckling versus primary vitrectomy in rhegmatogenous retinal detachment: a prospective randomized multicenter clinical study. *Ophthalmology* 2007;114(12):2142-54.
47. Sun Q, Sun T, Xu Y, et al. Primary vitrectomy versus scleral buckling for the treatment of rhegmatogenous retinal detachment: a meta-analysis of randomized controlled clinical trials. *Curr Eye Res* 2012;37(6):492-9.
48. Brucker AJ, Hopkins TB. Retinal detachment surgery: the latest in current management. *Retina* 2006;26(6 Suppl):S28-33.
49. Jackson TL, Donachie PH, Sallam A, et al. United Kingdom National Ophthalmology Database Study of Vitreoretinal Surgery: Report 3, retinal detachment. *Ophthalmology* 2014;121(3):643-8.
50. Jackson TL, Donachie PH, Sparrow JM, Johnston RL. United Kingdom National Ophthalmology Database Study of Vitreoretinal Surgery: Report 1, case mix, complications, and cataract. *Eye (Lond)* 2013;27(5):644-51.
51. Liao L, Zhu XH. Advances in the treatment of rhegmatogenous retinal detachment. *Int J Ophthalmol* 2019;12(4):660-7.
52. Do DV, Gichuhi S, Vedula SS, Hawkins BS. Surgery for post-vitrectomy cataract. *Cochrane Database Syst Rev* 2013(12):CD006366.
53. Markowitz SN. Principles of modern low vision rehabilitation. *Can J Ophthalmol* 2006;41(3):289-312.