Trends in Swedish Contact Lens Prescribing 2017

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Abstract

The purpose of this study was to evaluate the trends of contact lens prescribing among Swedish optometrists in 2017.

A standardized survey form developed by Morgan et al. was distributed to Swedish optometrists using their professional organizations, optical chains, direct email, social media channels, and by hand directly. They were asked to fill out the form for the next ten contact lens patients they saw after receiving the survey. Information was collected regarding the day of fitting, age, gender, lens material, design, frequency of replacement, wear frequency, modality and type of care system. A weighting system was employed to account for the volume of activity undertaken by the respondents, calculated by the time period required to achieve 10 fits. All forms and data were analyzed at the University of Manchester.

Fifty-seven forms were returned, detailing 562 fits. The mean age of the patients was 37 years, and 65% were female. 83% were fitted for full-time wear and 27% were managed as new fits. Soft contact lenses are the most commonly fitted modality and represent 97.8% of all new fits and 93.6% of all refits. Rigid contact lens fits represent 5.3% of all fits, with 2.2% of the new fits and 6.4% of the refits. About two-thirds of soft lenses prescribed were silicone hydrogels. Of the different designs, spherical lenses are most widely fitted, with toric lenses on at least one eye a close second. Extended wear accounts for 10.6% of the fittings. Multi-purpose solutions are the most popular regimen prescribed at 99.4%.

When compared with data from Norway and Denmark, it is evident that daily disposables are most popular in these countries (74%), whereas in Sweden monthly replacement lenses are most popular (58%). Otherwise, the results are similar to what has been reported from other parts of the world.

Sammandrag

Syftet med denna undersökning är att utvärdera trender kring kontaktlinstillpassning hos svenska optiker under år 2017.

En standardiserad enkät distribuerades till svenska optiker genom branschorganisationer, optikerkedjor, email och direkt utdelande av enkäten. Man bad optikerna att fylla i formuläret, de tio första kontaktlinstillpassningarna som genomfördes efter att man mottagit enkäten. Det samlades in information om ålder och kön på patienten, nytillpassningen/retillpassning, linsdesign och linsmaterial, modalitet och vilken typ av kontaktlinsvätska som föreskrivits.

Femtiosju formulär kom tillbaka, vilket gav 562 stycken tillpassningar. Medelåldern på patienterna var 37 år och 65% var kvinnor. 83% tillpassades för heltidsbruk och 27% var nytillpassningar. 94,7% tillpassades med mjuka kontaktlinser och av dessa var silikonhydrogel det dominerande materialet.

När man jämför med data från Norge och Danmark, är det tydligt att endagslinser är mer populära i dessa länder (74%), medan månadslinser är populärare i Sverige (58%). Annars är

resultaten liknande mot vad som rapporterats från andra delar av världen.

Introduction

The international survey of trends in contact lens prescribing worldwide has been studied since 1996 by a group led by Philip Morgan and with annual reports published in Contact Lens Spectrum. The purpose of the study is to identify and describe trends and differences in contact lens fitting both on an international and national level. The database now includes more than 354 000 fits undertaken in 62 countries (Morgan et al., 2018), and has resulted in several national reports spanning several years (Efron, Nichols, Woods, & Morgan, 2015; Haddad, Bakkar, Gammoh, & Morgan, 2016; Itoi, Itoi, Efron, Morgan, & Woods, 2018; Jones, Woods, Jones, Efron, & Morgan, 2016). Sweden has participated since 2004, but with a gap between 2006 and 2010. Results from Sweden have been presented at national conferences regularly, and the result from 2013 internationally (Gierow & Morgan, 2014). This paper reports the results from the Swedish survey for 2017.

Methods

A standardized form has been used every year (see Figure 1), and it was sent out to practising optometrists in Sweden at the beginning of 2017. The optometrists then had until the end of May to record information about the next 10 contact lens fits (refits or new) they performed, before returning the form. The survey was distributed through the Swedish Optometric Association, the Swedish Contact Lens Association, newsletters for some optical chains, by direct email, through social media channels and approximately 200 directly by hand. Data collected includes number of years qualified as an optometrist, type of practice, date of fitting, age and gender of patient, new fit or refit, lens type, design and material, replacement frequency, modality and care system used. A weighting system has been employed to account for the volume of activity undertaken by the respondents, calculated by the time period required to achieve 10 fits. This was designed to take account for differences in fitting patterns between busy and less busy practitioners. All forms and data were analyzed at the University of Manchester.

Results

For 2017, 57 forms were returned detailing 562 contact lens fits. The mean age of the patients was 37.0 \pm 16.3 years, and 65% were female. 83% were fitted for full-time wear and 27% were managed as new fits.

Rigid vs soft lens fits

Soft contact lenses are the most commonly fitted modality, representing 97.8% of all new fits and 93.6% of all refits (that is, lens fits when the patient is a current contact lens wearer). Rigid contact lens fits therefore account for 5.3% of all fits (2.2% of new fits and 6.4% of refits).

Soft lens details

About two-thirds of soft lenses prescribed were silicone hydrogels; this was slightly higher for refits (see Figure 2). Of the different designs, spherical lenses were most widely fitted, with toric lenses (prescribed to one or both eyes) the next most popular. Presbyopia fittings (when patients were over 45 years of age) accounted for 19% of fits. Of this group, 46.9% were fitted with multifocals, 23.0% with toric designs, 17.5% with spherical lenses and 12.6% with monovision.



Undersökning av kontaktlinstillpassningar 2017



Om du ej tillpassar kontaktlinser, ge denna då till en kollega som gör det! Vänligen svara på frågorna i rutan under, och fyll därefter i alla detaljer för de första följande tio linstillpassningar du gör du Hur många år har du arbetat som: I vilken typ av praktik jobbar du huvudsakligen? Fristående praktik (1-9 butiker) Kontaktlinstillpassare Regional kedja Nationell kedja

Annat (10-49 butiker) (50-eller fler butiker) Sätt endast ett kryss Sätt endast ett kryss Sätt endast ett kryss Ett krys Sätt endast ett kryss Generall information¹ Stabila linser Miuka linser² Linsdesign³ Bytesfrekvens Bruk! Rengöringssystem 2 3 4 5 6 7 8 9 10

- ngar

 Nytilipassningar och Retilipassningar; "My-tilipassning" används för patienter som aldrig använt kontaktlinser, eller inte använt kontaktlinser på många år. "Re-tilipassning" används till linsbärare som byter till ny linstyp pga, problem osv, även styrkeändringar!

 Mjuka linser; Dessa är indelade efter vätskeinnehåll.

 Linsdesign; Under kategorin "Linsdesign" kan du sätta flera kryss. "Antimyopi"-linser' är speciellt designade för att bromsa myopiutveckling (" ej marknadsfört i Sverige)

 Antal gånger per vecka linserna troligtvis kommer att användas; Dagligt bruk, skriv i antal dagar per vecka som linserna används, vid dygnet-runt bruk, skriv in antal nätter per vecka som linserna används. Max bruk =7.

När blanketten är ifylld – returnera den till: Peter Gierow, Inst f Medicin & Optometri, Linnéuniversitetet, 391 82 Kalmar. Du kan även faxa blanketten till nummer 0480-446262 eller sända den som bilaga med e-post till peter.gierow @lnu.se.

Varje tillpassare skall bara fylla i en blankett! Undersökningen pågår fram till 31 maj 2017. Sänd oss protosollet även om inte alla 10 tillpassningarna är ifyllda vid stoppdatum Har du frågor? Sänd mig ett e-mail (bäst) eller ring på tel 0480-44 62 57. Tack på förhand!

Figure 1: Survey form used in the 2017 survey.

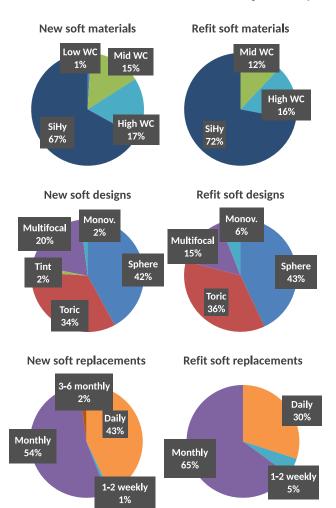


Figure 2: Major findings of the 2017 survey

Daily disposable lenses were more widely used for new fits (43%) compared to refits (20%) (see Figure 2). Extended wear accounts for 10.6% of all fittings. Multi-purpose solutions were the most popular regimen, prescribed at 99.4%.

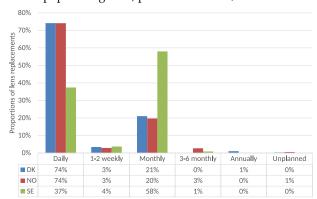


Figure 3: Comparison of soft lens replacements between Denmark, Norway and

Sweden is still a country which fits more monthly replacement lenses compared to daily disposables which is the reverse of other Nordic countries. Specifically, Sweden fitted 37% daily disposables and 58% monthly, compared to 74% daily and 20% monthly in Norway, and 74% daily and 21% monthly in Denmark (see Figure 3).

Discussion

When comparing our results with the reported Swedish result from 2013 (Gierow & Morgan, 2014), it is evident that little has changed when it comes to age, gender, proportion of new fits, proportion of RGP contact lenses and preferred contact lens material. When comparing with the overall results of the international survey from 2017 (Morgan et al., 2018), the results for Sweden are very similar, except for a rather low proportion of

RGP (2% vs. overall 11%). As mentioned above, Sweden has a rather low percentage of daily disposables compared with Norway and Denmark but is well in line with other international markets.

Fitting trends for Sweden have remained quite consistent since 2010 (see Figure 4). Silicone hydrogels and daily disposables accounted for the largest proportions with an average of 41% and 29%, respectively. Since 2013, silicone hydrogel as a material for daily disposables is slowly gaining ground and it will be interesting to see what will happen in the future.

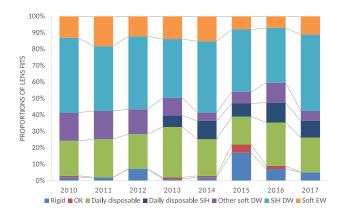


Figure 4: Categories of lenses fitted 2010-2017 (from Morgan et al. (2011), 2012, 2013, 2014, 2015, 2016, Morgan et al. (2017), Morgan et al. (2018)).

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References

Efron, N., Nichols, J. J., Woods, C. A., & Morgan, P. B. (2015). Trends in us contact lens prescribing 2002 to 2014. *Optom Vis Sci*, *92*(7), 758–67. doi:10.1097/OPX.000000000000623

Gierow, J. P., & Morgan, P. B. (2014). Contact lens fitting in sweden 2013. In *European academy of optometry* (p. 102).

Haddad, M. F., Bakkar, M., Gammoh, Y., & Morgan, P. (2016). Trends of contact lens prescribing in jordan. *Cont Lens Anterior Eye*, *39*(5), 385–8. doi:10.1016/j. clae.2016.06.004

Itoi, M., Itoi, M., Efron, N., Morgan, P., & Woods, C. (2018). Trends in contact lens prescribing in japan (2003-2016). *Cont Lens Anterior Eye.* doi:10.1016/j.clae. 2018.02.001

Jones, D., Woods, C., Jones, L., Efron, N., & Morgan, P. (2016). A sixteen year survey of canadian contact lens prescribing. *Cont Lens Anterior Eye*, *39*(6), 402–410. doi:10.1016/j.clae.2016.09.002

Morgan, P. B., Woods, C. A., Tranoudis, I. G., Helland, M., Efron, N., Jones, L., ... Krasnanska, J. (2011). International contact lens prescribing in 2010. *Contact Lens Spectrum*, 2011(26), 30–36.

Morgan, P. B., Woods, C. A., Tranoudis, I. G., Helland, M., Efron, N., Jones, L., ... Krasnanska, J. (2012). International contact lens prescribing in 2011. *Contact Lens Spectrum*, 2012(27), 26–32.

Morgan, P. B., Woods, C. A., Tranoudis, I. G., Helland, M., Efron, N., Jones, L., ... Krasnanska, J. (2013). International contact lens prescribing in 2012. *Contact Lens Spectrum*, 2013(28), 31–44.

Morgan, P. B., Woods, C. A., Tranoudis, I. G., Helland, M., Efron, N., Jones, L., ... Krasnanska, J. (2014). International contact lens prescribing in 2013. *Contact Lens Spectrum*, 2014(29), 30–35.

Morgan, P. B., Woods, C. A., Tranoudis, I. G., Helland, M., Efron, N., Jones, L., ... Krasnanska, J. (2015). International contact lens prescribing in 2014. *Contact Lens Spectrum*, 2015(30), 28–33.

Morgan, P. B., Woods, C. A., Tranoudis, I. G., Helland, M., Efron, N., Jones, L., ... Krasnanska, J. (2016). International contact lens prescribing in 2015. *Contact Lens Spectrum*, 2016(31), 24–39.

Morgan, P. B., Woods, C. A., Tranoudis, I. G., Helland, M., Efron, N., Jones, L., ... Krasnanska, J. (2017). International contact lens prescribing in 2016. *Contact Lens Spectrum*, 2017(32), 30–35.

Morgan, P. B., Woods, C. A., Tranoudis, I. G., Helland, M., Efron, N., Jones, L., ... Krasnanska, J. (2018). International contact lens prescribing in 2017. *Contact Lens Spectrum*, 2018(33), 28–33.