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COMMENT

Triple bottom line: sustainability in amblyopia care

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Sustainability of healthcare is one of the guiding principles of Vision 2020 on the path to eliminating avoidable blindness[1] and is actively promoted by the Royal College of Ophthalmologists. Sustainability involves balancing economic, environmental, and social outcomes and demands; this is the 'triple aim divided by the triple bottom line'. High-value healthcare should incur minimal economic and environmental impact. Previous work has used this framework to evaluate cataract surgery.[2,3]

Attending hospital eye services (HES) can be difficult for families who often have several children to look after. In the amblyopia treatment pathway, many appointments for amblyopia treatment can safely be provided by orthoptist-led clinics. In our setting, protocols allow our HES and the orthoptist-led community clinics (CCs) offered by the local community healthcare provider to work seamlessly, so that most amblyopia appointments can take place in CCs. In addition to our regular clinical audits, we aimed to measure the impact of service provision on the 'triple bottom line'.

We compared the distance families travel to attend the HES ($n=92$) and three CCs ($n=71$), and the time spent in the clinic (appointment or arrival time to departure time, using the shorter of the two), during one week in November 2015 and one week in March/April 2016.

The median distance families travelled to the HES clinic was 6.4 miles (interquartile range IQR 2.5 – 12.4), and to a CC 3.7 miles (IQR 1.1 – 5.1) (Figure 1, Table 1). The median time in clinic was 82 min for HES (IQR 55 to 107) and 20 min

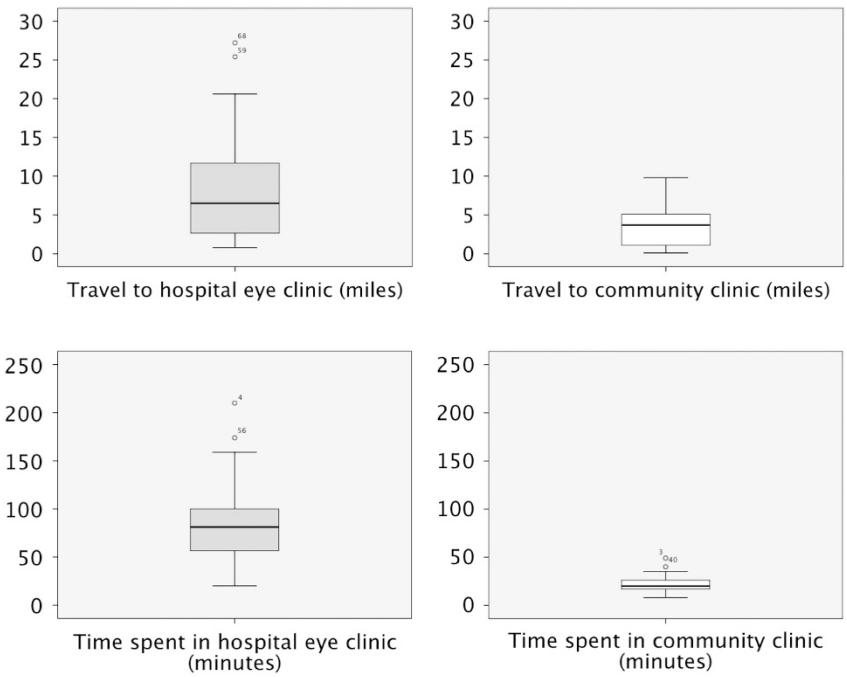

Figure 1 Top: The median distance families travelled to the hospital eye clinic was 6.4 miles, with an interquartile range (IQR) of 2.5 – 12.4 miles, whereas median travel to a local community clinic was 3.7 miles, with less variability reflected in a narrower IQR of 1.1 – 5.1 miles. Bottom: The median time families spent in a hospital eye clinic was 82 min (IQR 55 – 107 min), and that in a community eye clinic 20 min (IQR 17 – 26 min).

Table 1 Variability in the distance travelled to the hospital eye clinic and (though to a lesser degree) to the community clinics between the two observation periods in November 2015 and April 2016

Clinic	*Nov-15*		*Apr-16*		*Combined data*	
	Hospital eye clinic	*Community eye clinic*	*Hospital eye clinic*	*Community eye clinic*	*Hospital eye clinic*	*Community eye clinic*
n	42	35	50	36	92	71
Travel distance (miles): median	4.9	4.1	9	3.2	6.4	3.7
Interquartile range	2.3 – 10.1	0.8 – 5.1	2.9 – 13.8	1.1 – 5.2	2.5 – 12.4	1.1 – 5.1
Time in clinic (min): median	84	20	77	20	82	20
Interquartile range	65.5 – 102	18 – 25	44 – 113	16 – 28	55 – 107	17 – 26

Time spent in clinics was fairly constant.

(IQR 17 – 26) for CCs. The tariff to commissioners for HES follow-up appointments is £100, and that for CC visits is £55. Local protocols can set up a safe, family-friendly, effective and cost-efficient amblyopia pathway. Not all HES visits can be transferred to CC, but their number can be reduced. Clinical audits monitor quality of services. Further evaluations should include a larger number of sites and families to explore economic, ecological and societal impact further, for example by calculating the carbon footprint by including building energy use, travel data of staff, and patients and procurement activity data.

Conflict of interest

The authors declare no conflict of interest.

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Disclaimer

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