

# Management of visual problems after stroke: a survey of current practice in Scotland

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## Introduction

Visual problems after stroke are common; they include visual field loss, eye movement disorders and spatial neglect. They can impact on participation in rehabilitation, functional ability and quality of life yet services available to patients with visual problems are presently inconsistent.

### Aim:

To investigate how visual problems are currently assessed and managed in Scottish stroke in-patient settings.

## Methods

**Design:** postal survey

**Population:** one occupational therapist (OT) from every acute or rehabilitation in-patient ward in Scotland with stroke-dedicated beds.

**Questions:** designed to establish basic information about setting, and specific information about the management of visual problems (including assessments, interventions, health professionals involved and referrals).

**Method:** we employed procedures known to maximise response rates\*, including:

1. Identifying and contacting by phone an appropriate OT from each stroke care setting, and telephoning to ask their agreement to participate.
2. Circulation of a pre-notification letter
3. Follow-up of all non-respondents with a second letter and survey.
4. Using mainly fact-based questions, limiting the length, using first class postage and ensuring anonymity.

\* Edwards PJ, Roberts I, Clarke MJ, DiGiuseppi C, Wentz R, Kwan I, Cooper R, Felix LM, Pratap S. Methods to increase response to postal and electronic questionnaires. *Cochrane Database of Systematic Reviews* 2009, Issue 3. Art. No.: MR000008. DOI: 10.1002/14651858.MR000008.pub4.

**Table 1: Percentage of each intervention used as a proportion of all of the treatments for that visual problem**

Visual problem	Proportion of Interventions					
	Scanning Training *	Patching & Prisms	ADL Training	Reading Aids & Magnifiers	Provide Information	Environmental Modification
Visual Field	17%	3%	25%	9%	16%	23%
Eye Movement	17%	2%	28%	4%	19%	25%
Visual Neglect	16%	3%	31%	4%	17%	22%

\* average of computer-based and non-computer based

## Results

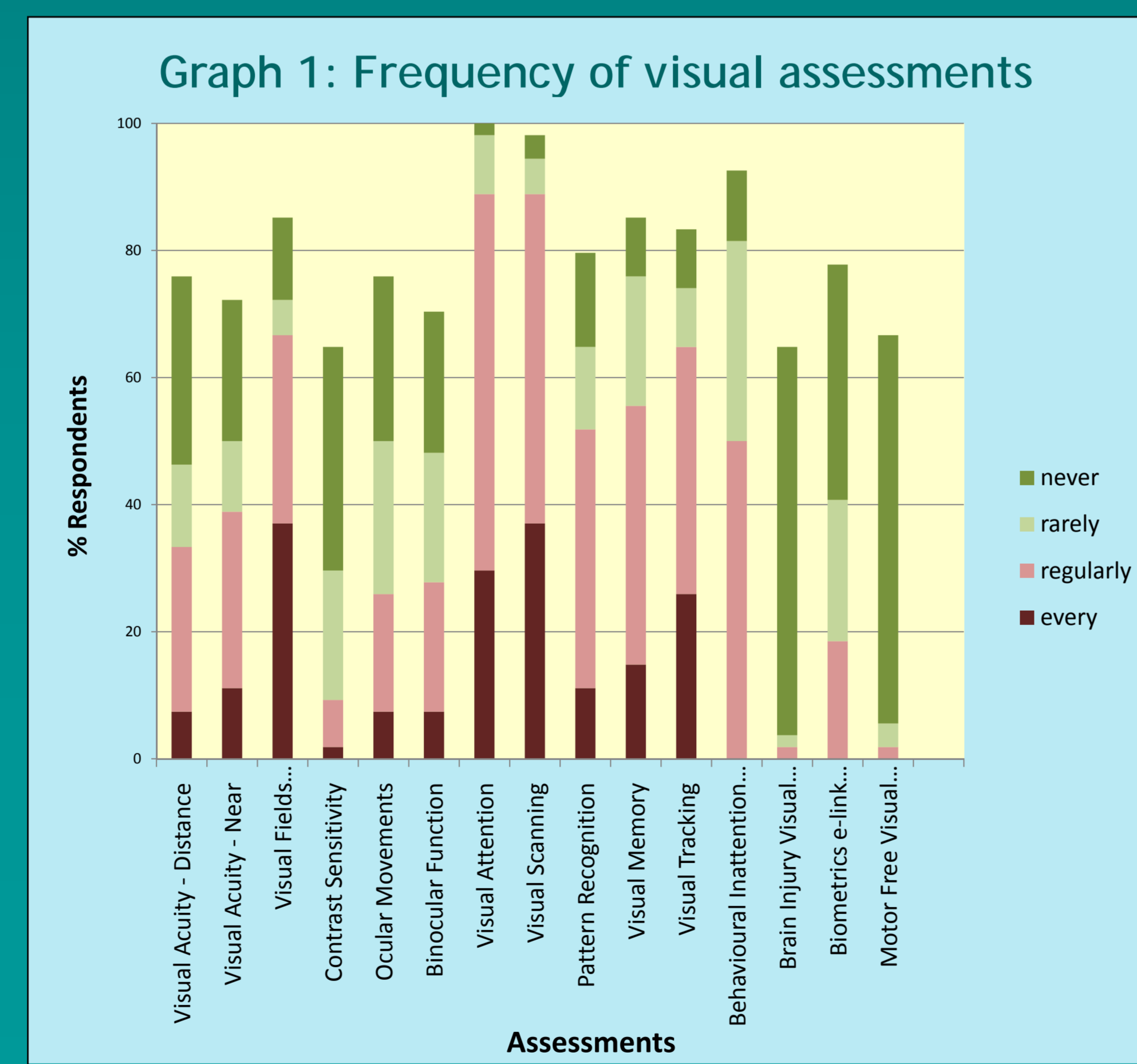
- Surveys were sent to 61 OTs, from every in-patient stroke care setting in Scotland.
- There was a response rate of 90% (55/61).
- 31 respondents were stroke specialist OTs and 23 non-specialist OTs.

### Protocols

- Protocols for visual assessment or management are available in 9% of stroke in-patient settings.
- 82% of stroke care settings ensure patients have their correct spectacles with them.

### Assessment

Visual assessment was carried out at the first OT assessment by 69% of respondents, and within 2 weeks of the stroke by 67% of respondents. The frequency of use of specific tests is shown in [Graph 1](#).



## Management

- 82% of OTs reported they would treat patients with visual neglect.
- 69% of OTs reported they would treat patients with visual field loss.
- 11% of OTs reported they would treat patients with eye movement disorders, with 17% of respondents not answering the question on management of eye movement disorders. One respondent commented that they had "never experienced" a patient with such a disorder.

OTs reported that they were twice as likely to refer to an ophthalmologist than an orthoptist for patients with visual field and eye movement problems.

15% more stroke specialists than non-specialists reported delivering treatment to patients for visual field loss and visual neglect.

The interventions used by OTs treating visual problems are broken down by the nature of the problem in [Table 1](#). The most frequent treatments delivered were ADL training and environmental adaptation.

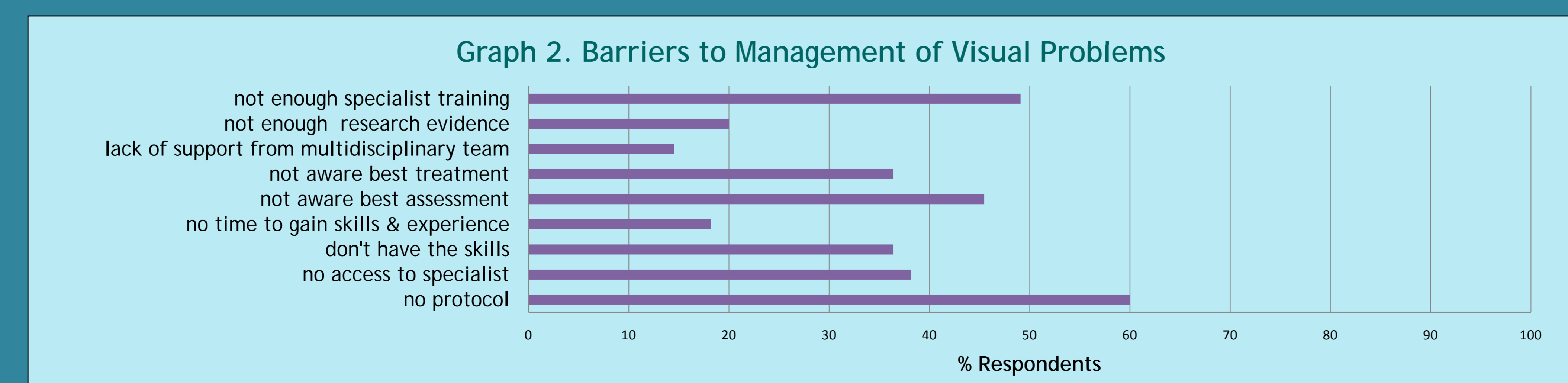
### Research priorities

Of the 33 respondents to the question "What are your main priorities for research in this area" the most frequent responses were:

1. Most effective / best treatments (70%)
2. Most effective / best assessments (43%)
3. Protocol Development (18%)
4. Referral Pathways (6%)

### Barriers to management of visual problems

The barriers reported by OTs are shown in [Graph 2](#).



## Discussion

The results of this survey lead us to propose :

### 1. There is an urgent need for the introduction of appropriate evidence-based protocols for the management of visual problems.

The vast majority of stroke care settings are reported to have no protocol for management of visual problems. Respondents highlighted this as a major barrier to management of these patients.

### 2. Education and training would appear essential to ensure that patients are provided with appropriate assessments, management strategies and referrals to relevant eye care professionals.

There is evidence that OTs are most likely to assess for and provide treatment interventions for visual neglect. Relatively few OTs reported assessments for or treatments for eye movement problems. Similar treatment interventions appear to be used regardless of the type of visual problems that a patient presents with. This evidence suggests that the treatments delivered may not be appropriate for the problem.

### 3. High quality research is required to provide evidence for the best assessment and treatments to use for visual problems after stroke.

This was highlighted as OT's main research priority and is fundamental in fulfilling point 1 and 2.

## Conclusions

This survey had a very high response rate and provides a clear picture of current visual assessment and management in Scottish stroke care settings. The results highlight a number of key areas requiring further action and investigation

To gain further, and more complete, insight into current visual practice in Scottish stroke care settings we are currently repeating this survey with populations of (i) community OTs, (ii) orthoptists and (iii) ophthalmologists.

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### Further information

•NMAHP RU is funded by the Scottish Government's Health Directorates, Chief Scientist Office. It has academic bases within Glasgow Caledonian University and the University of Stirling. The overall aim of the Unit is to improve the care and treatment of patients through scientific study of direct patient care.