

Visual Field Assessment

There are 2 main methods of visual field assessment

- Confrontation
- Automated

Confrontation Visual Field Assessment

This is a basic method of assessment that can be carried out at the bedside or in clinic. It can be used if the patient has limited concentration or communication or if there are time constraints. It is effective for identifying significant defects and with experience, an accurate field assessment can be obtained. There are several methods of confrontation assessment available and one of the most common is described below.

1 examiner method

The patient should be positioned directly opposite the examiner at distance of 1 metre.

To plot the field of the patient's right eye their left eye should be occluded (using an eye patch or their hand) and the examiners right eye should be closed (vice versa for the left).

The examiner compares their own visual field to that of the patient.

The patient is asked to fixate on the examiners open eye throughout the test.

A bright target (e.g. red pen) should be introduced from the periphery and the patient is asked to respond as soon as they see the target. The patient may verbalise this or raise their hand to indicate they have seen the target. If a patient is unable to respond verbally or physically, the examiner may see the patient look towards the target as it first comes into view. This is interpreted as a positive response.

The target should be introduced from all directions of gaze to determine the presence or absence of defects throughout all quadrants of the visual field.

The target should also be moved within the central field to ensure no central problems exist.

2 examiner method

This is especially useful with adults with significant communication difficulties or young children, where the 1 examiner method may not be successful.

One examiner sits opposite the patient and holds their attention as the other examiner sits behind the patient and introduces a target (e.g. bright toy/red pen) from the peripheral area. The examiner opposite the patient monitors visual responses. The patient is asked to look towards the target when it comes into view. This is repeated from different directions ensuring all quadrants are assessed and any defective areas are noted.

Automated Visual Field Assessment

Where concentration and resources permit, an automated visual field test should be carried out. Automated visual field assessment requires significantly more patient co-operation than confrontation but provides an accurate, repeatable, pictorial plot of a visual field. It enables defects to be accurately re-assessed and any improvement or regression can be noted.

Various visual field machines are available but the most commonly used instruments are the Goldmann perimeter or the Humphrey field analyser.

The binocular **Esterman programme** is often used to determine driving suitability and its responses are utilised by the DVLA. The exact DVLA driving standards can be found at

<https://www.gov.uk/guidance/visual-disorders-assessing-fitness-to-drive>