



THE COLLEGE  
OF OPTOMETRISTS



# A survey of UK contact lens practice for children and young people

## Full report

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# Foreword



The College has been commissioning research as part of our Research Strategy since 2008. As we have developed our approach to commissioning and conducting both our own research and projects with partners, we have been continuously looking at new ways in which we can deliver high quality, independent research for our members and the public.

During the current iteration of our Research Strategy (2011 – 2014), we have developed a range of approaches that are new for the College. We have embarked on a significant collaborative project, funded by the National Institute for Health Research, to look at vision among people with dementia; we have led on and co-funded the largest priority setting exercise for eye and vision research; and we have set up a project with the University of Leeds to gather data about ophthalmic public health. Each of these projects has involved the College using new ways of developing, funding and delivering research for the benefit of the public and our members. The UK contact lens practice with children and young people survey is another example of the College continuing to innovate, while delivering rigorous, independent research in a way that is useful to our members, the public and the wider sector. This project is the first to be funded with an industry partner.

Having identified that there was limited information and evidence in relation to this area of practice in the UK, the College's Research Committee decided that it was important for the College to gather data that would begin to inform our understanding of how UK optometrists approach contact lens practice with children and young

people. Since similar work in this area had already been conducted by the American Optometric Association and Johnson and Johnson Vision Care, it seemed sensible to use that work as a starting point for this survey. Johnson and Johnson Vision Care provided some funding to the project but the research was carried out independently by the College's research team.

There have been various references to industry funding of research in the media recently, and campaigns to ensure appropriate transparency around funding and conflicts of interest and preserving independence for researchers. The College was only able to embark on this project because of the funding provided by Johnson and Johnson Vision Care and because we were able to agree with them that the research would be conducted by us and that we would have freedom to publish the results.

We hope you find this report useful. Understanding what colleagues are doing with regard to their practice in a particular area provides a useful opportunity to reflect on your own practice. Once you have read the report you may want to consider the following questions:

- To what extent is your behaviour aligned with this general pattern?
- What do you regard as the most important factors determining whether it is appropriate to recommend contact lenses to a child/young person?
- Do these findings make you think differently about your approach or increase your confidence in your current approach?

You can let us know your views on the findings and offer suggestions for further research on this topic by emailing the research team: [research@college-optometrists.org](mailto:research@college-optometrists.org)

**Professor Edward Mallen**  
**Chair of the College of Optometrists**  
**Research Committee**

# Introduction

There is a growing body of literature reporting successful contact lenses (CL) wear by children and adolescents. Developments in CL materials have increased the variety of products available, but there is very limited information about whether these developments have had any impact on optometric practice with regard to the prescribing of CL to children and young people (CYP).

A review of press articles in relation to contact lenses, a further review of publications, and dialogue with contact lens organisations led the College of Optometrists to conclude that there is no current, sound data relating to the scope, scale and nature of contact lens practice among optometrists in the UK with regard to CYP.

To address this knowledge gap, the College undertook a survey of its members to explore current behaviour and attitudes towards CL practice with regard to CYP. This survey provides valuable insight into a developing area of the professional practice of optometry, an area where little information is currently available. There seems to be significant scope to improve the profession's understanding of how contact lenses are currently regarded and used by its members in respect of this group of patients. This is data that could lead to patients benefiting from improved access to information and better options for vision correction, which might in turn lead to greater satisfaction and concomitant improvements to quality of life.

Research carried out in the United States over the last 10 years<sup>1,2,3,4</sup> suggests there may be perceived benefits for some CYP from using CL, but it is not clear whether these benefits are being realised, or if perceived or real barriers exist to the use of CL in this patient group.

Eurolens Research, based at the University of Manchester, has conducted surveys on CL prescribing trends since the 1990s. However, these surveys are concerned with prescribing in general and provide limited specific data on CYP although researchers from the group did publish one study on CYP prescribing trends between 2005 and 2009.<sup>5</sup> Efron et al (2011) concluded that patterns of CL prescribing to infants and children are distinctly different to those of prescribing to teenagers and adults in a number of respects. However, data were collected from 38 countries and the proportion of young people fitted with CL varied considerably between nations, ranging from 25% in Iceland to 1% in China and the study did not shed light on prescribing trends in the UK.

This research is the first to provide organised and published information relating to current practitioner-reported attitudes and behaviours relating to CL use by CYP in the UK. The results present a picture of how UK optometrists currently prescribe CL to CYP. It provides a benchmark for measuring how practice in this area changes over time and identifies the reported drivers for change.

# Aims of the survey

The aims of the survey were:

1. To describe current behaviour and attitudes towards contact lens practice with regard to children and young people in the UK among optometrists.
2. To inform the optometric profession of current behaviour and attitudes toward contact lens practice with children and young people in the UK.
3. To identify key features of current contact lens practice where children and young people are concerned, based on the information reported by optometrists.



## Method

The method of data collection was a questionnaire-based survey of members of the College of Optometrists (College). The questionnaire was designed by a steering group consisting of the College's director of research, research manager, research committee members, a patient reference group member and the College's clinical adviser with input from a representative of Johnson and Johnson Vision Care Inc. It was a modified version of a questionnaire used by the American Optometric Association (AOA) in a survey of its members conducted in 2010.<sup>6</sup>

The College of Optometrists' membership of 9,845 practising optometrists represents approximately 71% of the registered optometrists in the UK (13,872). A randomly selected sample of 3,159 (32%) were invited to take part in a questionnaire-based survey. Subjects were initially contacted by email if they had an email address registered with the College (n=3,000) and invited to complete the questionnaire online via a Survey Monkey link. After a three month period and two reminders, a printed copy of the questionnaire was posted to those who had not responded, along with a reply paid envelope. The postal survey was also extended to the 159 college members without a registered email address.

# Results

## Characteristics of the sample and response rate

Invitations to participate in the online survey were emailed to 3,000 members. After two reminders, 461 questionnaires were completed, a response rate of 15.37%.

A printed copy of the questionnaire was posted to those who had not responded to the online survey (n = 2,539) plus 159 members who had no email address, 2,698 in total. During a two month period 314 questionnaires were returned: 11.64% response.

Overall, 3,159 questionnaires were distributed and 775 questionnaires returned, a response rate of 24.54%. From this, 27 questionnaires were removed as they contained no data other than a statement that the respondent did not fit CL, reducing the total number of completed questionnaires to 748 (449 online and 299 postal). Many of the questionnaires had incomplete data, possibly reflecting respondents' limited experience of CL prescribing for CYP so results in the next section show the number of responses to each questionnaire item.

Participants were asked to identify their primary practice setting (Table 1). The largest grouping was practice employees: the combined number of employees was 323 (43.2%) working either in independent practices (125, 16.7%) or working for regional/national companies (98, 26.5%). This did not include respondents whose primary role was as a locum (116, 15.5%) or optometrists working in hospital and community health settings (36, 4.7%). A quarter of respondents were practice owners (187, 25%) with a further 6.7% (50) identifying themselves as franchisees of regional or national optometric companies.

**Table 1: Primary place of practice of survey respondents**

Primary place of practice	Number	Percentage
Practice owner (1 practice not affiliated with a regional/national optical company)	114	15.2
Practice owner – small group (2–4 practice sites, not affiliated with a regional/national optical company)	68	9.1
Practice owner – medium group (5 or more practice sites, not affiliated with a regional/national optical company)	5	.7
Franchisee (1 practice affiliated with a regional/national optical company)	38	5.1
Franchisee (multiple practices affiliated with a regional/national optical company)	12	1.6
Locum – multiple practice	43	5.7
Locum – independent practice	73	9.8
Employed – by an optometric practice (not affiliated with a regional/national optical company)	47	6.3
Employed – by a small group optometry practice (2–4 sites, not affiliated with a regional/national optical company)	41	5.5
Employed – by a medium group (5 or more sites, not affiliated with a regional/national optical company)	37	4.9
Employed – by an optometric practice affiliated with a regional/national optical company	198	26.5
Hospital/clinic/other multidisciplinary	35	4.7
Community health centre	1	.1
Regional/national optical company	1	.1
Educational institution	23	3.1
Optical/ophthalmic manufacturer or wholesaler	1	.1
No response	11	1.5
<b>Total</b>	<b>748</b>	<b>100.00</b>

### Current prescribing practice

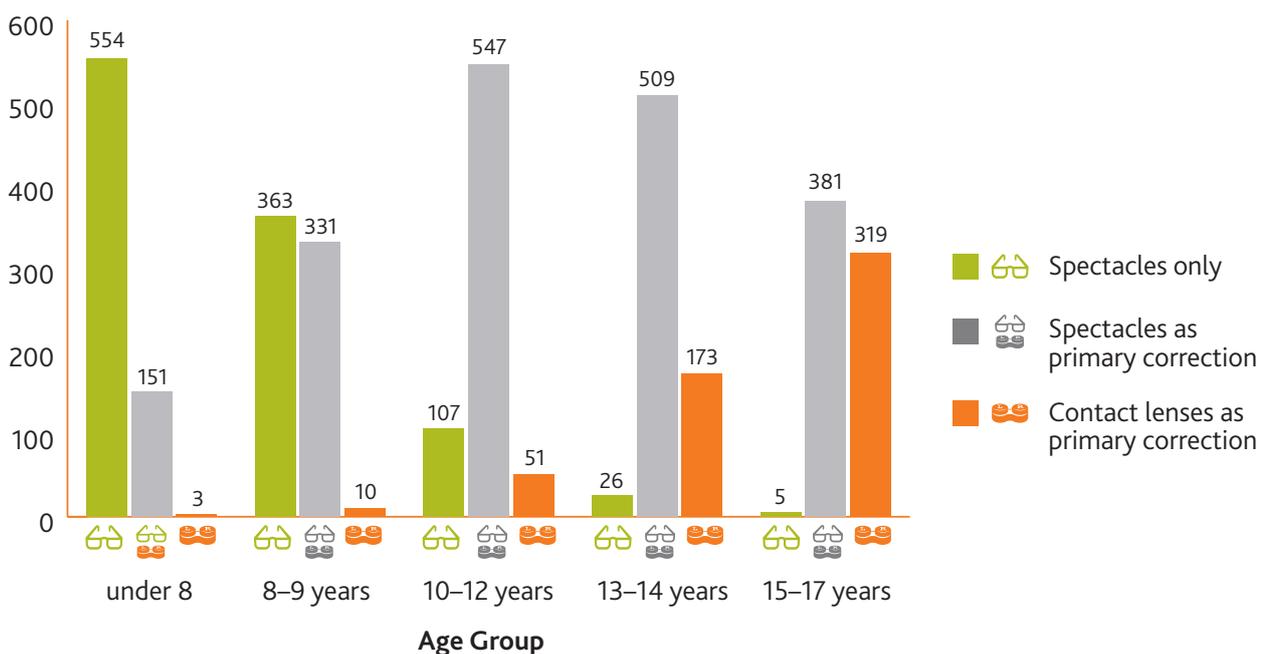
Ninety two percent of respondents (688) said they currently fit CL for people aged under 18 years of age; only 36 (4.8%) said they did not, with 24 (3.2%) not answering the question.

Participants were presented with three statements about their approach to vision correction:

- recommend spectacles only
- recommend spectacles but may prescribe contact lenses as secondary correction
- recommend contact lenses as primary form of correction with spectacles as a secondary correction

They were asked to select the statement which best described their approach to vision correction for children in a range of age categories. Their responses are shown in Figure 1.

### Figure 1: Recommended approaches to vision correction



For all age groups, spectacles were the recommended approach, either on their own or as the primary choice. However, the frequency with which CL were recommended, either as the primary or secondary approach to vision correction, increased with the age of the child.

For children aged less than 8 years, most optometrists (554, 76.9%) recommended 'spectacles only', although a fifth (151), while recommending spectacles, may prescribe CL as secondary correction. Only three optometrists would recommend contact lenses as the primary form of correction for this age group.

For children aged 8–9 years, the number of optometrists who would only recommend spectacles fell to 50% of respondents (363, n = 720). For 10–12 year olds, more than three quarters of optometrists (547, 76.2%) said they may prescribe CL as secondary correction. Nearly a quarter of optometrists (173, 24.1%) stated that they would recommend CL as the primary form of correction for children aged 13–14 years. By the time a child reached 15 years, less than 1% of optometrists recommended spectacles only and more than two fifths (319, 44.6% of those who responded) recommended CLs.

A further question asked if there had been any changes in the criteria for fitting CYP with CL over the last five years (Table 2).

**Table 2: Changes in contact lens fitting criteria over the last 5 years**

	Less likely to fit contact lenses	Criteria has not changed	More likely to fit contact lenses	Not sure
<b>Under 8 years Number = 707</b>	29 4.1%	558 78.9%	98 13.9%	22 3.1%
<b>8 – 9 years Number = 715</b>	22 3.1%	475 66.1%	199 27.8%	19 2.6%
<b>10 – 12 years Number = 725</b>	11 1.5%	385 50.3%	335 46.2%	14 1.9%
<b>13 – 14 years Number = 726</b>	3 0.4%	407 56%	306 42.1%	10 1.4%
<b>15 – 17 years Number = 730</b>	1 0.1%	456 62.5%	264 36.2%	9 1.2%

In every age group, the majority of respondents said that their criteria for fitting CYP with CL had not changed. The age groups where there had been most changes in CL fitting criteria were 10–12 year olds followed by 13–14 year olds. The age group where there was least reported change in criteria was the under 8 years old group.

Very few optometrists reported that they were less likely to fit CL; only 29 (4.1%) in relation to under 8 year olds and just one person for those aged 15–17 years.

The percentage of respondents who said they were more likely to fit children with CL ranged from 13.9% in the under 8 years category to 46.2% in the 10–12 years age group.

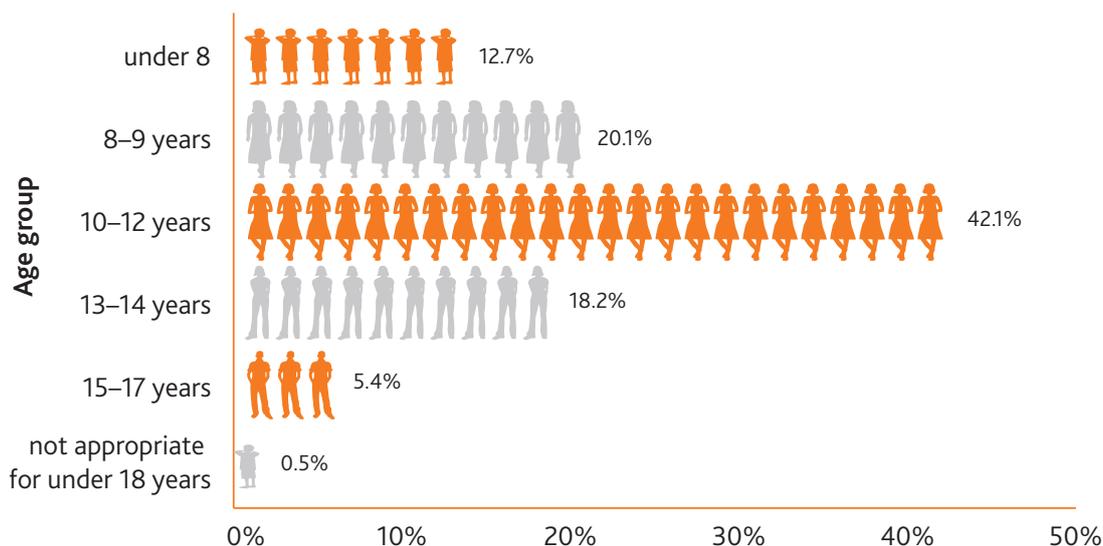
### Types of contact lenses prescribed

Optometrists were asked two questions to assess their attitudes towards CL prescribing.

- At what age do you feel it is appropriate to introduce a child to soft contact lenses?
- At what age do you feel it is appropriate to introduce a child to gas permeable contact lenses?

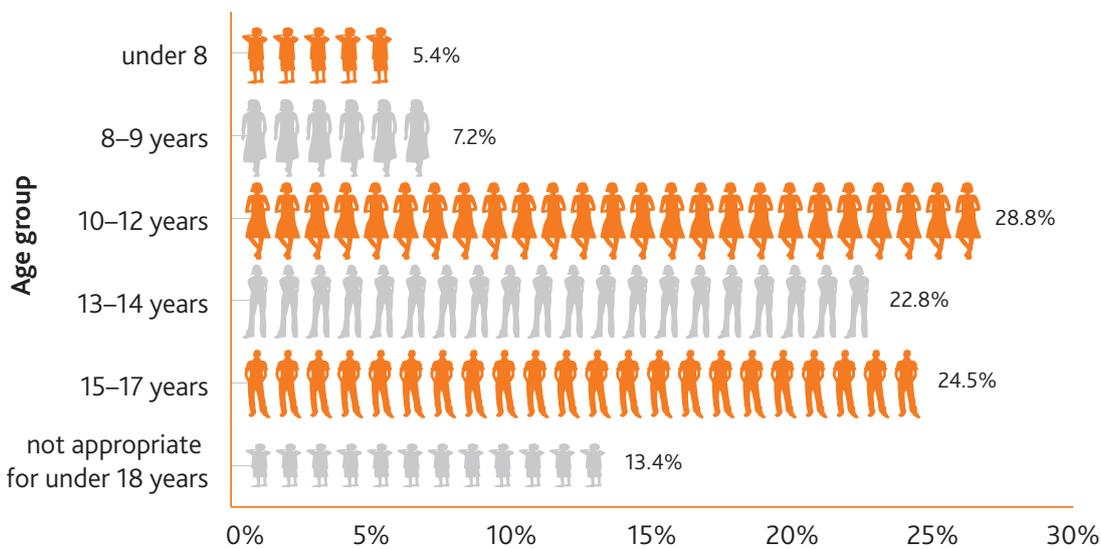
Figure 2a shows that 99.5% of respondents thought that soft contact lenses (SCL) were appropriate for people younger than 18 years of age. Three quarters thought that children could be introduced to SCL by the age of 12 years although only 12.7% thought SCL were appropriate for children under the age of 8 years.

**Figure 2a: Appropriate age to introduce a child to soft contact lenses**



Lower proportions of respondents were in favour of introducing CYP to gas permeable lenses (GPL) as shown in Figure 2b. GPL were considered inappropriate for CYP by 13.4% and only 5.4% would introduce children less than 8 years old to GPL.

**Figure 2b: Appropriate age to introduce a child to gas permeable lenses**



**Nearly 60% of respondents said that interference with sports and other activities was the main reason given by parents asking for CL.”**

Optometrists were asked about the type of contact lenses they prescribed in relation to the age of CYP. They were also asked to rank the frequency with which they prescribed each type of lens using a ranking of 1 to 7 with 1 being the most frequently prescribed. Their responses are summarised in Table 3.

**Table 3: Optometrists' prescribing preferences**

		Under 8 years	8 – 9 years	10 – 12 years	13 – 14 years	15 – 17 years
<b>Daily disposables</b>	Number of optometrists prescribing	240	405	610	667	676
	Percentage ranking lenses type as #1	74.6%	74.8	72.1%	63%	52.5%
<b>Two week replacement</b>	Number of optometrists prescribing	161	256	423	520	567
	Percentage ranking lenses type as #1	6.8%	4.3%	4%	6.3%	9.7%
<b>Monthly replacement</b>	Number of optometrists prescribing	176	277	477	595	647
	Percentage ranking lenses type as #1	10.8%	10.5%	7.3%	13.1%	19.3%
<b>Planned replacement (quarterly or 6 monthly)</b>	Number of optometrists prescribing	96	134	186	224	259
	Percentage ranking lenses type as #1	10.4%	4.5%	3.2%	4.5%	6.6%
<b>Conventional</b>	Number of optometrists prescribing	78	101	143	171	193
	Percentage ranking lenses type as #1	7.7%	4%	5.6%	5.3%	4.7%
<b>Gas permeable</b>	Number of optometrists prescribing	111	163	261	333	407
	Percentage ranking lenses type as #1	6.3%	9.9%	9.2%	6.9%	8.6%
<b>Corneal reshaping (CRT)/orthokeratology</b>	Number of optometrists prescribing	55	71	103	112	128
	Percentage ranking lenses type as #1	18.2%	9.9%	7.8%	5.4%	7%

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The numbers of optometrists prescribing every type of CL increased as the age of the child increased. Daily disposables were the most frequently prescribed CL for all ages. They were also ranked as the first choice of CL, with over 70% of prescriptions being for daily disposables in children aged up to 12 years. The second most frequently prescribed and preferred lenses were monthly replacement lenses which were prescribed slightly more often than two weekly replacement lenses.

When asked if they fitted cosmetic (plano) CL to children, nearly three quarters (541, 72.4%) responded that it was “Not appropriate for patients under 18”. No one said they would fit them to a child aged less than 8 years, two people said they fitted 8–9 year olds, six fitted 10–12 year olds and 28 fitted 13–14 year olds. However, 20% (150) reported fitting 15–17 year olds with cosmetic lenses.

Finally, optometrists were asked if they recommended overnight wear when prescribing extended wear CL for patients in the various age groups. A large majority, 639 (85.4%) answered that it was “Not appropriate for patients under 18 years”. Just 6% (46) recommended overnight wear for 15–17 year olds and the figures for younger age groups were: 1.5% for 13–14 year olds, 1.1% for 10–12 year olds, 0.5% for 8–9 year olds and 0.9% for children younger than 8 years.

### Factors influencing contact lens prescribing

Optometrists were presented with a list of 14 factors to consider when choosing whether or not to fit a child with CL and asked to indicate the importance of each on a scale of 1–10 with 10 being the highest level of importance.

The child’s interest/motivation to wear CL was considered to be the most important factor: mean 8.99, SD 1.765. This was closely followed by the child’s maturity level, the ability to take care of contact lenses by him/herself and personal hygiene habits. However, as Table 4 shows, participation in sports, impact on self esteem and prescription requirement were also considered to be very important factors. The actual age of the child was less important than their maturity.



**The child’s interest/motivation to wear CL was considered to be the most important factor influencing contact lens prescribing – closely followed by the child’s maturity level.”**

**Table 4: Importance of factors when deciding whether to fit contact lenses**

	Number		Mean	Median	Mode	Std. deviation
	Responses	No response				
Age	716	32	6.16	6.00	8	2.552
Gender	692	56	2.17	1.00	1	1.946
Child's personal hygiene habits	739	9	8.81	10.00	10	1.893
Child's maturity level	738	10	8.85	10.00	10	1.762
Child's interest/ motivation to wear contact lenses	740	8	8.99	10.00	10	1.765
Child's ability to take care of contact lenses by him/her self	735	13	8.84	10.00	10	1.776
Participation in sports	734	14	7.26	8.00	8	1.897
Impact of contact lens wear on child's self-esteem	734	14	7.77	8.00	8	1.787
Prescription requirement	726	22	7.39	8.00	8	2.044
Frequent frame loss or damage	699	49	4.23	4.00	5	2.346
Frequent spectacle lens damage	704	44	4.24	5.00	5	2.390
Parental interest in having child wear contact lenses	724	24	5.48	6.00	5	2.585
Parental experience with contact lenses	728	20	4.99	5.00	5	2.351
Cost of contact lenses	710	38	4.53	5.00	5	2.611

The least important factor was gender; mean 2.17, SD 1.946. This was borne out by responses to a separate question about whether subjects would be more likely to fit male or female children with CL. Over 87% (646) said that gender did not influence the decision but 88 (12.1%) said they would be more likely to fit CL if the child was female. Just one person said they would be more likely if it was a male child.

Optometrists were also asked about the importance of CL properties when fitting CYP, again using a scale of 1–10, 10 being the highest level of importance. Their responses are shown in Table 5. All six CL properties were considered very important (more than 5) but the most important were comfort, oxygen permeability, and visual acuity which all had a median of 9 and a mean score in excess of 8.7.

**Table 5: Importance of contact lens properties**

	Number		Mean	Median	Mode	Std. deviation
	Responses	No response				
<b>Comfort</b>	733	15	8.77	9.00	10	1.736
<b>Oxygen permeability</b>	733	15	8.79	9.00	10	1.820
<b>Ultraviolet protection</b>	733	15	7.23	8.00	8	2.174
<b>Replacement schedule</b>	733	15	7.96	8.00	10	2.160
<b>Ease of handling</b>	732	16	7.93	8.00	8	1.878
<b>Visual acuity</b>	734	14	8.75	9.00	10	1.497

Optometrists were asked about who introduced the possibility of CL with CYP: the optometrist, a member of staff, the parent or the child. Table 6 shows that the initiator of the “time to consider contact lenses” conversation differed according to the age of the child.

**Table 6: Who initiates the “time to consider contact lenses”**

	I initiate	Staff initiate	Parent initiates	Child initiates
<b>Under 8 years Number = 540</b>	152 28%	3 0.6%	347 64%	38 7%
<b>8 – 9 years Number = 594</b>	194 32.7%	4 0.7%	345 58%	51 8.6%
<b>10 – 12 years Number = 673</b>	288 42.8%	7 0.1%	249 37%	129 19.2%
<b>13 – 14 years Number = 684</b>	338 49.4%	14 0.2%	96 14%	236 34.5%
<b>15 – 17 years Number = 686</b>	371 54.1%	18 2.6%	32 4.7%	265 38.6%

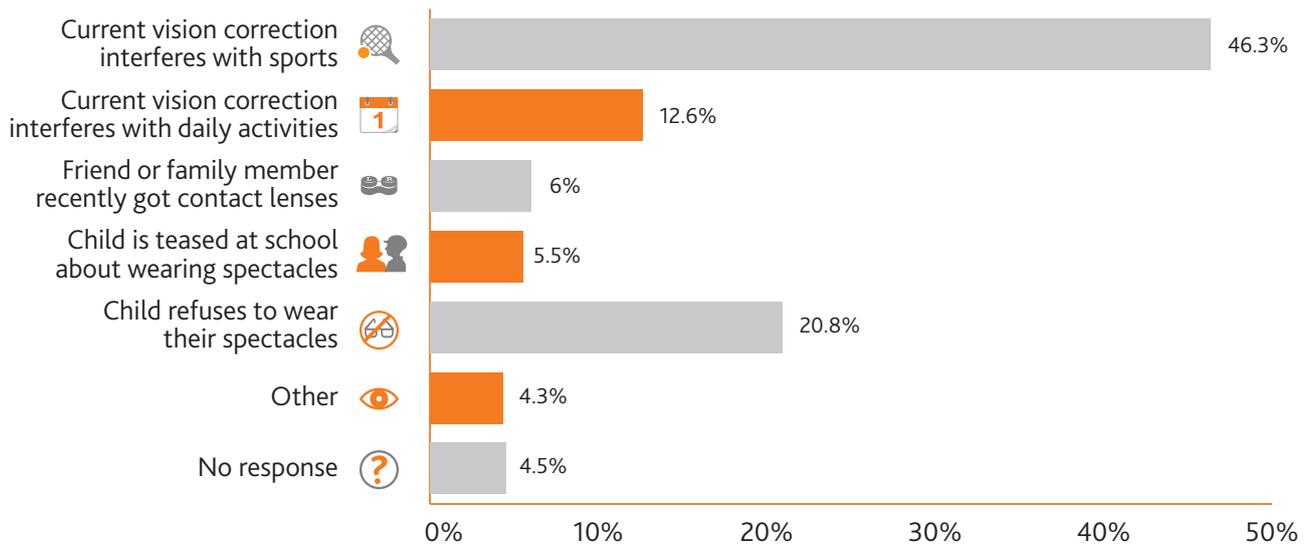
In younger age groups, parents were most likely to initiate the conversation. Nearly two thirds of optometrists said the parent was the initiator in children aged less than 8 years old, whereas only just over a quarter said they would introduce the idea for children this young.

The overall trend was that the older the child, the more likely that the optometrist would initiate the discussion. The optometrist was the main initiator for children aged 10 years and over.

Similarly, the older the child, the more likely he or she would be to initiate the idea of CL, although the optometrist was more likely than the child to be the initiator in every age group.

A follow up question asked “which of the following reasons do you hear most often from parents asking that their child be fitted with contact lenses?” (Figure 3).

**Figure 3: Reasons given by parents for requesting contact lenses**



The most common reason given was that current vision correction interfered with sports (46.3%) followed by the child's refusal to wear spectacles (20.9%). Collectively, interference with activities of some kind – sports and other activities – was reported as the main reason by 58.9% of optometrists. Self-esteem factors, child refusing to wear spectacles or being teased at school, were reported by more than a quarter of optometrists (26.6%).

The "other reasons" were mostly variations of the preselected responses: cosmetic (dislike of spectacles, because the parent did not like the child wearing spectacles) and sports (including for safety reasons). Eight optometrists cited clinical reasons.

The issue of sports-related CL wear was explored in a further question. Participants were presented with five options for vision correction and asked to identify the option they recommended most often for CYP who are active in sports. The five options were:

- Contact lenses only
- CRT/orthokeratology lenses
- Prescription sports or protective eyewear
- Spectacles and contact lenses
- Spectacles only

Unfortunately, a printing error with the postal questionnaire resulted in one of the options being omitted so the only valid responses are those from the online survey. Table 7 shows the results from the 449 online questionnaires. As the table shows, the tendency to recommend contact lenses, either alone or with spectacles, increased with the age of the child. Conversely, the number of respondents who would recommend spectacles only or prescription sports or protective eyewear decreased as the CYP age group increased.

**Table 7: Optometrists' prescribing preferences**

Age group	Contact lenses only	CRT/orthokeratology lenses	Prescription sports or protective eyewear	Spectacles and contact lenses	Spectacles only	No response
<b>Younger than 8 years</b>	1.6%	0.7%	55.0%	16.5%	20.5%	5.7%
8–9	3.6%	0.9%	43.0%	32.7%	14.3%	5.5%
10–12	10.9%	0.9%	14.5%	64.8%	4.9%	4.0%
13–14	17.1%	0.7%	4.9%	71.9%	1.8%	3.6%
15–17	18.5%	1.1%	2.9%	73.3%	0.4%	3.8%

# Discussion

This was the first survey to investigate UK optometrists' attitudes and behaviour in respect of CL for CYP.

The only survey to provide comparable data is the US survey undertaken by the AOA in 2010.<sup>6</sup> Both studies reported that high percentages of respondents fitted CL to patients under the age of 18 years, 97% in the US survey compared with 92% in this survey.

The overall pattern in approaches to vision correction was very similar in that optometrists in both countries began to change their approach to vision correction as the age of the child increased. However, UK optometrists were more conservative in prescribing CL. They were more likely to recommend spectacles as the only or primary form of vision correction for longer and moved towards recommending CL as the primary form of correction at a later age. For example, in children under 8 years, 77% of UK respondents recommended spectacles compared with 67% of US optometrists. The percentage of US optometrists that were reported to prescribe CL as the principal form of vision correction was considerably higher than in this UK survey: 20% for 10–12 year olds, 49% for 13–14 year olds and 66% for 15–17 year olds. In this survey the corresponding percentages were considerably lower: 7%, 24% and 45%.

However, when asked about the relative importance of various criteria when considering a child's suitability for CL, the age of the child was not the most important factor. The maturity of the child was more important than age and other significant criteria were the child's interest/motivation to wear CL, the ability to take care of CL by him/herself and personal hygiene habits.

This view is supported by a number of studies. Walline et al (2007) concluded that eye care practitioners should not focus on age alone when determining whether or not a young person can be fitted with CL because children and teens physiologically adjust to CL wear similarly and both are capable of providing adequate care for CL. They recommended that eye care practitioners should consider fitting children younger than 12 or 13 years with CL.<sup>2</sup> More recently, Walline et al (2013) concluded that successful CL wearers first fitted as children are no more likely to report CL-related adverse events, problems with compliance, decreased wearing time, or worse ocular health than those fitted with CL as teenagers, so practitioners should not use age as a primary determinant in fitting children with CL.<sup>7</sup>

A significant number of adult CL wearers are not satisfied with CL and are at risk of discontinuing CL wear.<sup>8</sup> A recent review of CL discomfort reported the difficulty of estimating how many CL wearers abandon CL but cited studies that reported CL "drop out" as between 12% and 51% of lens wearers with CL discomfort as the main reason.<sup>9</sup> The findings of Walline et al (2013) reporting high levels of success in long term use of CL by CYP<sup>7</sup> is therefore encouraging. They found that while symptoms such as red eye, ocular allergies, puffy eyelids, and painful eyes may increase with CL wear, they may be encountered rarely or be mild, and so not adversely affect the long-term health of the eyes.

Across all age groups, the majority of respondents ranked daily disposable CL as their first choice when fitting CYP. This is consistent with studies that have recommended this replacement modality as being especially suited to CYP because the simplicity of daily replacement systems, without the need for lens maintenance, is likely to enhance compliance.<sup>6,10</sup>

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More respondents were in favour of introducing CYP to soft contact lenses (SCL) than gas permeable (GP) ones. Jones-Jordan et al concluded that while children are able to successfully wear GP and SCL, long-term adaptation to SCL occurred more frequently than to GP. Furthermore, the amount of time GP lens wearers are able to comfortably wear their CL and the amount of itching may help determine whether they will remain in that modality.<sup>11</sup>

Rah (2010) asserted that many children or their parents request CL from their eye care practitioner for reasons such as involvement in sports and dance or because they do not like their appearance in glasses.<sup>4</sup> This view was supported by respondents in this survey; nearly 60% said that interference with sports and other activities was the main reason given by parents asking for CL. Self-esteem factors were reported by just over a quarter of respondents. Rah's study looked at quality of life for young CL wearers and found that CL wear improved vision-related quality of life in children when compared with spectacle wear, especially in the areas of appearance and athletics. The authors concluded that these two areas may be the factors that most likely dramatically improve children's satisfaction when wearing CL compared with glasses. It is interesting to note that optometrists taking part in this survey also found that these areas were the main drivers for requesting CL.

# Conclusion

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This survey is the first to provide organised and published information relating to current practitioner-reported attitudes and behaviours relating to CL and CYP in the UK. Although 92% of respondents said they fitted CYP with CL, the response rate means that this may not be wholly representative of the profession. However, the response rate of 25.54% and the sample size of 748 respondents were greater than that of the 2010 AOA survey which had 576 responses, a response rate of 14.4%.

The results of the survey demonstrate that spectacles remain the main form of recommended vision correction for CYP in all age groups although the frequency with which CL were recommended, either as the primary or secondary approach to vision correction, increased with the age of the child. While more than half of respondents said that their criteria for fitting CL had not changed over the last five years, the results suggest that a percentage of the optometric profession are more likely to fit CL now than they were five years ago. Nearly 60% of respondents said that interference with sports or other activities was the main reason given by parents when asking for contact lenses. Just over a quarter reported that self-esteem factors were the main reason.

The maturity of the child was considered to be more important than age in determining the suitability of CL; equally important factors were the child's interest/motivation to wear CL, the ability to take care of CL by him/herself and personal hygiene habits. SCL, particularly daily disposable CL, were the first choice of CL modality for the majority of respondents across all age groups.

While noting caution about the limitations of the sample, the results present a picture of how UK optometrists currently prescribe CL to CYP and provide a benchmark for measuring how practice in this area changes over time. Although there are no specific data relating to the CL market for CYP, in terms of the general population the UK is the biggest CL market in Europe. There were 3.68 million wearers in 2011, 7.5% of the adult population, generating sales of £231 million. In the past 20 years there has been a 135% increase in the number of adult CL wearers.<sup>12</sup> The extent to which this percentage growth is reflected with CYP is not known, but the results of this survey suggest changes in professional attitudes. Further research into current and future prescribing trends will be of interest to the optometric profession and CL manufacturers.



**While more than half of respondents said their criteria for fitting CL had not changed over the last five years, the results suggest that a percentage of the optometric profession are more likely to fit CL now than they were five years ago."**

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