Contact lenses and presbyopia

Earlier this year, *Optician* and Johnson & Johnson Vision invited a group of contact lens experts to share their thoughts on presbyopia and multifocal contact lenses. *Optician* reports

Dramatic design and materials improvements have been achieved in modern multifocal contact lenses but, as middle age approaches, many successful single vision contact lens wearers drop out despite a desire to stay in contact lenses.

To better understand the current situation surrounding multifocal lenses, *Optician* drew together a panel of practitioners, academics and researchers to look at levels of multifocal use, discuss approaches to presbyopic patients and look at how successful fitting can be achieved in practice.

Setting the scene for the discussion, Bill Harvey described how the correction of presbyopia with contact lenses was a rapidly evolving area of clinical practice. This sector has seen the introduction of many new lens designs, with multifocals available in a variety of materials and modalities, while suppliers have supported clinicians with a range of resources. However, he said, many clinicians are reluctant to embrace multifocal lenses as was borne out by the responses to recent interactive CPD published in *Optician*.

Monovision is still the first choice for some practitioners, and many still view multifocal contact lens fitting as complicated and a significant drain on chair time, he suggested. There are also some areas of lens design that are often confused or poorly understood, such as extended depth of focus (EDOF).

Chair

- **Bill Harvey**; former clinical editor, *Optician*. Specialist optometrist, RNIB. chief examiner and assessor, College of Optometrists

Panel

- **Keith Tempany**; fellow and former president of the BCLA, practising contact lens optician specialising in multifocal lenses, myopia control and irregular corneas
- **Karen Chambers**; independent practitioner, contact lens optician and dry eye specialist
- **Chris Worsman**; optometrist specialising in contact lenses
- **Natalie Ambrose**; Johnson & Johnson Vision Global Business Intelligence Team
- **Dr Thomas Karkkainen**; Senior principal research optometrist at Johnson and Johnson Vision
- **Dr Debarun Dutta**; formerly based at the Brien Holden Institute in Australia, now a lecturer at Aston University with a specialist interest in contact lenses

Natalie Ambrose

Dr Debarun Dutta

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MARKET PENETRATION

To introduce the topic, Natalie Ambrose offered a snapshot of the current market penetration of presbyopia correction with contact lenses and suggested where opportunities had been missed and where future opportunities might lie.

'At the moment, of those requiring presbyopic vision correction, only 10% are actually in contact lenses,' said Ambrose. 'We know that options such as monovision are still used and only about a third of presbyopes are actually in multifocal contact lenses.' She said there were two clear opportunities. 'The first is to grow the penetration of contact lenses within the 40-plus audience, the second big opportunity is to tackle the problem of drop-out.

'Typically, we see penetration of contact lenses for 35-year-olds to be around 25%. This drops down to 10% for those aged 45-plus, so obviously there is a big opportunity there even simply to maintain contact lens wear as those patients age. And we know that this is possible, because we see

and we hear a lot of interest from this older audience.'

She said recent estimates suggest around 37% of presbyopes wearing contact lenses, wear multifocals, around 10% are in monovision, and the rest are wearing distance correction with or without readers on top.' But big opportunities exist, she added. 'Over 80% of presbyopes would be open to try contact lenses to correct their presbyopia, and we know that those already in contact lenses really do want to continue wearing them in the future.'

So why, asked Harvey, are wearers dropping out as presbyopia approaches? 'The issue tends to be around vision,' said Ambrose. 'Patients think their lenses are no longer working for them and, slowly, start to reduce wear. The result is a kind of gradual falling out of love with their lenses over time.'

Historically, said Harvey, public awareness of contact lens correction for reading was poor. He asked Ambrose if that was being better addressed. She said the situation had improved but suggested a lack of awareness was still behind the poor penetration and this age group was simply not aware of the options. 'We have some way to go,' she concluded.

DRY EYE

Picking up on Ambrose's point around dropouts Dr Debarun Dutta asked the panel to consider the difference between discomfort and dissatisfaction. 'These are not interchangeable concepts,' he said. 'Dissatisfaction is anything that you don't like, while discomfort is a biological response that needs addressing. We now have access to fantastic optics and fit guides, but we need to address issues with the ocular surface if we are to tackle the challenge of penetration and dropout.' He suggested a more holistic approach was needed to identify patients likely to develop comfort issues.

Keith Tempany agreed that any dry eye issues needed to be addressed before prescribing a multifocal contact lens option; Karen Chambers concurred. 'I would say that I have to deal with the dry eye all the way through fitting. If you don't get the dry eye right, the patient is never going to be happy with their contact lenses. I've done it myself as a wearer. You suddenly go, "Oh, I'm wearing them two hours less a day than I used to." But, I think you've got to physically show the patient the truth when they come in and say, "I don't have dry eye." I take a photograph and I show them the blocked meibomian glands, how poor their tear film is, and how much staining they've got. And then I say, "Sorry, you do have dry eye and we have to manage that. It doesn't exclude you from contact lens wear." I would say around 90% of my presbyopic contact lens patients are dry eye cases.'

Keith Tempany

Karen Chambers

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Harvey suggested management of expectations over time played a role. 'You have to consider the long term. For example, monovision may work for low adds, but makes it harder to adapt to a simultaneous vision multifocal later on,' he suggested.

Drawing on personal experience Harvey said. 'In my own case, I have a tear break-up time of nanoseconds, but opt for a silicone hydrogel lens because I want better oxygen availability, despite knowing a more comfortable option is available. There's a role for better patient education here; if the patient knows what's going on, they might be better able to tell you what is the best solution for them.'

TALES FROM PRACTICE

Harvey then asked the panel about their own personal experiences from practice and industry, both in terms of introducing multifocal contact lens options and how this can impact upon the business of a practice.

'It's definitely a two-way opportunity,' said Ambrose. 'As you know, 90% of contact lens wearers also wear glasses. We also know that, typically, multifocal contact lens wearers are more loyal to their practice. I think this has to do with the fact that you're genuinely delivering on what the patient wants, and they feel included in the decision-making.'

Fresh from his practice in York, Chris Worsman explained how his own experience of presbyopia provided fresh impetus to developing his multifocal business. 'We started focusing on older contact lens patients some 40 years ago and now have some patients in their 90s wearing them. We've got 177 multifocal wearers,' but, he added: 'most of those probably started when I started becoming presbyopic myself.'

He retold his experience of attending a 1-Day Acuvue Moist Multifocal workshop at the Johnson & Johnson Institute. 'I went down wearing monovision; tried these multifocals, thinking: "oh they'll never work", and ended up, that day, driving 200 miles back up the M1 in them. It just works.'

Harvey suggested that becoming presbyopic could be the key to embracing multifocals. 'Experience is important in boosting confidence in practitioners. So, perhaps the problem with poor penetration is down to younger eye care professionals?'

'Absolutely', said Tempany. 'As this experience helps you to understand the shortfalls of things like monovision. You are better placed to tell patients that multifocal contact lenses aren't perfect but can be amazing. They let me do pretty much →

everything I'm going to do during the day without having to put glasses on and off. So, you can build up the expectations realistically.' He said the profession was in a very privileged era at the moment. 'We are spoilt with the number of designs we have that are exceptionally good, they are very reproduceable and we can offer multifocals to far more people and know that we will get a lot of success.'

Harvey suggested this was also an opportunity to promote multifocals over monovision. He suggested the quick fix of monovision could become a problem later in wear as presbyopia progressed. Getting presbyopes into multifocals with a low add is a lot more successful than attempting to fit the mature presbyope with multifocals with a high add, he reiterated.

'Sure,' said Worsman. 'The main issue with monovision is the loss of the intermediate range as the addition increases. I think when people do go into multifocals, they want them to work. It is important that staff get really quite enthusiastic about the lenses. It's great to be able to say that, because I wear them myself, I can honestly say that multifocals are a great way of correcting my vision. The important point is, you have to tell people what's available, what is the best option.'

Harvey was also keen to know how Worsman's patients in their 90s coped with handling. 'The 92-year-old is totally switched on,' said Worsman. 'Yes, we do have dropouts (among the oldest wearers) and there are problems with handling. Some just can't cope with the actual putting on and taking off, or are increasingly prone to forgetting about their lenses.'

Harvey invited contact lens practitioner Chambers to share her thoughts on how her ocular surface clinic created further interaction with presbyopia patients and asked for tips on the successful combination of the two disciplines in practice.

'I run the dry eye and contact lens appointments side by side, we don't have a set day for dry eye patients,' she said. 'Instead, I have a mix of both appointments. I have just invested in a new topographer with an excellent dry eye analysis function and I think that this has made me more successful in explaining dry eye to the potential contact lens patient, because I can mix the two. So, I take a fee for images, and I carry out meibography. I can then show the patient exactly what I'm dealing with, before I even put the contact lenses in.

'Doing this allows me to discuss dry eye management as well as contact lenses,' added Chambers. 'I'm just thinking about a lady I saw a couple of weeks ago. She said to me, "I've tried contact lenses from three opticians, and I just can't bear to wear them for more than an hour, or two hours at most. The vision is okay, but my eyes feel as if they are going to drop out." So, I took some photos and assessed whether the problem was evaporative dry eye or aqueous deficiency. Because for her, it's both, you then have to start a tailored management approach.' But, she warned, do not treat all patients the same. 'In my experience, men are not so good at complying with dry eye management plans while also getting used to contact lenses. Probably 75% of our presbyopic patients are ladies, and 25% men.'

Chris Worsman

"We look at getting the lenses on the eye and getting the patient out the door, into the real world, for at least 20 minutes or so if we can."

Adding a point of information, Dr Dutta interjected that males and patients in their early 20s have poorer compliance. Conversely, he said: 'Myopia management is showing us, also, how the very young tend to have good compliance.'

Harvey suggested that the recurring theme, whether it be showing plots and photos, or just explaining concepts to patients, was education. 'It's the key when we look at the outcomes at the end of contact lens fitting. And the more informed the patient, the more compliant they will be for longer.' He invited Tempany to say a little more about his experience. 'I have had a contact lens practice for many years. We have a very large contact lens population, and I would say that probably at least half are presbyopic,' he said.

'Presbyopic correction is something I've always been interested in, and we are always experimenting with new options.' To maximise success; managing expectations and getting lenses on eyes was the key, he added. 'We look at getting the lenses on the eye and getting the patient out the door, into the real world, for at least 20 minutes or so if we can. And I know that everybody's clinic is different, and a lot of practitioners won't be able to do that easily, but the longer we can send them out, the better. For example, yesterday, we fitted a solicitor at 10 o'clock in the morning and got her back in at about three in the afternoon. It was very useful for her to be able to see how lens wear was going to affect her work. In this case, how good lens wear was. So, I really do think real world experience with a multifocal is really important.'

MANAGING EXPECTATIONS

Harvey was keen to dig deeper into the 'real world' performance for the wearer. 'Contentious question; but so long as the patient can pass the number plate test, is there really any need for a high contrast acuity check for simultaneous vision lenses?'

'A very good question', said Worsman. 'High contrast acuity doesn't really reflect actual life. I think the point about the importance of an extended trial is really good. It would be good to see if there is research to show that the amount of time someone is wearing the lenses for on the day of fitting influences the likelihood of success. I don't know if that's been done.'

The settling period suggested for different contact lenses varies between 20 to 45 minutes, said Dr Dutta, depending which manufacturer and design. 'But what Karen [Chambers] says is important; remember it is a holistic approach that is needed, and each patient will be different due to factors such as their ocular surface.'

TEAR FILM

Offering a point of information and joining the meeting via Zoom, Dr Thomas Karkkainen stressed the importance of a stable tear film for fitting success. 'Having an intact tear film is critical. You can have the best optics in the world but if you don't have a smooth, intact tear film on the front

surface it's not going to matter.' He added that once the tear film does break up it impacts the optical performance of the lens. Worsman agreed that tear film break up was not just about comfort it was also if it had a detrimental effect on vision. 'If the tear film dehydrates it really reduces the performance of the optics dramatically with multifocal lenses.'

'So,' said Harvey, 'might it be possible to have three patients with identical refraction and ocular surface but different expectations of what can be achieved? And, if so, is it important to be able to identify which patients may be more demanding and which would be happy with compromise, and so approach them in an appropriate manner?'

'Yes, you may have the fussy myope who has 6/4 vision and a minus one sphere, and you're fitting them with multifocal contact lenses,' said Chambers. 'If you don't set the expectations of what they're going to see and how you're going to manage them, they'll drop out before you've even put the lenses in.' You have to understand their lives, she added. 'I will offer two different options for some patients; one for when they are playing tennis or watching their son's football match and another for when they are in the office, sat at a computer. I agree, not every patient wants two options for contact lenses but actually, in the real world, we do struggle with having perfect vision for every situation. I would ask lots of questions about their day-to-day life and whether they are erring on the side of distance or close work during the day.'

INTRODUCING THE CONCEPT

Having agreed that early intervention was essential, Harvey was interested to know how the panel raised the topic of presbyopia with emerging patients. 'When you're doing an aftercare on a 30-year-old, do you set time aside to say, "in 10 years' time, this will happen to your vision"?'

Tempany said you have to advise patients about what was around the corner, be they young or old. 'We do this with our myopia management patients as well as with pre-presbyopes. Even for someone aged 30-plus who hasn't got any problems. Yeah, ideally, we might say, "Everything's great, everything's working really well. At some point in the future, however, you're going to struggle with reading. At that point, we can put you into something that will give you everything, everywhere, all at once."'

Chambers said the modern world was moving that moment ever closer. 'People are starting to struggle a bit earlier on, partly as they're using digital devices more.

Dr Thomas Karkkainen

I start the conversation when people start struggling with their computer, if they're getting headaches. Because they have symptoms, I would start to talk about it. Or with anyone by the time they're 40.'

Ambrose agreed: 'To follow your point, Karen [Chambers], we're much more on digital devices nowadays, even the older population. So, I think the need for good near correction is a lot greater. But to the point about getting people into contact lenses straight away, we know, generally, people are nine times more successful if you get them into contact lenses within the first two years of them needing vision correction. This may not be the case for the 45-plus group specifically; I don't have that data point but I don't see why that wouldn't be around a similar mark for that group as well. So, I think it is really important to fit them early.'

FITTING GUIDES

With education and managing expectations firmly established as crucial elements of patient communication, Harvey turned to the topic of successful fitting. He asked about attitudes towards success rates, how goals can be monitored and what resources are available to help achieve a good fit. 'If we want to encourage others to improve their success rates with multifocal contact lens fitting, what about the usability and usefulness of the various online tools and calculators?" he asked.

'Fitting guides are key,' said Worsman. 'Developers who have got brains the size of planets and manufacturers who have spent millions have developed these fitting guides so that, if you follow them, the results are spectacular.'

'I agree,' said Chambers. 'I think you can always get success with the presbyope some way or another; and it might not be a multifocal in both eyes. With the advent of multifocal torics, we now have a number of manufacturers who are supplying them so we don't have to go down the monovision route.'

'Follow the guide every single time, because that is going to ensure a high level of success,' said Tempany. 'The manufacturers have done so many trials on the lenses and that's what works. About 90% of the time, someone requires just one fitting session. I'd say, in most cases, it takes about the same time to fit a multifocal patient as it does to fit a standard patient. OK, it's a little bit more than with a single vision, but not a huge amount more and you're going to keep that patient for life quite possibly. So, your return on that investment, for a small amount of extra chair time is enormous. Not forgetting the new people that they'll bring in with that success.'

While the panellists are all successful and confident fitters the panel concluded by offering some tips for those practitioners looking to increase their multifocal fits. Worsman picked up on Ambrose's point about fitting patients early. 'If you are not very confident then start with the young ones, start with the low adds.' Tempany said checking the best vision sphere in the trial frame rather than calculation from the prescription was another useful check. 'That can throw up some surprises especially from low astigmats.' He also urged practitioners to check eye dominance and to check the add as multifocal contact lenses often required less add than varifocal spectacle lenses.

Chambers reiterated that understanding the products available was crucial. 'Confidently talking about your products, because the patient will only buy from you if you are confident and making a great recommendation.'

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