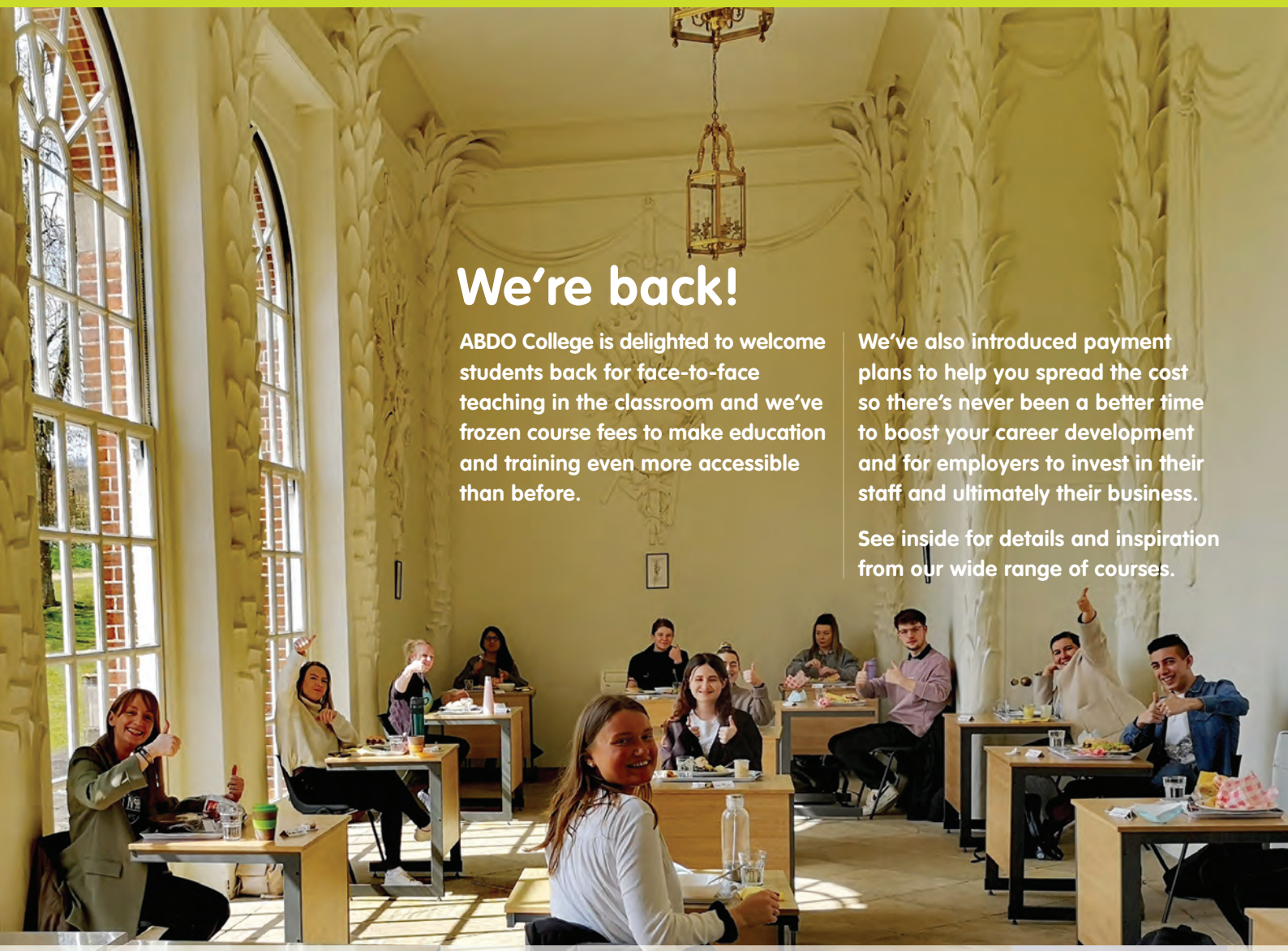
abdo COLLEGE

# Re:View

Keeping excellence in your sights | July 2021 | Issue 40



## We're back!

ABDO College is delighted to welcome students back for face-to-face teaching in the classroom and we've frozen course fees to make education and training even more accessible than before.

We've also introduced payment plans to help you spread the cost so there's never been a better time to boost your career development and for employers to invest in their staff and ultimately their business.

See inside for details and inspiration from our wide range of courses.

## Wave goodbye, say hello

College founder and principal Jo Underwood retires this month after 21 years at the helm. In this milestone edition of *Re:View* find out what she is most proud of and her plans for the future plus discover more about the new principal.

See inside...

# Life after Covid-19 – the future is looking bright

Welcome to the first 2021 edition of *Re:View* magazine. It has been an incredibly challenging year for all who have been studying. Enormous adjustments have been required and I congratulate everyone for the manor in which you have adapted.

The College team is to be congratulated for the rapid transition they made from face-to-face teaching to online delivery and the tremendous support they have given to all students.

The College has now re-opened and it's fantastic to see life returning to some form of normality. It is also reassuring to see the measures that are in place to ensure all students and staff work in a Covid-safe environment.

It is a time of sadness and celebration though as Jo Underwood, the College's founder principal, has retired.

Jo established the College and through her leadership it has developed into a world-renowned educator of opticians. Jo should be immensely proud of all she has achieved, and rest assured, the College is in good hands as her successor Dr Robert Cubbidge has taken up his post to take it to the next level and beyond.

Now is the time for you to consider your next step in education. Optical Assistant courses, Fellowship Dispensing Diploma, a Degree in Ophthalmic Dispensing, low vision or contact lenses, and much more, the College's courses are open for enrolment. The good news is that College fees are frozen for 2021/22, along with options of extended payment plans. Degree courses are also eligible for student loans.

There is also a positive from the General Optical Council's Education Strategic Review, the FBDO level 6 is the future minimum level of education for all UK dispensing opticians. A review of the FBDO syllabus is underway, ensuring that tomorrow's DOs are equipped with the best appropriate skills for future practice.

**Clive Marchant, FBDO**
Chair,
ABDO College Board of Trustees

## Contents




**ABDO College**
Godmersham Park, Godmersham, Canterbury, Kent CT4 7DT
tel: 01227 738 829 option 1 | fax: 01227 733 900 | info@abdocollege.org.uk | www.abdocollege.org.uk
www.twitter.com/abdocollege | www.facebook.com/ABDOCollege
www.linkedin.com/company/the-abdo-college-of-education | www.instagram.com/abdocollege

# News

## College course fees are frozen to boost upskilling and career development

ABDO College has announced that fees will be frozen for 2021/22, for all courses. The decision was made to reflect the economic disruption faced by many during the past year, which still continues for some.

The cost is frozen for the Ophthalmic Dispensing courses, the Contact Lens and Low Vision courses and the optical support courses, including Optical Assistant and Senior Optical Assistant.

The College's head of operations, Steve Hertz, explained: "We feel it is important to recognise the difficult year that practitioners have had, and that, for many, trade continues to be disrupted, which affects the amount they can invest in training.

"It is part of ABDO College's mission to encourage as many people as possible to upskill, which could mean signing up their support staff to the Optical Assistant course or encouraging committed optical assistants to go on to work towards their FBDO diploma. In freezing the fees, we hope that as many people as possible will be able to continue their career development.

"It is great to be able to tell current students and those hoping to apply for the coming session that course fees will remain at the 2020/21 levels for 2021/22."

To find out the fees for each course and to apply, visit **www.abdocollege.org.uk/courses**

## Helping to spread the cost of education and training with new payment plans

The College is continuing with payment plans for course fees to make education and training even more accessible.

The change will help students who are self-funding and will make it easier for business owners who want to invest in their staff and their practice while dealing with budget constraints.

Training at the College has always enabled students to learn while they earn, making the chance to develop their career in optics widely accessible.

The payment change is in recognition of the pressures on the optical profession due to Covid-19. The payment plans are interest-free and allow the chance to spread payments over six months.

The College's head of operations, Steve Hertz, said: "Clearly the current climate is putting a strain on practices and students so we hope this option will enable as many students as possible to begin or continue their studies, while balancing the books."

The payment plans mean that, for example, the Optical Assistant course would cost £135 per month. The Ophthalmic Dispensing diploma (FBDO) first year would cost £585 per month and the Contact Lens Certificate course would cost £400 per month.

Payments can be made monthly for all College courses except revision.

### Thinking about the next step in your career? Want to develop your staff? Now is the time to apply

Summer 2021 sees deadlines for courses including:

- **Optical Assistant** 1 August
- **Senior Optical Assistant** 1 August
- **Ophthalmic Dispensing Fellowship Diploma** 1 August
- **Ophthalmic Dispensing BSc Hons** 1 August
- **Low Vision Honours** 11 September
- **Contact Lens Certificate** 1 August

Find out more and apply for all these courses at
www.abdocollege.org.uk/courses

# News

## Founding principal retires from leading role and looks ahead to the future

ABDO College's principal Jo Underwood has retired after 21 years in the role. She had been in charge of the College since its inception in 2000 and was due to retire at the end of the last academic year but stayed on because of the pandemic.

Jo officially stepped down as principal on 30 June but will still be working full time at the College until 1 September. She will then reduce her workload to two days a week to have a handover with the new principal, Dr Robert Cubbidge, and to help with any small projects for the College.

Looking back, she reflected: "I am proud of setting up the College from an empty shell with no students and guiding it into the thriving first class teaching establishment it is today.

"I am particularly proud that in my 21 years of running the College, we have never cancelled any classes, even through sickness, snow or pandemic."

Jo paid tribute to the support of the college tutors, "who do such an excellent job guiding our students to success in their exams". She also praised all the academic and support staff, "their enthusiasm and dedication to the College and their commitment to their own lifelong learning and development".

"I am proud of all the dispensing opticians we have taught over the years and their efforts in providing the best care for their patients and their loyalty to the profession," she concluded.

Jo will continue in her role as chief examiner for the College's Optical Technicians courses and Optical Assistant courses. She will also examine for ABDO exams in dispensing and contact lenses in both theory and practical.

With more free time in the future, Jo is hoping to do lots of travelling when Covid-19 allows, and to enjoy more walking and cycling. She is also hoping to reawaken her love of reading and embroidery.

## Well-known and respected teacher set to guide ABDO College into a new era

Dr Robert Cubbidge takes over as principal of ABDO College from this month. He was previously a senior lecturer in optometry at Aston University where he was for 28 years.

Robert held academic posts at the university from 1998, including programme directorships of the BSc and MOptom programmes. He taught the optics and ophthalmic dispensing components of the optometry degree at Aston.

He has had a long association with ABDO and ABDO College and has been an external moderator for the College since 2014. He has also been an external assessor for the ABDO programme in Malaysia.

Dr Robert Cubbidge

Robert has been visiting associate professor at Aarhus University in Denmark since 2016; he is also a trustee of the Spectacle Makers Charity.

Over the past few months, he has been working closely with Jo Underwood to ensure a smooth transition into his new role as principal.

"I am particularly impressed with the hard work and effort the College has made during the Covid-19 pandemic to ensure that students have been supported in their education. I hope to take the positives of these new working practices forwards as we evolve and develop our programmes in the coming years," he said.

ABDO general secretary, Tony Garrett, said: "I am delighted that we have managed to recruit such a well-known and respected teacher to build on the tremendous work that Jo Underwood has done – and I am sure everyone will give him a warm and generous welcome."

# Combining a love of science and working with people

In their final year, ABDO College degree students are all required to complete a dissertation which focuses on a research question of their choice. In this feature you can read about Timothy Nicholson and his research paper, *'The effectiveness of orthokeratology (ortho-k) as a method of myopia control'.*

It was a love of working with both people and science that first started graduate Timothy Nicholson on his career path in optics. He began working at the independent practice Noakes, Habermehl & Kerr Opticians in Plymouth when he was 16. After doing his A-levels he spent some time studying medicine at Cardiff University but continued to work in the practice over the summer holidays, which increased his love of optics.

Now he is a dispensing optician at the award-winning Lynne Fernandes Optometrists in Bristol. "Every day is different, each person is unique and nothing is more rewarding than helping people make the most of their vision," he emphasised.

With that in mind, Timonthy completed the BSc Hons Degree Ophthalmic Dispensing course at the College. "I was keen to start the course alongside my employment and my director, Lynne Fernandes supported me. Having previously enjoyed studying eyes, it was a natural step," he explained.

His favourite parts of the course were the case studies. "They were brilliant because they helped apply knowledge to the patients I was seeing in practice straight away.

Timothy Nicholson

"Low vision in particular can be a bit intimidating, however, lectures, as well as researching and writing essays about individual patients was really insightful," he added. "Even a little bit of knowledge used in the right way can be transformative for these patients."

**A bit tricky**

His least favourite part of the course was doing diagrams and he found the law module a challenge. "I'm not much of an artist and found some of the aberration diagrams a bit tricky. However, course tutors were on hand to interpret my ray diagrams where needed. "The law module in the second year was necessary but I found it tougher to learn because there was a lot of detailed material to go through. The lecturer Simon Butterfield did a great job of going through examples from his experience in practice though, which made it easier to remember."

Timothy's research into myopia control was inspired by his work in the practice. "I was finding it difficult to keep pace with new myopia management ideas and the research papers were diverse, with varying validity," he explained.

"Myopia management is such a current, changing topic with a million opinions flying around. Working as part of the practice team, DOs need to be able to help patients and parents make informed decisions about their care, particularly given the arrival of Defocus Incorporated Multiple Segments (DIMS) spectacle lens technology.

"Ortho-k is a strongly evidence-based method of myopia management, however, opticians should be careful about the weight with which they apply this finding to different age groups and ethnicities. Further research is needed regarding the duration of treatment, and how baseline measurements affect results," he cautioned.

Timothy's studying isn't over though. "Wherever optics takes me, I'll always be learning," he emphasised. His advice to others following a similar path is: "Go for it, don't be afraid to ask questions and remember that compassion for the patient is at the centre of all we do," he concluded.

# The effectiveness of orthokeratology (ortho-k) as a me between ortho-k and myopic progression can be suita

By Timothy Nicholson BSc (Hons) FBDO

## INTRODUCTION

Myopia can be defined by characteristic axial lengthening of the eye, an anatomical feature first accepted by scientists over 200 years ago (de Jong 2018). Today, myopia is the most common ocular disorder worldwide (Cooper and Thatchenko 2018) and a major global health concern associated with an increased risk of developing sight-threatening pathologies (Liu *et al* 2015) (De Jong 2018) (Hoang, Seang-Mei and Matsumura 2019).

Myopia has far-reaching economic (Liu *et al* 2015) and social impacts (Cooper and Tkatchenko 2018). There is ongoing academic discussion about the causes of axial lengthening (de Jong 2018). Although raised intra-ocular pressure as a result of the convergence and accommodation mechanism is widely proposed (de Jong 2018), studies over the previous four decades concur (Cooper and Tkatchcenko 2018) that environmental and genetic factors are involved in the progression of myopia (Hoang, Seang-Mei and Matsumura 2019) (Cooper and Tkatchenko 2018).

Myopia control necessitates intervention by opticians which reduces the rate of axial lengthening, however, there is no gold standard method which satisfies safety, efficacy, affordability and clinical acceptability ideals (Liu *et al* 2015). First introduced in the early 1960s, ortho-k is a method of refractive correction which uses rigid contact lenses to reshape the corneal epithelium and has subsequently been used for myopia control (Liu *et al* 2015).

Since the range of variables contributing to the progression of axial length is wide and includes non-modifiable factors such as time spent outside, confounding variables are an inherent, widespread and enduring problem in myopia control research (Cooper and Tkatchenko 2018). In the case of ortho-k, the variability of conclusions drawn from studies has had the real-life implication of causing uncertainty among practitioners, reducing ortho-k use for myopia control (Bao *et al* 2015).

## METHOD

Consolidation of the research question and expansion of search terms was followed by database searches. The available literature on myopia control is varied in character. Two search engines were chosen because their respective databases both encompass appropriate topics that will suit the research question and because their search profiles differ. Ovid accesses Medline articles through their indexed Medical Subject Headings (MeSH), whereas Entrez accesses PubMed through direct text word matching (Kelly and Pierre-Hansen 2008). This will further optimise the scope of the search.

## FINDINGS

In all four studies, analysis is clearly demonstrated with both primary and secondary data displayed, with no data loss (Hek and Moule 2006). The studies are all standardised for p-value, where the null hypothesis can be given as ortho-k produces no significant effect on myopic progression compared with a control group.

Three studies recorded $p<0.01$, whereas Charm and Cho 2013 calculated $p<0.05$. Using traditional p-value interpretations for biological systems, whereby $p<0.05$ indicates statistical significance, all four studies found their p-value low enough to reject the null hypothesis. Recent guidance by the American Statistical Association has highlighted that this historical interpretation overlooks nuance (Bangdiwala 2016). Although true randomisation is not possible, Cho and Charm's 2013 p-value is the most valid because only their study introduced randomisation (Cohen 2011).

All of the studies include variance analysis, however, two of the studies are multivariate and also considered correlation; Armengol *et al* 2015 used regression analysis to demonstrate that ortho-k participants closely fit a model describing reduced axial elongation over two years ($r2 = 0.99$). Chen *et al* 2012 quantified a close association between axial elongation and ortho-k (regression coefficient 0.28), also over a time period of two years.

All four studies report that there is a statistically significant argument for myopic progression being slowed by ortho-k.

# thod of myopia control: what association, if any, bly demonstrated?

## DISCUSSIONS

Several key considerations are identified when a critical appraisal of research quality is carried out. The cohort observational design is common to all the studies, with its inherent strengths and limitations. The studies varied in terms of sample sizes, participant inclusion criteria, duration of follow-up and the accuracy of measurements.

All four articles argue that ortho-k slows myopic progression. In order to establish the scientific robustness of this association for the purpose of guiding opticians on the topic, the relative strengths and weaknesses of the studies and their assertions must be appraised. While Charm and Cho 2013 based their strategies on several previous studies (Dhawan, Grewal and Kataria 2016) in order to design a suitable method (partial reduction ortho-k), the other trials did not as closely integrate aims with known findings.

One author of the Armengol *et al* 2015 paper has proprietary interests in the contact lens under review. This a conflict of interest and could have influenced the objectivity of methods or results analysis in this paper.

The papers precisely describe the inclusion and exclusion criteria, as well as dropouts, therefore individually, the studies can unambiguously extrapolate conclusions from sample to target populations (Du Prel and Rohrig 2009). Together, the studies corroborate findings about participants aged eight to 12-years-old because this age range is common to all four. The widest inter-test participant variable was ethnicity. While Chen *et al* 2014 recruited only Asian participants and Armengol *et al* 2015 only Caucasian, information about participant heritage is not recorded by Chiu, Lee and Wang 2017 or Charm and Cho 2013.

Lack of random population sampling in all cases reduced external validity (Suresh, Suresh and Thomas 2011). Relatively low statistical power due to small sample size is the major weakness of Charm and Cho 2013.

## CONCLUSION

Reliable comparisons between the ortho-k and control groups cannot be made using the Armengol *et al* 2015 study due to combined weaknesses of design, pre-judgement of ortho-k effectiveness and reliance on one practitioner, as well as author bias.

The other three papers collectively demonstrate that ortho-k slows myopic progression, although extrapolation to the target population for the purpose of informing opticians about who this finding applies to must also be considered.

Individually, the studies adhere to the scientifically reliable methods necessary for healthcare recommendation (Mares and Sivakumar 2016), but it is because they corroborate one another (Melis, Rikkert and Van der March 2017) by agreeing that ortho-k achieves statistical significance in slowing myopic progression that they achieve suitable weight for the purpose of informing opticians on the effectiveness of ortho-k for myopia control, for example, the Charm and Cho 2013 study has the most reliable method but too few participants to have statistical power on its own.

Although higher evidence levels involving greater randomisation and double blinding were not achieved by these studies, the true randomised control trial (RCT) method encounters difficulties when applied to medical devices because participants must give informed consent in order for the research to be ethical (Shafer 1982). Lack of such RCTs in the wider ortho-k literature is noted by Bao *et al* 2015. However, Concato, Horowitz and Shah 2000 argue that, when observational studies are of high quality, they give similar findings to RCTs.

The most reliable conclusions can be drawn where the studies overlap, for example the strongest evidence exists that ortho-k slows myopic progression over a two-year period for eight to 12-year-olds. However, findings about patient baseline refraction, or ethnicity, or duration of ortho-k wear are not corroborated by the studies because there was significant variation in the way these characteristics were recorded, sampled and analysed. Opticians therefore should not make inferences based on these parameters.

Liu *et al* 2015 agree that more investigations are needed to determine whether ortho-k effectiveness for myopia control is influenced by ethnicity. Cooper and Tkatchenko 2018 state that gas permeable contact lenses are typically prescribed when myopia is already slowing at 12 years and older. For this reason, information about the effect of ortho-k on different age groups is limited.

Cho and Tan 2018 agree that more evidence is needed on the duration of treatment required, in particular because of a suggested rebound effect; the possibility that stopping ortho-k wear causes axial elongation to speed up.

Opticians cannot use the variance analyses of these studies to inform clinical practice because standard deviations of the association between ortho-k and myopic progression were contradictory.

Only one issue concerning internal validity was found. Chen *et al* 2014 conclude that atropine and ortho-k could be used as a combination therapy, but their study gives no weight to this argument. Conclusions drawn by the multivariate studies comparing ortho-k to other myopia control methods were not included because they are beyond the scope of this literature review.

There is enough corroboration between the studies to inform opticians that ortho-k is effective for slowing myopic progression. However, the groups to which opticians should apply these findings are limited because the strength of evidence varies for these groups. While the argument that ortho-k slows myopic progression is supported for eight to 12-year-olds over a period of two years, this assertion is not supported for patients in different age groups and no inference can be reliably made about baseline refraction, ethnicity or duration of treatment required. Further investigation to isolate these variables is required.

For article references, visit
**https://abdocollege.org.uk/references/**

abdo COLLEGE

# Fellowship Dispensing Diploma (FBDO)

## Develop your career and learn while you earn

Want to become a dispensing optician? ABDO College offers you the chance to combine online learning with in practice experience and block release. The course:

- Leads to a registerable FBDO qualification
- Has a proven track record of success with consistently high theory and practical exam results
- Gives you a platform to advance your career.

### Entry requirements

- GCSEs level 4 or above in English, mathematics, science and two other subjects (Grade C pre-2017)
- Evidence of recent learning
- You must be working in practice as a trainee dispensing optician for a minimum of 30 hours per week under a GOC-registered supervisor and have the support of your employer.

For more details and to apply:

visit **www.abdocollege.org.uk**

call **01227 738 829 (Option 1)**

or email **info@abdocollege.org.uk**

Applications close: 1st August 2021

KEEPING EXCELLENCE IN YOUR SIGHTS