

# A profile of low vision services in England: the Low Vision Service Model Evaluation (LOVSME) project

C Dickinson<sup>1</sup>, P Linck<sup>2</sup>, R Tudor-Edwards<sup>2</sup>, A Binns<sup>3</sup>,  
C Bunce<sup>4</sup>, R Harper<sup>5</sup>, J Jackson<sup>6</sup>, J Lindsay<sup>6</sup>,  
A Suttie<sup>7</sup>, J Wolffsohn<sup>8</sup>, M Woodhouse<sup>3</sup>  
and T Margrain<sup>3</sup>

*Eye* (2011) 25, 829–831; doi:10.1038/eye.2011.112

The variable quality of provision of low vision (LV) care in the UK provoked considerable discussion in the 1990s. Recognising weaknesses such as fragmentation in service delivery led to an emphasis more recently on developing services that prioritise multi-disciplinary working (eg, Reeves *et al.*<sup>1</sup> Hinds *et al.*<sup>2</sup> and Court *et al.*<sup>3</sup>). LV services are critical for those needing help following sight loss, and it is likely that they now collectively provide more than 155 000 appointments per year in the UK.<sup>4</sup>

Although there is agreement on the components of a comprehensive service (Figure 1), no standard model of delivery currently exists in the UK.<sup>5</sup> A variety of providers deliver rehabilitation using different strategies to operate at the interface between the health, social care and voluntary sectors.

The LOVSME project aimed to profile selected LV services against previously developed criteria.<sup>5,6</sup> Services were selected for breadth and diversity, rather than for an in-depth evaluation of particular models of care.

Seven LV service providers were approached: two 'integrated' or 'one-stop shop' services; two hospital services staffed by optometrists; one hospital service staffed by orthoptists and nurses; one externally purchased and multi-agency service; and one Social Services provider. All services were based in England, although they were well spread geographically and varied in the nature of their catchment areas. They represent the entire range of LV care and all of its best aspects.

The profiling exercise took place during 2009 and involved identification of a lead provider as a contact for each site; completion of a

preliminary questionnaire giving an overview of the service; completion of detailed questionnaires by the providers of each element of the service; a visit by members of the research team to the service to meet with those professionals and joint completion of an agreed visit report.

There was no attempt to judge the quality or effectiveness of these services. Rather, a comprehensive description of the selected services was obtained, documenting, for example, their methods of access, waiting times, the professionals involved, intensity and duration of service, and referral pathways to other agencies. Staffing levels and costs, the audit tools/outcome measures in use, and examples of good practice, were determined.

A secondary result of the exercise was that a Low Vision Services Assessment Framework was developed as a tool to help service providers evaluate different aspects of their service, and to establish a baseline for future service development. This also drew on the recommendations of the Low Vision Services Consensus Group<sup>6</sup> and the Low Vision Working Group,<sup>5</sup> and a systematic review of existing literature. It comprises 15 sets of questions covering key aspects of service provision, in terms of both the services on offer (eg, provision of LV aids; assessment of psychological needs) and supporting infrastructure (eg, buildings; staffing; record-keeping).

Despite their inherent variety, all the services adopted a multi-disciplinary approach to LV service delivery. However, none of them entirely fulfilled all the desirable criteria of a comprehensive service. The significance of these apparent deficiencies is unknown, as objective assessments of the effectiveness and

<sup>1</sup>University of Manchester, Manchester, England, UK

<sup>2</sup>Bangor University, Bangor, Wales, UK

<sup>3</sup>Cardiff School of Optometry and Vision Sciences, Cardiff University, Cardiff, Wales, UK

<sup>4</sup>Moorfields Eye Hospital, London, England, UK

<sup>5</sup>Manchester Royal Eye Hospital, Manchester, England, UK

<sup>6</sup>Royal Victoria Hospital, Belfast, North Ireland, UK

<sup>7</sup>Fife Society for the Blind, Fife, Scotland, UK

<sup>8</sup>Aston University, Birmingham, England, UK

Correspondence:  
T Margrain,  
Cardiff School of Optometry  
and Vision Sciences,  
Cardiff University,  
Maindy Road, Cardiff,  
Wales CF24 4LU, UK  
Tel: 029 2087 6118;  
Fax: 029 2087 4859.  
E-mail: margrainth@  
cardiff.ac.uk



**Figure 1** Components of a comprehensive low vision service.

cost-effectiveness of the different services studied are not currently available. Services using a multi-agency approach appeared to have risen to the challenge of working together and communicating imaginatively to provide continuity of care. Although the 'one-stop shop' has great appeal in this regard, the concept of a single-site, fully comprehensive service is probably an illusion: all aspects can never practically be provided within a single location. For example, a hospital-based service is not well-placed to offer guidance on, or training in the use of, electronic aids to daily living; while a community-based one-stop shop is unlikely to offer a full ophthalmological work-up. Cost-effectiveness may also be an issue: it is possible that community-based 'one-stop shops' lead to at least partial duplication of a local hospital-based service.

The typical staffing requirement for carrying out LV assessments was 1 full-time equivalent (FTE) per 1200 appointments; the typical Social Services provision was 1 FTE per 100 new service users (SUs) per year. Additional services such as counselling required extra staff, and there was also a requirement for administrative and clerical assistance.

Our integrated economic study found that the highest cost element in providing LV services was staffing. Annual costs for 2007/8 varied from £439 875 for an integrated service to £224 392 for an externally purchased and multi-agency service, compared with an estimated cost of £263 500 for a traditional hospital service (excluding local authority costs). The annual number of SUs seen ranged from 450 in an integrated service to 1600 in a hospital service. Estimates for the cost per SU consultation in these examples varied between £181 and £489.

Although auditing procedures were in place in all services, they typically consisted of a simple internal audit of SU numbers. All providers obtained feedback from SU groups, and several had used it to change their procedures. Only one service routinely performed clinical audit of effectiveness, in the form of self-report quality of life data, but these had not been published and it was unclear how they were used.

A limitation of this evaluation was that all the information was given by service providers rather than SUs. Although referral between providers in the rehabilitation pathway was documented, no information

was available about the effectiveness of initial entry to the pathway(s).

It is not yet known which of the different service models is most effective, or cost effective, in terms of the impact on quality of life, functional performance, and psychological adaptation to the visual impairment of SUs. This profiling exercise together with the Assessment Framework will, however, inform future research on different models of care.

The full text of the report including the Assessment Framework is provided as supplementary material in the online version of the journal.

#### Conflict of interest

The authors declare no conflict of interest.

#### Acknowledgements

This study was undertaken on behalf of the RNIB as part of the Low Vision Service Model Evaluation (LOVSME) project. The LOVSME team expresses its sincere thanks to all those involved with the services participating in this study for their time and effort.

#### Advisory panel

Mary Bairstow, Vision 2020 UK; Andy Fisher, Focal Point UK; Alison Handford, RNIB; Lindsey Hughes, British

and Irish Orthoptic Society; Lisa Hughes, Service User; Marek Karas, Optometric Advisor; Robert W Massof, Hopkins University School of Medicine; Pritti Mehta, RNIB; Anita Morrison-Fokken, FOCUS Birmingham; Phillipa Simpkins, RNIB; Joan A Stelmack, Edward E Hines Jr VA Hospital, Illinois; Gaynor Tromans, FOCUS Birmingham.

#### References

- 1 Reeves B, Harper RA, Russell WB. Enhanced low vision rehabilitation for people with age related macular degeneration: a randomised controlled trial. *Br J Ophthalmol* 2004; **88**: 1443–1449.
- 2 Hinds A, Sinclair A, Park J, Suttie A, Paterson H, Macdonald M. Impact of an interdisciplinary low vision service on the quality of life of low vision patients. *Br J Ophthalmol* 2003; **87**: 1391–1396.
- 3 Court H, Ryan B, Bunce B, Margrain TH. How effective is the new community-based Welsh low vision service? *Br J Ophthalmol* 2011; **95**: 178–184.
- 4 Culham LE, Ryan B, Jackson AJ, Hill AR, Jones B, Miles C *et al.* Low vision services for vision rehabilitation in the United Kingdom. *Br J Ophthalmol* 2002; **86**(7): 743–747.
- 5 Low Vision Working Group. *Recommended Standards for Low Vision Services*. NHS Eye Care Services Programme Document. 2007.
- 6 Low Vision Services Consensus Group. *Low Vision Services: Recommendations for Future Service Delivery in the UK*. RNIB: London, 1999.

Supplementary Information accompanies the paper on Eye website (<http://www.nature.com/eye>)