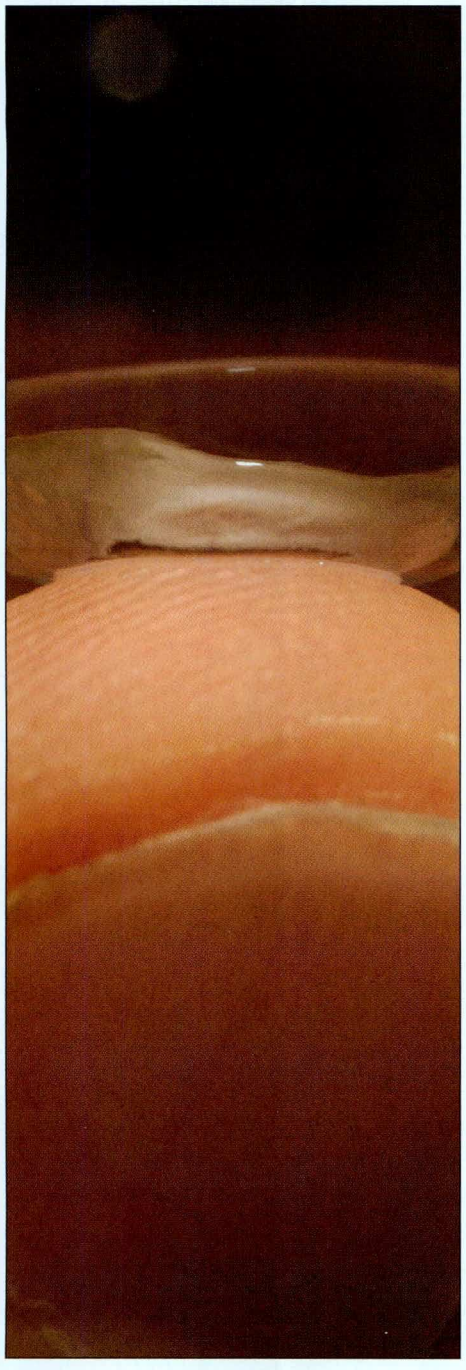
Contact Lens Prescribing in Canada 2006

Prescription de lentilles cornéennes au Canada en 2006



Abstract

A questionnaire was used to identify current preferences for contact lens prescribing in Canada. Practitioners were asked to submit information on the first ten patients fitted with contact lenses immediately after receipt of the survey; 151 completed questionnaires were returned, detailing contact lens fits to 1,421 patients. The results indicated that of the patients fitted with contact lenses, the majority were prescribed soft lenses. The preferred modality was monthly planned replacement. Over 80% of the soft lens fits were with either silicone hydrogel or mid-water content materials, with an even split between the two material options. Of the rigid lens fits the majority were for daily wear. The overnight wear of rigid lenses appears to be for the practice of orthokeratology. Practitioners are recommending multipurpose solutions for the majority of their soft lens patients (91%).

Résumé

On a utilisé un questionnaire pour déterminer les préférences actuelles dans la prescription de lentilles cornéennes au Canada. On a demandé aux praticiens de fournir des renseignements sur les dix premiers patients ayant reçu des lentilles cornéennes à la suite de la réception de ce questionnaire; 151 questionnaires ont été renvoyés, fournissant des détails sur les lentilles cornéennes prescrites à 1 421 patients. Les résultats indiquent que la majorité des lentilles cornéennes prescrites étaient des lentilles souples. La modalité préférée était le remplacement mensuel. Plus de 80 % des lentilles cornéennes souples étaient faites soit d'hydrogel de silicone ou d'une teneur aqueuse d'environ 50 % avec un choix égal entre les deux options. La majorité des lentilles rigides étaient à port quotidien. Les lentilles rigides portées la nuit semblent l'être à des fins d'orthokératologie. Les praticiens recommandent des solutions polyvalentes à la plupart de leurs patients ayant des lentilles cornéennes souples (91 %).

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Introduction

Canadian practitioners have participated in a contact lens fitting survey over the past seven years, the results of which have been published as part of an international review.[1-6] This is the first time the results from this Canadian fitting survey have been published in isolation.

Around the world, manufacturers often hold data on contact lens markets, which can be commercially sensitive and is usually not made publicly available. For practitioners, a helpful approach is to understand prescribing trends from colleagues at a national level, as this allows for individual prescribing habits to be benchmarked against a peer group.

Methods

Morgan et al[1-6] have been collecting data on the fitting habits of Canadian practitioners for seven years and report these as part of an international survey. The same approach was used in this study. Each questionnaire requested some basic background information about the practitioner completing the questionnaire and then solicited generic (unbranded) information about the first ten patients fitted with contact lenses after receipt. Data about each lens fit fell into the following categories: date, age and gender of patient, new fit or refit, lens material, lens design, lens replacement frequency, wearing modality and care system prescribed.

In January 2006, 1000 survey forms were mailed to a proportional selection of practitioners in each province. This paper reports on this fitting survey.

When analysed, a system of weighting was employed to better reflect the nature of lens prescribing. This weighting was based on the contact lens activity of the respondents, as determined from the dates provided on the questionnaire. Thus, a practitioner completing all ten fits in one day was afforded a higher activity weighting than a colleague taking eight weeks to complete ten fits.

Assuming that there are 200 days per year when a practitioner could fit contact lenses, data from the practitioner who fitted all 10 patients in one day carried more weight (200/1) than the practitioner who fitted one patient in the three month time period (200/90). Effectively the data was annualised, an analysis method used in previous studies.[7]

Results

Demographics and background information

The response rate of the practitioners surveyed was 15.1%. Their years of experience fitting contact lenses ranged from 6 months to 41 years, with an average experience of 14.3yrs (±10.3yrs). The demographic data for the 1,421 patients fit are shown in Table 1.

TABLE 1: DEMOGRAPHIC DATA FOR PATIENTS FIT WITH CONTACT LENSES.

PATIENT AGE	31.3 ± 13.9
AGE RANGE	8 to 79 yrs
FEMALE : MALE FITS	957 : 464 (2:1)

New fits versus refits

Practitioners were asked to identify new fits or refits: a new fit - a person presenting who had not worn lenses before or with a significant time period without lens wear; and refit - a person who presented needing to have their contact lenses changed. Of the fits reported in this survey 35.0% were new fits and 65.0% were refits. The break down between new and refits for all of the fits reported is shown in Figure 1. Patients presenting for a routine follow up visit or to collect their next supply of planned replacement contact lenses were not recorded in this survey.

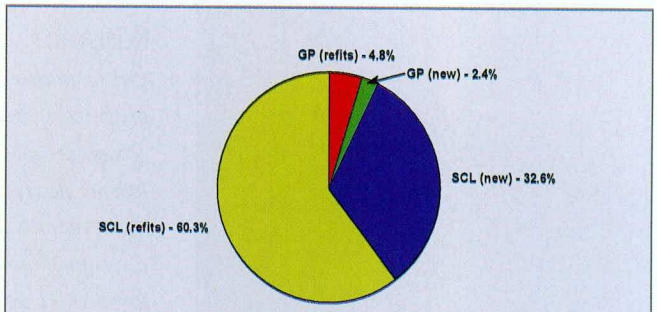

Figure 1: Proportion of contact lens fits, new versus refits.

Soft lenses

The majority of patients were fit with soft lenses (92.9%). Of the soft lenses fitted the material of choice was evenly distributed between mid-water lenses (41.8%) and silicone hydrogel materials (39.8%), Figure 2. For patients who were being refit with lenses the proportion being prescribed silicone hydrogel lenses was higher

than those who were being fit for the first time (47.6% versus 33.8%), Figure 3. This shift results in fewer re-fits being with high and mid water content lenses than new fits. The preferred replacement modality is monthly planned replacement (71%); the distribution of replacement frequencies can be seen in Figure 4. As could be anticipated, the largest proportion of soft lens wearers was fit with spherical lenses (59.5%). Interestingly more multifocal lenses were fit than cosmetic tints. Figure 5.

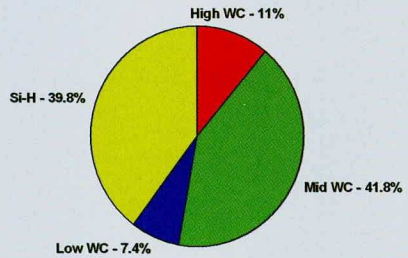

Figure 2: Distribution of materials prescribed for all fits of soft contact lenses.

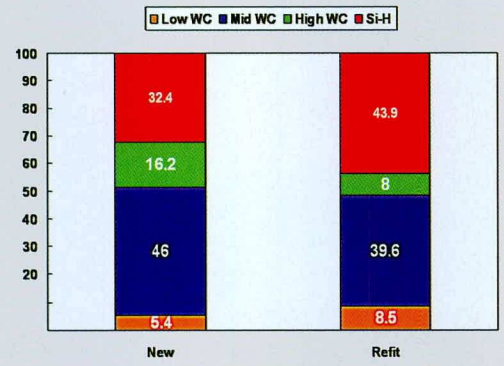

Figure 3: Proportion of soft lens materials for daily wear, new versus refits.

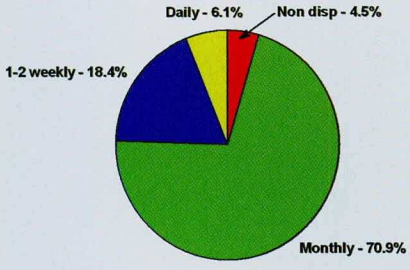

Figure 4: Distribution of replacement frequencies prescribed for all fits of soft contact lenses.

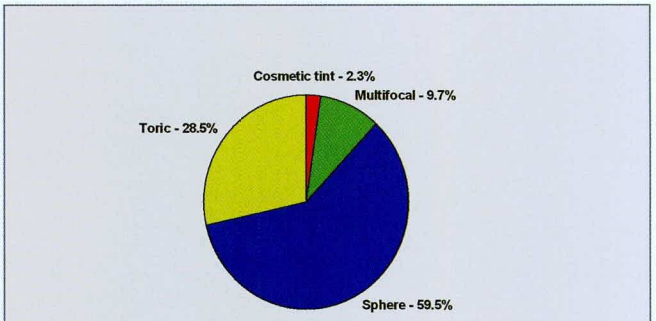

Figure 5: Distribution of lens designs prescribed for all fits of soft contact lenses.

Soft lens care systems

For fits where solutions were expected to be prescribed, ie daily wear soft lenses excluding daily disposables, practitioners prescribed multipurpose disinfecting solutions for the majority of their soft lens patients. The proportions for silicone hydrogel and non-silicone hydrogel were slightly different with more patients being given hydrogen peroxide solutions if they were wearing silicone hydrogel compared to non-silicone hydrogel lenses Figure 6 & 7.

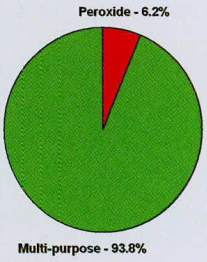

Figure 6: Distribution of lens care systems prescribed for all soft lens fits, except silicone hydrogel lenses.

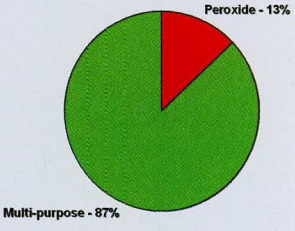

Figure 7: Distribution of lens care systems prescribed for silicone hydrogel lenses only.

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Daily versus extended wear

Practitioners continue to fit the majority of their patients with lenses to be worn on a daily wear basis. Compared to the new fits, twice as many of the refits were for extended wear, the proportions still being small for both groups (4.8% and 10.0% respectively), Figure 8.

Of the extended wear soft fits the majority were utilising silicone hydrogel lens materials (96.2%) as seen in Figure 9.

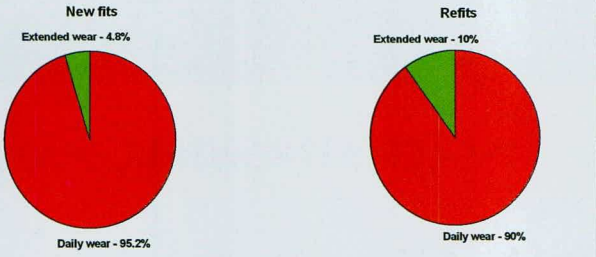

Figure 8: Proportion of lenses prescribed for daily or extended wear by new or refit for all lenses.

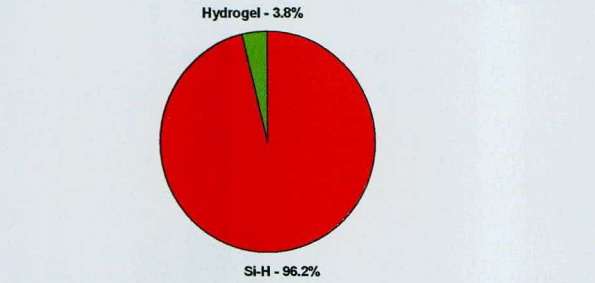

Figure 9: Proportion of extended wear lenses that were prescribed with silicone hydrogel lenses or hydrogel lenses.

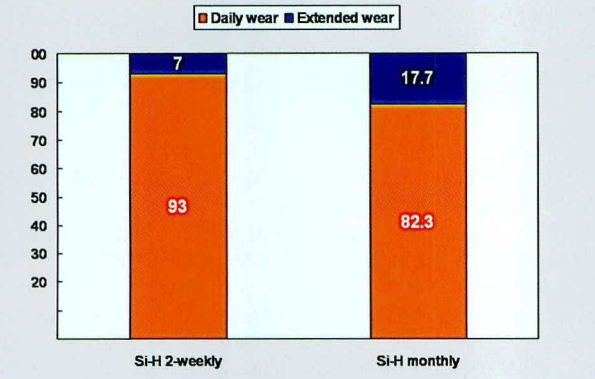

Figure 10: Distribution of extended wear between 2 weekly and monthly replacement silicone hydrogel soft lenses.

Silicone hydrogel materials

Silicone hydrogel lenses are prescribed on a monthly or two weekly planned replacement basis. As identified previously, when soft lenses are prescribed for overnight wear silicone hydrogel materials were chosen. The majority of overnight silicone hydrogel lenses were prescribed on a monthly planned replacement basis, Figure 10.

Rigid lenses

Predictably, rigid lenses were fit for a wider variety of designs than soft lenses. Almost 36% of the rigid lenses fit were for orthokeratology. Toric and multifocals made up 22% of the total number of fits with a relatively small 31.5% being spherical lenses, Figure 11. High permeability materials were preferred for the majority of patients (50.3%). A small percentage of patients were fit with low Dk materials (12.8%), Figure 12.

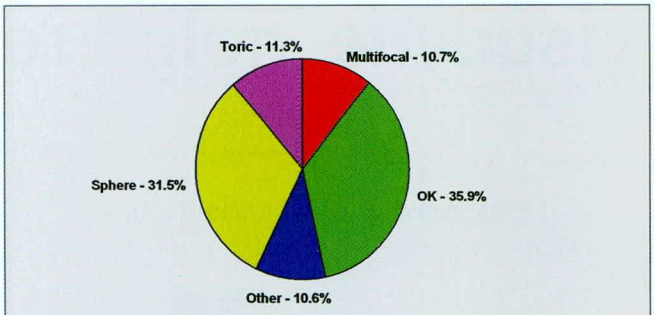

Figure 11: Distribution for GP lenses of the various lens designs fit.

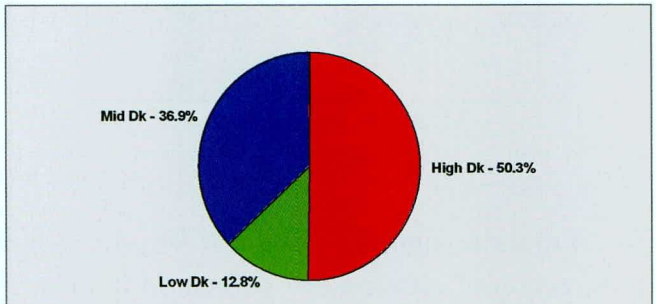

Figure 12: Distribution for use of the different rigid lens materials.

Discussion

It would appear that contact lens practitioners have embraced the evidence that more oxygen is better and that soft lenses should be replaced regularly. Silicone Hydrogel and mid to high water content soft lens materials account for 89% of all of the soft lenses fitted.

Silicone hydrogels were originally marketed as monthly replacement extended wear lenses, and accounted for a relatively small proportion of the contact lens market., Recently, new silicone hydrogel products have been introduced that are designed for daily wear on either a monthly or a two weekly planned replacement basis. These products have been accepted by the optometric profession as a very viable option for their patients. The higher proportion of silicone hydrogel lenses being used for refit compared to new fits implies that this material is also being used to address problems that patients may be experiencing.

There are still patients wearing conventional soft lenses for which the replacement is dictated by performance and clinician recommendation rather than a predetermined replacement cycle. This is most likely due to that fact that for some patients planned replacement may not be an option because of parameter availability. Despite a prediction that rigid lenses would be obsolete by 2010 rigid gas permeable lenses still hold a share of the contact lens market.[8] There are patients for whom rigid lenses are the only option, for example, patients with keratoconus. Orthokeratology also continues to support the gas permeable lens market and has become a popular alternative to other forms of refractive correction in recent years.

Conclusion

Practitioners in Canada prescribe mainly soft lenses that are replaced on a monthly basis with materials of choice appearing to be either mid water content or silicone hydrogel materials. The mode of wear of choice is daily wear. More patients are refit into extended wear than patients who have this option for the first time (new fit). Monthly replacement silicone hydrogel lenses are preferred for extended wear, with two weekly replacement being preferred for daily wear. Multi-purpose solutions are clearly the care regimen of choice for the majority of clinicians. There is still a place in the market for rigid gas permeable contact lenses.

Acknowledgments

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