

CLINICIAN PERCEPTIONS OF 30-DAY CONTINUOUS WEAR CONTACT LENSES

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Background

The availability of silicone hydrogel contact lenses for 30-day continuous wear has been a recent advancement in the contact lens field. Previous contact lenses approved for up to 7-day extended wear have been associated with hypoxia related side effects such as corneal swelling, microcysts, neovascularization, corneal infiltrates and microbial keratitis (Cheng et al 1999, Schein et al 1989). A major barrier to optometrists prescribing overnight wear in the past has been the perceived lack of health and safety, particularly the potential for corneal infection.

Recent surveys indicate there is high patient interest in continuous wear (Sweeney 2002). Studies have shown that silicone hydrogels meet or exceed the critical oxygen levels needed by the cornea for safe overnight wear (Covey et al 2001, Holden and Mertz 1984). Researchers have also found much improved health and safety with silicone hydrogels used for continuous wear, and a much lower predicted incidence of microbial keratitis (Nilsson 2001, Levy et al 2000).

For this technological breakthrough to reach its potential, it must affect and change the opinions and recommendations of practicing clinicians.

Purpose

This investigation first sought to determine various clinician groups' self-perceived knowledge of current vision correction options. Secondly, it evaluated how newly available materials and procedures have affected the clinician's likelihood of recommending these options to patients.

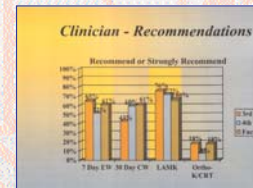
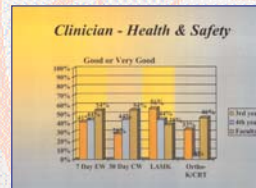
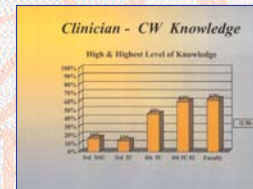
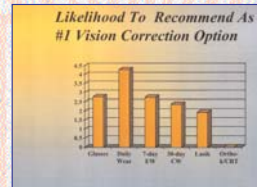
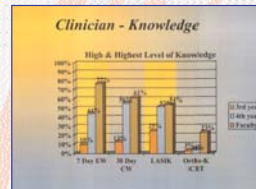
Methods

A 23-question survey was administered to 3rd and 4th year student clinicians and faculty clinicians practicing at the IU school of Optometry, and to 3rd year clinicians at NSU during the spring of 2002. The questionnaires evaluated clinician attitudes concerning 30-day continuous wear with silicone hydrogels, 7-day extended wear with frequent replacement lenses, non-surgical corneal reshaping or modern ortho-k, and refractive surgery, as well as more traditional contact lens and spectacle treatments. The questions were presented in summative 5-point scales ranging from very low to very high.

Overall knowledge of the vision correction option, opinions of health and safety, and ratings of convenience were evaluated for each vision correction option. Next, the likelihood for the clinician to recommend each option was evaluated.

Finally, the questionnaire was again administered to a select group of 4th year clinicians at IU after they had gained some amount of clinical experience with 30-day continuous wear lenses, to determine if their opinions and attitudes were effected by this relatively minimal exposure.

Results



Question	3rd year (n=49)	4th year (n=24)	Faculty (n=24)
1. I believe that 30-day continuous wear contact lenses are safe.	45	42	42
2. I believe that 30-day continuous wear contact lenses are healthy.	42	40	40
3. I believe that 30-day continuous wear contact lenses are convenient.	40	38	38
4. I believe that 30-day continuous wear contact lenses are a good option for my patients.	38	36	36
5. I believe that 30-day continuous wear contact lenses are a viable option for my patients.	36	34	34
6. I believe that 30-day continuous wear contact lenses are a reasonable option for my patients.	34	32	32
7. I believe that 30-day continuous wear contact lenses are a practical option for my patients.	32	30	30
8. I believe that 30-day continuous wear contact lenses are a realistic option for my patients.	30	28	28
9. I believe that 30-day continuous wear contact lenses are a sensible option for my patients.	28	26	26
10. I believe that 30-day continuous wear contact lenses are a sound option for my patients.	26	24	24

Question	3rd year (n=49)	4th year (n=24)	Faculty (n=24)
11. I believe that 30-day continuous wear contact lenses are a safe option for my patients.	45	42	42
12. I believe that 30-day continuous wear contact lenses are a healthy option for my patients.	42	40	40
13. I believe that 30-day continuous wear contact lenses are a convenient option for my patients.	40	38	38
14. I believe that 30-day continuous wear contact lenses are a good option for my patients.	38	36	36
15. I believe that 30-day continuous wear contact lenses are a viable option for my patients.	36	34	34
16. I believe that 30-day continuous wear contact lenses are a reasonable option for my patients.	34	32	32
17. I believe that 30-day continuous wear contact lenses are a practical option for my patients.	32	30	30
18. I believe that 30-day continuous wear contact lenses are a realistic option for my patients.	30	28	28
19. I believe that 30-day continuous wear contact lenses are a sensible option for my patients.	28	26	26
20. I believe that 30-day continuous wear contact lenses are a sound option for my patients.	26	24	24

Question	3rd year (n=49)	4th year (n=24)	Faculty (n=24)
21. I believe that 30-day continuous wear contact lenses are a safe option for my patients.	45	42	42
22. I believe that 30-day continuous wear contact lenses are a healthy option for my patients.	42	40	40
23. I believe that 30-day continuous wear contact lenses are a convenient option for my patients.	40	38	38
24. I believe that 30-day continuous wear contact lenses are a good option for my patients.	38	36	36
25. I believe that 30-day continuous wear contact lenses are a viable option for my patients.	36	34	34
26. I believe that 30-day continuous wear contact lenses are a reasonable option for my patients.	34	32	32
27. I believe that 30-day continuous wear contact lenses are a practical option for my patients.	32	30	30
28. I believe that 30-day continuous wear contact lenses are a realistic option for my patients.	30	28	28
29. I believe that 30-day continuous wear contact lenses are a sensible option for my patients.	28	26	26
30. I believe that 30-day continuous wear contact lenses are a sound option for my patients.	26	24	24

Question	3rd year (n=49)	4th year (n=24)	Faculty (n=24)
31. I believe that 30-day continuous wear contact lenses are a safe option for my patients.	45	42	42
32. I believe that 30-day continuous wear contact lenses are a healthy option for my patients.	42	40	40
33. I believe that 30-day continuous wear contact lenses are a convenient option for my patients.	40	38	38
34. I believe that 30-day continuous wear contact lenses are a good option for my patients.	38	36	36
35. I believe that 30-day continuous wear contact lenses are a viable option for my patients.	36	34	34
36. I believe that 30-day continuous wear contact lenses are a reasonable option for my patients.	34	32	32
37. I believe that 30-day continuous wear contact lenses are a practical option for my patients.	32	30	30
38. I believe that 30-day continuous wear contact lenses are a realistic option for my patients.	30	28	28
39. I believe that 30-day continuous wear contact lenses are a sensible option for my patients.	28	26	26
40. I believe that 30-day continuous wear contact lenses are a sound option for my patients.	26	24	24

Results

Contact lens knowledge increased as clinical experience increased. Ortho-k was ranked as the lowest level of knowledge in all groups. 3rd and 4th year clinicians rated LASIK and 7-day extended wear as having good and very good health and safety when compared with 30-day continuous wear (p<0.05). A 4th year repeat survey after minimal clinical exposure to 30-day continuous wear resulted in higher ratings for good health and safety (p<0.05). When evaluating convenience, ortho-k and glasses were not ranked as convenient. When asked to rank vision correction options, 3rd and 4th year student clinicians as well as faculty clinicians all chose daily wear contact lenses as their first choice. After clinical experience with 30-day continuous wear lenses, the 4th years chose daily wear contact lenses and 30-day continuous wear lenses almost equally as a first option.

Discussion

While 4th year and faculty clinicians profess to have a relatively good level of knowledge about 30-day continuous wear, Lasik and 7-day extended wear with lower Dk, Lasik received higher safety ratings than 30-day continuous wear. Clinicians were as likely or more likely to recommend 7-day extended wear or Lasik than they were to recommend 30-day continuous wear.

These health and safety evaluations, and clinician recommendations are in conflict with the great body of published evidence showing 30-day continuous wear silicone hydrogels to be a safer modality than Lasik or 7-day extended wear. This may contradict the clinician's self-perceived evaluation of their knowledge in this area, or may be reflective of a relatively deep-seated lack of comfort with long-term overnight wear.

One encouraging finding was that even a relatively limited experience with 30-day continuous wear was enough to affect clinician perceptions. More importantly, the likelihood of their recommending this modality was increased compared to Lasik or 7-day extended wear.

Finally, all clinician groups rated their knowledge of current corneal reshaping techniques with GP lenses as low, and they are by far least likely to recommend it to patients. Ironically, this reluctance by clinicians stands in stark contrast to the attitude of patients. In a companion study, Patient Perceptions of 30-day Continuous Wear (Riley et al 2002), when patients were asked to rate their interest in the various vision correction options, non-surgical corneal reshaping or modern ortho-K rated the highest.

Conclusions

A good level of knowledge of a modality does not necessarily translate into changed behavior in terms of clinician perceptions and recommendations.

A relatively short clinical experience with a new modality can result in changes in clinician perceptions and recommendations.

Acknowledgements

This study was supported through a grant from Ciba Vision.