

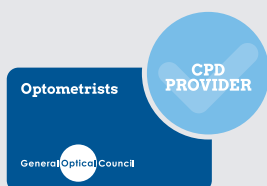


LEARNING DOMAINS

CLINICAL
PRACTICE

PROFESSIONALISM

PROFESSIONAL GROUPS



CPD CODE: C-111991

MCQs AVAILABLE ONLINE:

Sunday 1 June 2025

CLOSING DATE: 7 September 2025

ANSWERS PUBLISHED:

November/December 2025

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CPD CODE: C-111991

Managing the low vision patient in practice

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There are times when the dispensing optician (DO) will come across the low vision patient who needs help. Sometimes this is felt to be outside the scope of practice for an individual, and a referral to a low vision clinic is the first port of call. This can be good practice, but the DO is fully equipped¹ to deal with these patients in any type of practice.

This article considers how the DO can assist the patient in practice regardless of the setting. To assist with visualising as well as general information, a case record of a patient who wishes help at near is used to demonstrate how the person can be assisted. The focus of this article will be on the provision of optical aids, however, alternative digital technologies and other aspects that should be considered in the patient consultation are also discussed.

SIGHT LOSS IN THE UK

There are more than two million people in the UK with sight loss at a level that impacts their daily lives, and this is predicted to double by 2050². This trajectory indicates the importance of the DO managing the low vision patient in practice.

The Royal National Institute of Blind People (RNIB)³ published the main causes of sight loss as follows:

- Age-related macular degeneration (AMD): 23 per cent of people
- Cataract: 19 per cent of people
- Glaucoma: seven per cent of people
- Diabetic retinopathy: five per cent of people
- Uncorrected refractive error: 39 per cent of people
- Other eye problems: seven per cent of people

Uncorrected refractive error is easy to remedy⁴ in optometric practice and, after surgical intervention for cataract, most people can achieve good vision⁵.

Therefore, the three most common conditions seen within the low vision clinic are:

- AMD
- Glaucoma
- Diabetic eye disease/diabetic retinopathy

However, it should be noted cataract can still be seen in the low vision clinic and, therefore, the patient will require assistance and management.

WHO IS THE LOW VISION PATIENT?

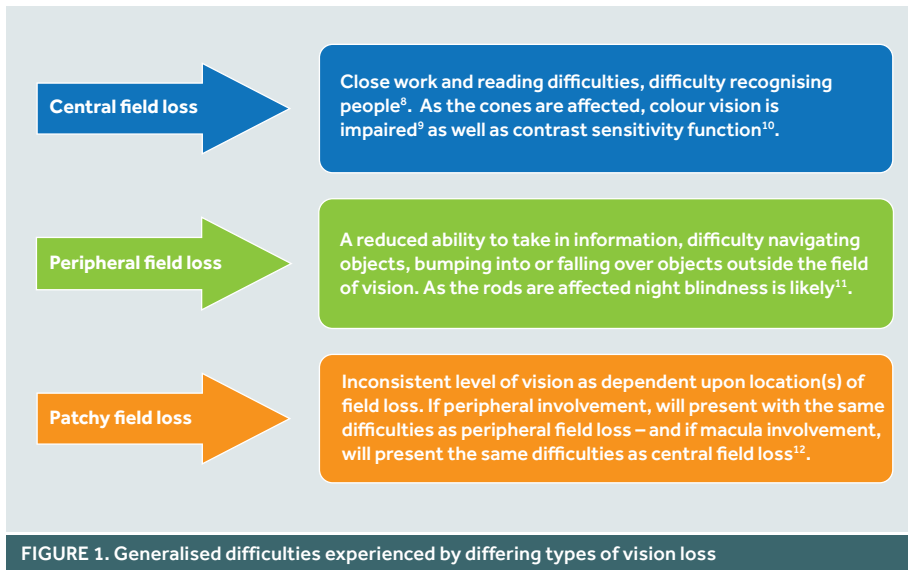
According to the Low Vision Service Consensus Group (1999)⁶, a person with low vision is: "Someone with an impairment of visual function for who full remediation is not possible by conventional spectacles, contact lenses or medical intervention and causes a restriction in that person's everyday life".

To help consider how a patient can be helped in practice, the following case record is worked through.

CASE RECORD: Mrs A

- Mrs A aged 73 years has dry AMD
- Last eye examination, six months ago
- R: +0.25/-0.25 x 90 6/24
– Add +4.00D N12 @25cm
- L: +0.50/-0.25 x 90 6/24
– Add +4.00D N12 @25cm
- Wants help at near

The sole aim of helping a person with low vision is to improve their quality of life, which can be negatively impacted by AMD⁷, and enable use of their residual vision to its maximum potential.



It is helpful to consider how their pathology will impact vision; considering the three most common conditions we can 'generalise' them as shown in **Figure 1**. However, it must be stressed that this does not replace listening to the patient regarding the difficulties they are experiencing.

IMPACT TO MRS A

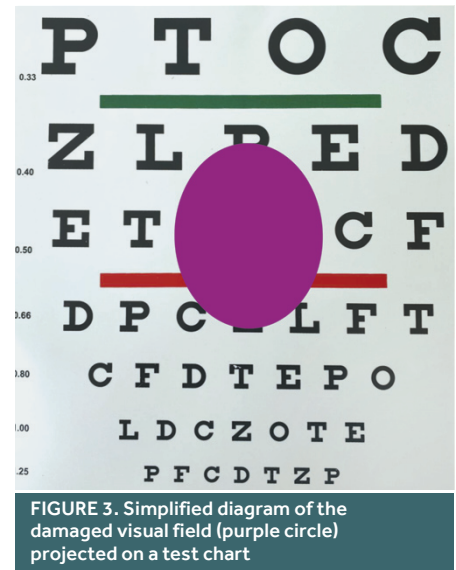
The visual system in humans possesses high resolution central vision within the fovea¹³. Light is processed by the photoreceptors in the neural retina of which there are two types: cones, concentrated within the fovea, which contain colour pigments and dominate our daytime vision; and rods, which are more sensitive to light and concentrated in the peripheral retina.

AMD affects the central retinal area (macular region) demonstrating a reduction in the cone mediated function⁹ and parafoveal rod photoreceptors in the early stages¹⁴.

The disease impacts on dark adaption¹⁵, causes a reduction in visual acuity (VA)¹⁶ and results in central field loss¹⁷. The macula area is where tasks that require a high level of detail are performed such as reading and recognising facial detail.

Despite its relatively small area, any reduction in its performance can have a huge impact on daily tasks. Geographic atrophy within the central retina also correlates to a reduction in contrast sensitivity function¹⁰ making low contrast objects difficult to see.

An image of a healthy fundus is shown **Figure 2a** alongside a fundus with characteristic drusen and thinning at the macula of a patient with a damaged central field (**Figure 2b**). **Figure 3** is a simplified diagram to demonstrate how this relates to what a person can see on the test chart when directing their gaze towards the 6/18 line, and **Figure 4** is a common representation of what a person with AMD may experience.



TASK ANALYSIS

The first thing to consider is what the patient needs help with, and identify the priority tasks. Identifying a patient's needs is important as these make a difference to them, their quality of life and independence. Mrs A stated she wanted help at near; this information is insufficient. The practitioner needs to know exactly 'what' near tasks the patient needs support with. It is important to ascertain the size of the task, contrast and duration of the task.

After questioning Mrs A, it is learned that the near tasks relate to the patient's visits to the supermarket and reading books of N10 font size. First, consider the main priority and deal with this; to do this it is a case of asking the patient. Also identify any tasks that could be a health and safety concern; these should be tackled first to maintain the patient's well-being.

Figure 5 shows that central field loss is likely to respond well to magnification¹⁸ which increases the retinal image size.



FIGURE 2a. Fundus image of a healthy macula

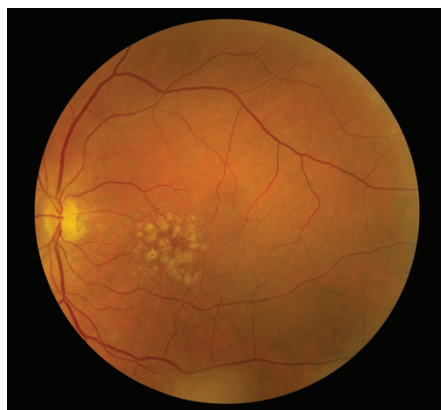


FIGURE 2b. Fundus image of drusen, thinning and atrophy of the retinal cells



FIGURE 4. A representation of vision loss for a patient with AMD



FIGURE 5. A scotoma of equal size — but by enlarging/magnifying the text on the right more of the word can be seen

The scotoma is the same size in both the left and right images (pink circles), however, enlarging/magnifying the text on the right enables the word to now possibly be deciphered compared to the nearly totally obscured word on the left.

RELATIVE SIZE MAGNIFICATION

Enlarging the text is a form of creating magnification known as relative size magnification¹⁹. Making the object larger means it subtends a larger angle at the nodal point of the eye, resulting in a larger retinal image size. This method can be utilised in the form of changing the book from N10 to a bigger font size. This then means no optical aid is required, eliminating any associated shorter working distance, reduced field of view and aberrations. However, all methods have limitations; here the book being larger with more pages will be heavier.

RELATIVE DISTANCE MAGNIFICATION

Relative distance magnification works by bringing the object closer, which again increases the angle subtended at the nodal point of the eye creating a larger retinal image. In **Figure 6**, object h_2 is closer to the eye than h_1 . Rays from the top of h_2 subtend a larger angle θ_2 at the nodal point of the eye than the angle θ_1 subtended by the ray from the top of h_1 . This results in the formation of a larger retinal image h_2' compared to h_1' .

However, if we reduce the working distance, a person would need sufficient

accommodation to overcome the increased vergence at the eye. Therefore, a stronger positive lens positioned in front of the eye may be needed in the form of a spectacle magnifier, and look more like a pair of strong reading spectacles rather than a low vision aid.

These, however, can provide too short a working distance, and prisms may be required¹⁹ due to the higher convergence demand and may not be suitable for the task. Therefore, other low vision aids should also be considered alongside the task.

CHOOSING THE STARTING MAGNIFICATION

Mrs A has equal visual acuities VAs in both eyes. However, if there was disparity, the better eye is chosen enabling the patient the best chance of achievement. The starting magnification is a ratio of the enlargement that is wished to be achieved.

$$\text{Starting magnification} = \frac{\text{Achieved VA}}{\text{Required VA}} = \frac{12}{6} = 2x$$

Enlarging things by 2x should theoretically work for tasks within the supermarket, but the final amount of magnification supplied will depend on many factors, including font size, type of task and duration. The magnification achieved may also not be the same as what the magnifier has been labelled due to factors that include: if any accommodation is used and/or a reading

addition in place; the patient's refractive error; the distance the magnifier is used; and whether multiple techniques are used. There are also differing methods of labelling the magnifier power²⁰, therefore, knowing the dioptric power of the magnifier can be more informative.

ACUITY RESERVE

Our acuity reduces the longer we do a task, meaning we need a bit of reserve to enable us to continue. For a spot task, such as reading prices in the supermarket, no reserve is needed. For prolonged/sustained tasks, such as reading a book, acuity reserve may need to be considered²¹.

There are two schools of thought to create enough acuity reserve, the magnification supplied would usually be 2:1²² or 3:1²¹ from the calculated starting magnification.

The starting magnification required for book reading is $\frac{12}{10} = 1.2x$ hence employing acuity reserve this should be increased to 2.4x (approximately 2.5x) or 3.6x (approximately 3.5-4x).

However, should a 6x starting magnification be required, and employing a 2:1 ratio giving 12x magnification, other challenges are created: a significantly reduced working distance; reduced field of view¹⁸; and reduced depth of field, which may hinder the patient using the aid. Consequently, there are times when logic informs that a deviation away from the ratios may be more appropriate. Ideally, the magnification supplied should be the lowest possible to enable the task to be performed.

CHOOSING AN AID

Many factors will influence the choice of aid. **Table 1** acts as a guide only. What is chosen can vary based on what is learnt in the appointment: conversations to establish the patient's needs, wants, dislikes, tolerances and other factors that impact the task like location.

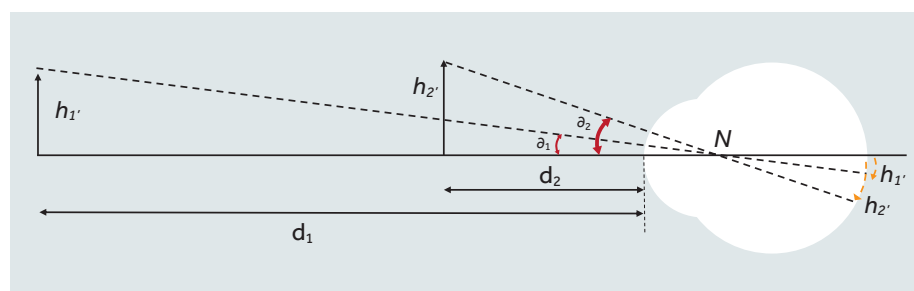


FIGURE 6. Relative distance magnification

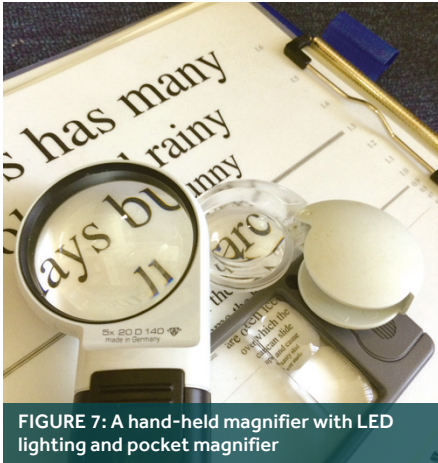


FIGURE 7: A hand-held magnifier with LED lighting and pocket magnifier

CHOOSING AN AID FOR MRS A

To see prices in the supermarket, referring to **Table 1**, it is clear that magnification would help. This is a near task, both hands are not needed, there is no report of dexterity or posture problems – just that the device needs to be portable. Therefore, we could consider a lightweight, small sized aid.

The most common magnifier provided is the hand-held magnifier (**Figure 7**). The advantages and disadvantages of this aid are provided in **Table 2**.

The hand magnifier is portable, can be used with either distance spectacles, where the object would be held at the focal point of the magnifier to enable parallel light to enter the eye, or used with near spectacles. This could be an aid of choice for the patient to view their prices in the shops due its portability. In addition, pocket magnifiers are lightweight and easy to carry.

Lighting that illuminates the object of interest is beneficial to the person with AMD as it changes the retinal adaptive state, and can reduce the impact of the scotoma. Lighting is also a way to assist with improving contrast of the object²³.



FIGURE 8: A representation of real-world vision where a person would need to detect subtle differences to navigate safely

| Question | Answer | Options |
|---|--------------|--|
| <i>Will magnification help?</i> | Yes | Consider magnifiers |
| | No | If problem due to contrast consider ways to improve contrast, e.g. contrasting colours, filters, lighting. (Contrast sensitivity can be measured on a Pelli-Robson chart. The score would be the last triplet on the chart where two letters are identified correctly. Where the value is 1.65 or less contrast enhancement can be considered) |
| | | If problem due to restricted peripheral field, consider ways to expand visual field, e.g. reverse telescope, prismatic techniques/devices, technology |
| | | If problem due to mobility, consider multi-disciplinary team referrals for mobility training |
| <i>If using an optical magnifier, is it for a distance, intermediate or near aid?</i> | Distance | Telescope. Electronic vision enhancement systems (EVES) with multi-visual capacity |
| | Intermediate | Telescope. EVES with multi-visual capacity |
| | Near | Hand magnifier, stand magnifier, spectacle magnifiers, bar/brightfield, telescope, EVES |
| <i>Are both hands needed?</i> | Yes | Needs to be hands-free, e.g. stand magnifier, spectacle mounted or EVES |
| | No | None currently excluded |
| <i>Does the patient have dexterity problems?</i> | Yes | Stand magnifier, bar magnifier, EVES, and spectacle mounted |
| | No | None currently excluded |
| <i>Are there any neck/posture issues?</i> | Yes | Avoid something that requires excessive leaning. EVES can provide good posture, cantilever heads if stand magnifier and hand-held magnifier |
| | No | None currently excluded |
| <i>Does it need to be portable?</i> | Yes | Consider a lightweight small-sized aid, e.g. pocket magnifier |
| | No | None currently excluded |

TABLE 1. Choosing an optical aid

| Pros | Cons |
|---|---|
| <ul style="list-style-type: none"> • Convenient, lightweight, easy to clean, discrete, socially acceptable, generally inexpensive • Can be used at any distance from the eye • Lower powers available in larger diameters • Internal illumination possible • Wide range of magnification available | <ul style="list-style-type: none"> • Too easily purchased, may not be appropriate power, and may need training in use to be effective • Require a steady hand and ability to maintain working distance • Plastic lenses require careful handling and cleaning • Internal illumination increases weight and complexity • Long working distances reduce the enlargement effect when used with near addition lenses |

TABLE 2. Advantages and disadvantages of a hand-held magnifier¹⁹ (adapted from Rumney 2007)

| Pros | Cons |
|--|--|
| <ul style="list-style-type: none"> • Working distance between lens and task is stable • Hands free • Low powers can provide enough stand height to perform task beneath the lens • Moderately priced • Usually have built in illumination | <ul style="list-style-type: none"> • Requires a flat stable surface • Low powers are usually large • High power lenses make it difficult or impossible to perform tasks beneath the lens • More expensive than hand-held magnifiers • Need sufficient accommodation or reading addition |

TABLE 3. Advantages and disadvantages of a stand magnifier²⁵ (adapted from Wolffsohn 2007)

| Pros | Cons |
|---|---|
| <ul style="list-style-type: none"> • Can be placed directly on the object • Discrete - can look like a paperweight • It is binocular • Hands free • Does not change viewing distance • Can be used in combination with other aids | <ul style="list-style-type: none"> • Surface it is positioned on must be flat • Bigger versions are heavier to carry around • Field of view dependent upon size • Cannot perform tasks underneath • Small magnifications available |

TABLE 4. Advantages and disadvantages of bar and brightfield magnifiers²⁵ (adapted from Wolffsohn 2007)

| Pros | Cons |
|--|---|
| <ul style="list-style-type: none"> • High magnification as well as variable magnification • Portable versions available • Underlining or windowing effects possible • Screen colours can be altered, and illumination controlled • Control of contrast • Binocular viewing hands free • Enables comfortable posture | <ul style="list-style-type: none"> • Expensive running and maintenance costs • Complex • Training required • Lack of portability if desktop |

TABLE 5. Advantages and disadvantages of EVES

It should be remembered that the pathology is also likely to reduce contrast sensitivity function so improving contrast should form part of the management. However, magnifying an image of poor contrast will simply make a larger poorly contrasted image. In the real world, things are also not as black and white as presented on the test chart (**Figure 8**).

A printed book does not provide 100 per cent contrast²⁴ and old books tend to yellow with age. Also, supermarket products are not usually packaged in a pure white box with perfectly printed black writing. Lighting can be employed with the pocket magnifier as seen in **Figure 7**, which has built in LED illumination.

AIDS FOR READING A BOOK

Reading is a near task, but it is unknown if both hands are needed, if the patient wants to read at a table or with a bookstand to enable better posture or prefer to hold the book (**Table 1**). With no report of dexterity or posture problems, and possibly portability not as essential as when an aid was chosen to help at the supermarket, a hand-held magnifier could be considered. However, these can become tiresome to hold for long durations and difficult to maintain the working distance, so other types of aids could be considered.

Another option is the stand magnifier, which rests on the page and keeps a steady viewing distance (**Figure 9**). There are many types of stand magnifier available, but due to the stand usually being shorter than the lens focal length (**Figure 10**), the user requires ample accommodation to overcome the diverging vergence arriving at the eye. Where this is not available, then the user must wear an appropriate reading addition²⁵. The advantages and disadvantages of the stand magnifier are shown in **Table 3**.

Another option that has a steady working distance is the brightfield/bar magnifier. As with a stand magnifier, a flat surface is required and can be useful for reading things that are on a flat surface. **Figure 11** shows how the image starts to suffer from bending of the page towards the spine, which would also be true of a stand magnifier demonstrating the need for a flat surface.

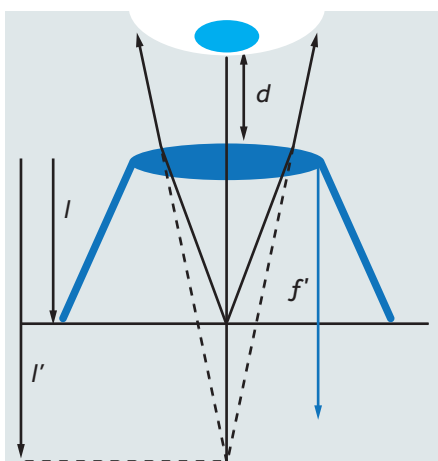
The advantages and disadvantages of this choice are shown in **Table 4**.



FIGURE 9. Stand magnifier

If requiring a hands-free aid and a longer working distance, which can aid posture, compared to other aids then a near vision telescope can be a good choice.

A relatively easy to fit and use spectacle mounted telescope is the MaxDetail by Eschenbach (Figure 12 left). However, these come in a low 2x magnification²⁶ and for reading a book, some acuity reserve is needed for Mrs A. The RidoMED (Figure 12 right) comes in 3x and 4x²⁷. Disadvantages include a relatively small field of view²⁸, they are not cosmetically appealing, and the weight might be bothersome for long durations. The RidoMED also requires perfect alignment with the near centration distance, although it is easy to adjust by sliding the telescope distance along the top bar once the screws are loosened.



The stand height is less than the focal length of the lens f' creating divergent light. To see an image at distance l' clearly the user would need to exert sufficient accommodation or wear a near vision pair of spectacles to overcome the negative vergence arriving at the eye.

FIGURE 10: Optics of a stand magnifier with a stand height shorter than the lens focal length

ng bought outright. Finally, mes be found: the Macular e to find advertisements.

A theoretical maximum size (although not practically achievable) occurs if the magnifier is spherical, and $t = 2r$, giving

$$M = \frac{n}{n-1}$$

very different from elec- e transverse magnification. emicylindrical (bar; magni- verally form, designed to be —usually the page of a book al reasons, the lower lens nm away from the task by a otect the lens from scratch- rweight', 'dome', or 'Visiolett' at these magnifiers are plus

Thus the thicker the magnifier in relation to its radius of curvature, the higher will be its magnification: this is unlikely to exceed 3X in practice. It can be seen (see Fig. 10) very close to the original object, so magnification has not been created by a reduction in the viewing distance (as with other plus lenses). There is no advantage in decreasing the eye-to-magnifier distance to increase the field-of-view: the number of words seen through the magnifier will only be affected by the lens diameter. Magnification is increased by lifting the magnifier a few millimetres from the page

FIGURE 11. A bar magnifier with a guideline to aid tracking

TRAINING

Provision of a magnifier also requires patient training²⁹, how to use including where to hold, which eye to use and which spectacles to wear. A very high-powered magnifier handed to a patient at an inappropriate distance will cause the patient not to see the task, and may reinforce negative emotions around the condition and that aids (or anything else) may not help.

ELECTRONIC AIDS AND DIGITAL DEVICES

Optical aids are very useful, relatively inexpensive and easy to use for those who do not wish to invest in or use technological devices. Technological devices, however, can be exceptionally useful.

Optical recognition devices, such as the OrCam MyEye or OrCam Read, assist in supermarkets to identify products reading out what is placed in front of it or identifying a product from a barcode³⁰; they can also identify bank notes. If the patient possesses a smartphone, its camera could also be used.

When it comes to prices on shelves instead of products, this makes the

working distance relationship difficult. A smartphone can be used to take a photo at price level then enlarged to create the required magnification. Mobile phone apps such as Seeing AI (iPhone) and Google Lookout (android) can also assist in supermarkets identifying products from barcodes^{31,32}. There are also other apps on the market and Henshaw's Knowledge Village is a great resource for information on these products and how useful they are³³.

A good option to help with reading a book is an Electronic Vision Enhancing System (EVES) (Figure 13). Reading material is placed on the table and projected onto the screen, enabling a comfortable reading distance and posture for the user. Contrast can be enhanced within the settings by changing colours and reverse polarity. The advantages and disadvantages of EVES are provided in Table 5.

The advantages of variable magnification and contrast enhancement make this a viable option for reading a book. If considering an EVES for the patient, then training is required and can be accessed via the company providing the device. As the person will be at a



FIGURE 12. MaxDetail (left) and RidoMed Galilean (right) design spectacle mounted near vision telescopes



FIGURE 13. Electronic Vision Enhancing System (EVES)

specific working distance to view the screen if they have reduced accommodation, an appropriate reading addition will be required.

A Kindle has numerous accessibility features enabling easier use of reading e-books, including magnification, screen reader, highlighting of text to keep on track and white text with a black background³⁴.

The OrCam MyEye can also help by reading out the page in front of it³⁰. However, as this is audio based it does not assist if the patient wishes to read rather than listen. Another option would be talking books or a pen reader. The user places the scanning end of the pen reader on the text and scrolls along the text, which is read aloud³⁵. Seeing AI can also capture pages of a book and read them aloud.

When advising use of digital technologies and applications, consider whether the person is confident using digital technologies. Resources to direct people to for digital inclusion and technology support are SeeAbility³⁶ and AbilityNet³⁷ and are listed in **Table 6**.

COMBINING TECHNIQUES

If we combine differing techniques, we multiply the magnifications, and if we combine the same techniques, we add the magnifications.

For the task of reading books, the patient could choose large print books if available. A font size of N18 will give rise to 1.5x.

$$\text{Magnification} = \frac{\text{Font size used}}{\text{Original font size seen}} = \frac{18}{12} = 1.5x$$

Using a 2x magnifier with the enlarged print means we have, $2 \times 1.5 = 3x$ overall magnification.

OTHER ASPECTS TO CONSIDER

It is known that mental health conditions are more prevalent in people with sight loss, particularly depression – with nearly half of those attending a low vision service due to sight loss experiencing significant depressive symptoms³⁸. Information on counselling services can be provided, such as telephone counselling through the RNIB and Macular Society. Should depressive symptoms be noted, referral to the General Practitioner may be appropriate as depression is a medical condition.

Also important is discussing the possibility of experiencing Charles Bonnet Syndrome whereby a person experiences hallucinations brought about by their reduced vision⁸. Patients do not always mention this for various reasons. They can be reassured that the visual hallucinations experienced can be a normal consequence of sight loss.

Informing patients of the normality of their experience and promoting understanding can reduce negative emotions. This approach may improve the condition³⁹, possibly due to the reduction in anxiety from the detailed explanation of the cause of the hallucinations.

Mrs A has dry AMD and may have been provided with an Amsler chart from the hospital eye service to self-monitor changes in vision. It can be useful to ensure they still have one, that it is being used correctly, and they know what to do should they notice any changes, metamorphopsia or missing areas of vision. This would be to immediately reach

out to an eyecare professional for a potential rapid referral or to contact the hospital eye service directly⁴⁰. This is because dry AMD can progress to wet, which has a faster progression often leading to a devastating loss of vision. Wet AMD can be treated to help preserve vision⁴¹.

There is evidence to suggest lutein and zeaxanthin may be helpful for the patient with AMD. Although not a cure, supplements may assist in slowing down the progression⁴². A patient can be trained in eccentric viewing and steady eye strategy, which may enable a lowering of the magnification power if successful.

The details of both of these are outside the scope of this article. A good resource is the Macular Society (**Table 6**) where the patient can find further information and support in these techniques⁴³ and advice on nutrition⁴⁴.

REFERRALS AND SIGNPOSTING

Depending upon the patient's needs, eyecare practitioners may need to signpost and make referrals to utilise a multi-disciplinary team for the best patient outcome. **Table 6** provides the practitioner with a list of resources that can be provided to the patient.

Mrs A has not provided any further needs, but suggestions that may be appropriate to provide would be details of the Macular Society and the RNIB Eye Care Support Pathway.

FOLLOW-UP

After discussion with the patient, and deciding on the most appropriate optical appliance(s), it can be useful to enable the patient to loan the optical aids in their real-life environment and review at the follow-up. It may be beneficial to review in a week to one month, considering the usefulness of the aids, offer support, motivation on use, further training or consider other options if the aids are not working.

SUMMARY

It is clear there is a need for low vision services in the High Street practice setting, and the DO is ideally placed and appropriately qualified to support low vision patients. This can be with simple advice, supplying low vision aids, or signposting and referral to either secondary care or additional healthcare services where a multidisciplinary team approach is the most appropriate option to ensure the best patient outcome.

| Resource name | How the resource can help | Resource access |
|------------------------------------|--|---|
| <i>Sightline directory</i> | Enables practitioners and patients to find out what is available. Locates low vision services in any particular area in the UK ⁴⁵ | www.rnib.org.uk/sightline-directory |
| <i>RNIB</i> | Helpline, counselling, information about eye conditions, information on aids including assistive technology, advice on money and benefits, employment advice, shop ⁴⁶ | www.rnib.org.uk/living-with-sight-loss |
| <i>RNIB</i> | Information on registration and benefits ⁴⁷ | https://media.rnib.org.uk/documents/APDF-SE180905_Benefits_Concessions_and_Registration-v001_cCPrtX.pdf |
| <i>RNIB</i> | Eye Care Support Pathway. Provides access to practical and emotional support and follows patients through their eyecare journey. Aims to help people to 'wait well' during their eyecare journey to lead to 'living well with their condition' ⁴⁸ | www.rnib.org.uk/your-eyes/the-eye-care-support-pathway |
| <i>Macular Society</i> | To assist with those affected by macular disease, promote peer support, helpline, information on nutrition, lighting, driving and treatment. Telephone counselling, support groups, befriending, Skills for seeing training (EVT and SES), treatment buddies for those beginning intravitreal injections, Charles Bonnet Buddy ⁴⁹ | www.macularsociety.org/ |
| <i>NHS Falls</i> | Falls prevention advice ⁵⁰ | www.nhs.uk/conditions/falls |
| <i>Liftshare</i> | If people list a regular journey on a website, they may be able to get a lift with another person who makes the same journey ⁵¹ | www.liftshare.com/uk |
| <i>Passenger Assist</i> | National Rail can assist by: getting the person on the right train and ensuring their luggage is with them ⁵² | www.nationalrail.co.uk/help-and-assistance/passenger-assist |
| <i>Esme's Umbrella</i> | Support for those experiencing visual hallucinations as a normal consequence of vision loss known as Charles Bonnet Syndrome ⁵³ | www.charlesbonnetsyndrome.uk/ |
| <i>Seeability</i> | Provides support to enable digital inclusion ⁵⁶ | www.seeability.org/digital-inclusion-seeability |
| <i>AbilityNet</i> | Provides technology support from a team of volunteers ⁵⁷ | www.abilitynet.org.uk/ |
| <i>Henshaw's Knowledge Village</i> | Online resource with support and information for digital devices including apps and provision of life hacks ⁵³ | www.henshaws.org.uk/knowledge-village |
| <i>Gov.UK</i> | Referrals for an assessment of needs to social services. Enabling access to equipment, minor adaptations in the home, a paid carer and access to other eyecare professionals such as a mobility officer if appropriate ⁵⁴ | www.gov.uk/apply-needs-assessment-social-services |

TABLE 6. Resource list for the practitioner and patient

REFERENCES

References can be found when completing this CPD module. For a PDF of this article with references email, abdocpd@abdo.org.uk

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LEARNING OUTCOMES FOR THIS CPD ARTICLE

DOMAIN: Clinical practice

7.1: Conduct a comprehensive low vision assessment, including task analysis, starting magnification, acuity reserve, optical aid selection and any relevant medical, family and social history for the purposes of an optical consultation.

7.2: Recognise the impact of mental health conditions particularly depression in patients with sight loss providing advice and where necessary referral in a timescale that does not compromise patient safety and care.

DOMAIN: Professionalism

10.1: Apply effective interprofessional collaboration and clear communication with optical and healthcare professions to support the management and referral of a low vision patient with age-related macular degeneration (AMD).



**CLINICAL
PRACTICE**



PROFESSIONALISM

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