



SPECIAL  
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GROUP

## Appendix A

### Published Peer-Reviewed Literature on Ocular Telehealth Programs

ATA OCULAR TELEHEALTH SPECIAL INTEREST GROUP  
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# Published Peer-Reviewed Literature on Ocular Telehealth Programs

## Diabetic Retinopathy

1. Chow SP, Aiello LM, Cavallerano JD, et al. Comparison of nonmydriatic digital retinal imaging versus dilated ophthalmic examination for nondiabetic eye disease in persons with diabetes. *Ophthalmology*. 2006;113(5):833-840.
2. Kumari Rani P, Raman R, Manikandan M, Mahajan S, Paul PG, Sharma T. Patient satisfaction with teleophthalmology versus ophthalmologist-based screening in diabetic retinopathy. *J Telemed Telecare*. 2006;12(3):159-60.
3. Boucher MC, Desroches G, Garcia-Salinas R, et al. Teleophthalmology screening for diabetic retinopathy through mobile imaging units within Canada. *Can J Ophthalmol*. 2008;43(6):658-668.
4. Silva PS, Cavallerano JD, Aiello LM, Aiello LP. Telemedicine and diabetic retinopathy: moving beyond retinal screening. *Arch Ophthalmol*. 2011;129(2):236-242.
5. Li Z, Wu C, Olaiyiwola JN, Hilaire DS, Huang JJ. Telemedicine-based digital retinal imaging vs standard ophthalmologic evaluation for the assessment of diabetic retinopathy. *Conn Med*. 2012;76(2):85-90.
6. Conlin PR, Asefzadeh B, Pasquale LR, Selvin G, Lamkin R, Cavallerano AA. Accuracy of a technology-assisted eye exam in evaluation of referable diabetic retinopathy and concomitant ocular diseases. *The British journal of ophthalmology*. 2015;99(12):1622-1627.
7. Owsley C, McGwin G, Jr., Lee DJ, et al. Diabetes eye screening in urban settings serving minority populations: detection of diabetic retinopathy and other ocular findings using telemedicine. *JAMA Ophthalmol*. 2015;133(2):174-181.
8. Litvin TV, Weissenberg CR, Daskivich LP, Zhou Q, Bresnick GH, Cuadros JA. Improving Accuracy of Grading and Referral of Diabetic Macular Edema Using Location and Extent of Hard Exudates in Retinal Photography. *J Diabetes Sci Technol*. 2015 Nov 17;10(2):262-70.
9. Kanjee R, Dookeran RI, Mathen MK, Stockl FA, Leicht R. Six-year prevalence and incidence of diabetic retinopathy and cost-effectiveness of tele-ophthalmology in Manitoba. *Can J Ophthalmol*. 2016 Dec;51(6):467-470.
10. George SM, Hayes EM, Fish A, Daskivich LP, Ogunyemi OI. Understanding the Knowledge Gap Experienced by U.S. Safety Net Patients in Teleretinal Screening. *AMIA Annu Symp Proc*. 2017 Feb 10;2016:590-599.
11. Daskivich LP, Vasquez C, Martinez C Jr, Tseng CH, Mangione CM. Implementation and Evaluation of a Large-Scale Teleretinal Diabetic Retinopathy Screening Program in the Los Angeles County Department of Health Services. *JAMA Intern Med*. 2017 May 1;177(5):642-649.
12. Ellis MP, Bacorn C, Luu K, Lee SC, Tran S, Lillis C, Lim M, You G. Cost Analysis of Teleophthalmology Screening for Diabetic Retinopathy Using Teleophthalmology Billing Codes. *Ophthalmic Surg Lasers Imaging Retina*. 2020;51:S26-S34.
13. Boucher MC, Qian J, Brent MH, Wong DT, Sheidow T, Duval R, Kherani A, Dookeran R, Maberley D, Samad A, Chaudhary V; Steering Committee for Tele-Ophthalmology Screening, Canadian Retina Research Network. Evidence-based Canadian guidelines for tele-retina screening for diabetic retinopathy: recommendations from the Canadian Retina Research Network (CR2N) Tele-Retina Steering Committee. *Can J Ophthalmol*. 2020 Feb;55(1 Suppl 1):14-24.

14. Fonda, S. J.; Bursell, S. E.; Lewis, D. G.; Clary, D.; Shahon, D.; Horton, M. B. The Indian Health Service Primary Care-Based Teleophthalmology Program for Diabetic Eye Disease Surveillance and Management. *Telemedicine Journal & E-Health* 12 2020;26(12):1466-1474.
15. Galiero R, Pafundi PC, Nevola R, Rinaldi L, Acierno C, Caturano A, Salvatore T, Adinolfi LE, Costagliola C, Sasso FC. The Importance of Telemedicine during COVID-19 Pandemic: A Focus on Diabetic Retinopathy. *J Diabetes Res.* 2020 Oct 14;2020:9036847.
16. Gunasekeran, D. V.; Ting, D. S. W.; Tan, G. S. W.; Wong, T. Y. Artificial intelligence for diabetic retinopathy screening, prediction and management. *Current Opinion in Ophthalmology* Sep 2020;31(5):357-365.
17. Korn Malerbi, F.; Lelis Dal Fabbro, A.; Botelho Vieira Filho, J. P.; Franco, L. J. The feasibility of smartphone based retinal photography for diabetic retinopathy screening among Brazilian Xavante Indians. *Diabetes Research & Clinical Practice* Oct 2020;168():108380.
18. Queiroz, M. S.; de Carvalho, J. X.; Bortoto, S. F.; de Matos, M. R.; das Gracas Dias Cavalcante, C.; Andrade, E. A. S.; Correa-Giannella, M. L.; Malerbi, F. K. Diabetic retinopathy screening in urban primary care setting with a handheld smartphone-based retinal camera. *Acta Diabetologica* Dec 2020;57(12):1493-1499.
19. Ramasamy, K.; Mishra, C.; Kannan, N. B.; Namperumalsamy, P.; Sen, S. Telemedicine in diabetic retinopathy screening in India. *Indian Journal of Ophthalmology* Nov 2021;69(11):2977-2986
20. Kato, A.; Fujishima, K.; Takami, K.; Inoue, N.; Takase, N.; Suzuki, N.; Suzuki, K.; Kuwayama, S.; Yamada, A.; Sakai, K.; Horita, R.; Nozaki, M.; Yoshida, M.; Hirano, Y.; Yasukawa, T.; Ogura, Y. Remote screening of diabetic retinopathy using ultra-widefield retinal imaging. *Diabetes Research & Clinical Practice* Jul 2021;177():108902.
21. Ogunyemi Ol, Gandhi M, Lee M, Teklehaymanot S, Daskivich LP, Hindman D, Lopez K, Taira RK. Detecting diabetic retinopathy through machine learning on electronic health record data from an urban, safety net healthcare system. *JAMIA Open.* 2021 Aug 19;4(3).
22. Chen, H.; Pan, X.; Yang, J.; Fan, J.; Qin, M.; Sun, H.; Liu, J.; Li, N.; Ting, D. S. W.; Chen, Y. Application of 5G Technology to Conduct Real-Time Teleretinal Laser Photocoagulation for the Treatment of Diabetic Retinopathy. *JAMA Ophthalmology* 09 01 2021;139(9):975-98.
23. Yim, D.; Chandra, S.; Sondh, R.; Thottarath, S.; Sivaprasad, S. Barriers in establishing systematic diabetic retinopathy screening through telemedicine in low- and middle-income countries. *Indian Journal of Ophthalmology* Nov 2021;69(11):2987-2992.
24. Rajalakshmi R, UmaSankari G, Prathiba V, Anjana RM, Unnikrishnan R, Venkatesan U, JebaRani S, Shanthirani CS, Sivaprasad S, Mohan V. Tele-Ophthalmology Versus Face-to-Face Retinal Consultation for Assessment of Diabetic Retinopathy in Diabetes Care Centers in India: A Multicenter Cross-Sectional Study. *Diabetes Technol Ther.* 2022 Aug;24(8):556-563.
25. Pareja-Ríos A, Ceruso S, Romero-Aroca P, Bonaque-González S. A New Deep Learning Algorithm with Activation Mapping for Diabetic Retinopathy: Backtesting after 10 Years of Tele-Ophthalmology. *J Clin Med.* 2022 Aug 23;11(17):4945.
26. Ortiz-Basso, T.; Boietti, B. R.; Gomez, P. V.; Boffelli, A. D.; Paladini, A. A. [Prevalence of diabetic retinopathy in a rural area of Argentina]. *Medicina* 2022;82(1):99-103.
27. Takkar, B.; Das, T.; Thamarangsi, T.; Rani, P. K.; Thapa, R.; Nayar, P. D.; Rajalakshmi, R.; Choudhury, N.; Hanutsaha, P. Development of Diabetic retinopathy screening guidelines in South-East Asia region using the context, challenges, and future technology. *Seminars in Ophthalmology* Jan 02 2022;37(1):97-104.

## Macular Degeneration

28. Duchin KS, Asefzadeh B, Poulaki V, Rett D, Marescalchi P, Cavallerano A. Teleretinal imaging for detection of referable macular degeneration. *Optom Vis Sci.* 2015;92(6):714-718.

29. Brady, C. J.; Garg, S. Telemedicine for Age-Related Macular Degeneration. *Telemedicine Journal & E-Health* 04 2020;26(4):565-568.
30. Busquets, M. A.; Sabbagh, O. Current status of home monitoring technology for age-related macular degeneration. *Current Opinion in Ophthalmology* May 01 2021;32(3):240-246.
31. J Islam, M.; Sansome, S.; Das, R.; Lukic, M.; Chong Teo, K. Y.; Tan, G.; Balaskas, K.; Thomas, P. B. M.; Bachmann, L. M.; Schimel, A. M.; Sim, D. A. Smartphone-based remote monitoring of vision in macular disease enables early detection of worsening pathology and need for intravitreal therapy. *BMJ Health & Care Informatics* May 2021;28(1):e100310.
32. Sim, S. S.; Yip, M. Y.; Wang, Z.; Tan, A. C. S.; Tan, G. S. W.; Cheung, C. M. G.; Chakravarthy, U.; Wong, T. Y.; Teo, K. Y. C.; Ting, D. S. Digital Technology for AMD Management in the Post-COVID-19 New Normal. *Asia-Pacific Journal of Ophthalmology* Jan-Feb 01 2021;10(1):39-48
33. oel Mintz, Chase Labiste, Michael V DiCaro, Evan McElroy, Reza Alizadeh, Kunyong Xu. Teleophthalmology for age-related macular degeneration during the COVID-19 pandemic and beyond. *J Telemed Telecare*. 2022 Oct;28(9):670-679.

## ROP

34. Brady, C. J.; D'Amico, S.; Campbell, J. P. Telemedicine for Retinopathy of Prematurity. *Telemedicine Journal & E-Health* 04 2020;26(4):556-564.
35. Greenwald, M. F.; Danford, I. D.; Shahrawat, M.; Ostmo, S.; Brown, J.; Kalpathy-Cramer, J.; Bradshaw, K.; Schelonka, R.; Cohen, H. S.; Chan, R. V. P.; Chiang, M. F.; Campbell, J. P. Evaluation of artificial intelligence-based telemedicine screening for retinopathy of prematurity. *Journal of Aapos: American Association for Pediatric Ophthalmology & Strabismus* 06 2020;24(3):160-162.
36. Azad, R.; Gilbert, C.; Gangwe, A. B.; Zhao, P.; Wu, W. C.; Sarbjana, P.; Vinekar, A. Retinopathy of Prematurity: How to Prevent the Third Epidemics in Developing Countries. *Asia-Pacific Journal of Ophthalmology* Sep-Oct 2020;9(5):440-448.
37. Bao, Y.; Ming, W. K.; Mou, Z. W.; Kong, Q. H.; Li, A.; Yuan, T. F.; Mi, X. S. Current Application of Digital Diagnosing Systems for Retinopathy of Prematurity. *Computer Methods & Programs in Biomedicine* Mar 2021;200():10587.
38. Campbell, J. P.; Singh, P.; Redd, T. K.; Brown, J. M.; Shah, P. K.; Subramanian, P.; Rajan, R.; Valikodath, N.; Cole, E.; Ostmo, S.; Chan, R. V. P.; Venkatapathy, N.; Chiang, M. F.; Kalpathy-Cramer, J. Applications of Artificial Intelligence for Retinopathy of Prematurity Screening. *Pediatrics* 03 2021;147(3):e2020016618.
39. Guo, Z.; Ma, N.; Wu, Y.; Yuan, H.; Luo, W.; Zeng, L.; Jie, H.; Li, S. The safety and feasibility of the screening for retinopathy of prematurity assisted by telemedicine network during COVID-19 pandemic in Wuhan, China. *BMC Ophthalmology* Jun 11 2021;21(1):258.
40. Li, W.; Cheung, R.; Malvankar-Mehta, M. S. Comparing the diagnostic accuracy of telemedicine utilization versus in-person clinical examination for retinopathy of prematurity in premature infants: a systematic review. *Journal of Aapos: American Association for Pediatric Ophthalmology & Strabismus* 04 2022;26(2):58.e1-58.e7
41. Morrison, S. L.; Dukhovny, D.; Chan, R. V. P.; Chiang, M. F.; Campbell, J. P. Cost-effectiveness of Artificial Intelligence-Based Retinopathy of Prematurity Screening. *JAMA Ophthalmology* 04 01 2022;140(4):401-409.
42. Ho, T.; Lee, T. C.; Choe, J. Y.; Nallasamy, S. Evaluation of real-time video from the digital indirect ophthalmoscope for telemedicine consultations in retinopathy of prematurity. *Journal of Telemedicine & Telecare* Aug 2022;28(7):502-507.

## Other Retina

43. Chasan JE, Delaune B, Maa AY, Lynch MG. Effect of a teleretinal screening program on eye care use and resources. *JAMA Ophthalmol.* 2014;132(9):1045-1051.
44. Maa AY, Patel S, Chasan JE, Delaune W, Lynch MG. Retrospective Evaluation of a Teleretinal Screening Program in Detecting Multiple Nondiabetic Eye Diseases. *Telemed J E Health.* 2017 Jan;23(1):41-48.
45. McCord SA, Lynch MG, Maa AY. Diagnosis of retinal detachments by a teleophthalmology screening program. *J Telemed Telecare.* 2019;25(3):190-192.
46. Ashrafzadeh S, Gundlach BS, Tsui I. Implementation of teleretinal screening using optical coherence tomography in the Veterans Health Administration. *Telemed J E Health.* 2021;27(8):898-904.
47. González-Márquez F, Luque-Romero L, Ruiz-Romero MV, Castillón-Torre L, Hernández-Martínez FJ, Olea-Pabón L, Moro-Muñoz S, García-Díaz RDM, García-Garmendia JL. Remote ophthalmology with a smartphone adapter handled by nurses for the diagnosis of eye posterior pole pathologies during the COVID-19 pandemic. *J Telemed Telecare.* 2021 Feb 18;1357633X21994017.
48. Situ BA, Hua HU, Kaakour AH, Daskivich LP, Savvas S, Toy BC. Implementation of a pilot teleretinal screening protocol for hydroxychloroquine retinopathy in a Los Angeles County safety net clinic. *J Telemed Telecare.* 2021 Jun 17;1357633X211018102.
49. Lee SC, Alber S, Lieng MK, Emami-Naeini P, Yiu G. Teleophthalmology Using Remote Retinal Imaging During the COVID-19 Pandemic. *Telemedicine and e-Health.* Vol 0 Iss 0, May 24, 2022.
50. Lee SC, Lieng MK, Alber S, Mehta N, Emami-Naeini P, You G. Trends in Remote Retinal Imaging Utilization and Payments in the United States. *Ophthalmology.* Volume 129, Issue 3, March 2022, Pages 354-357.

## Glaucoma

51. Pasquale LR, Asefzadeh B, Dunphy RW, Fisch BM, Conlin PR, Ocular TeleHealth T. Detection of glaucoma-like optic discs in a diabetes teleretinal proram. *Optometry.* 2007;78(12):657-663.
52. Ong HS, Levin S, Vafidis G. Glaucoma detection using optic disc images from the English national screening programme for diabetic retinopathy. *J Glaucoma.* 2013;22(6):496-500.
53. Ong HS, Levin S, Vafidis G. Glaucoma detection using optic disc images from the English national screening programme for diabetic retinopathy. *J Glaucoma.* 2013;22(6):496-500.
54. Thomas SM, Jeyaraman MM, Hodge WG, Hutnik C, Costella J, Malvankar-Mehta MS. The effectiveness of teleglaucoma versus in-patient examination for glaucoma screening: a systematic review and meta-analysis. *PLOS one.* 2014;9(12):e113779.
55. Thomas SM, Jeyaraman MM, Hodge WG, Hutnik C, Costella J, Malvankar-Mehta MS. The effectiveness of teleglaucoma versus in-patient examination for glaucoma screening: a systematic review and meta-analysis. *PLOS one.* 2014;9(12):e113779.
56. Duchin KS, Asefzadeh B, Poulaki V, Rett D, Marescalchi P, Cavallerano A. Teleretinal imaging for detection of referable macular degeneration. *Optom Vis Sci.* 2015;92(6):714-718.
57. Anderson AJ, Bedggood PA, George Kong YX, Martin KR, Vingrys AJ. Can home monitoring allow earlier detection of rapid visual field progression in glaucoma? *Ophthalmology.* 2017;124(12):1735-1742.
58. Gan, K.; Liu, Y.; Stagg, B.; Rath, S.; Pasquale, L. R.; Damji, K. Telemedicine for Glaucoma: Guidelines and Recommendations. *Telemedicine Journal & E-Health* 04 2020;26(4):551-555.
59. Chandrasekaran S, Kass W, Thangamathesvaran L, Mendez N, Khouri P, Szirth BC, Khouri AS. Tele-glaucoma versus clinical evaluation: The New Jersey Health Foundation Prospective Clinical Study. *J Telemed Telecare.* 2020 Oct;26(9):536-544.
60. Aboobakar, I. F.; Friedman, D. S. Home Monitoring for Glaucoma: Current Applications and Future Directions. *Seminars in Ophthalmology* May 19 2021;36(4):310-314.

61. Rithambara Ramachandran, Devon B. Joiner, Vipul Patel, Deborah Popplewell, Poonam Misra, Chad M. Kaplan, Donald C. Hood, Lama A. Al-Aswad. Comparison between the Recommendations of Glaucoma Specialists and OCT Report Specialists for Further Ophthalmic Evaluation in a Community-Based Screening Study. *Ophthalmology Glaucoma*. 2022;5(6):602-613.
62. Yuen J, Xu B, Song BJ, Daskivich LP, Rodman J, Wong BJ. Effectiveness of Glaucoma Screening and Factors Associated with Follow-up Adherence among Glaucoma Suspects in a Safety-Net Teleretinal Screening Program. *Ophthalmol Glaucoma*. 2023 May-Jun;6(3):247-254.

## General Eye Disease Screening, Delivery and Access

63. Chen LS, Tsai CY, Liu TY, et al. Feasibility of tele-ophthalmology for screening for eye disease in remote communities. *J Telemed Telecare*. 2004;10(6):337-341.
64. Paul PG, Raman R, Rani PK, Deshmukh H, Sharma T. Patient satisfaction levels during teleophthalmology consultation in rural South India. *Telemed J E Health*. 2006;12(5):571-578.
65. Ng M, Nathoo N, Rudnisky CJ, Tennant MT. Improving access to eye care: teleophthalmology in Alberta, Canada. *J Diabetes Sci Technol*. 2009;3(2):289-296.
66. Maa AY, Evans C, DeLaune W, Lynch MG. Veteran eye disease after eligibility reform: prevalence and characteristics. *Mil Med*. 2013;178(7):811-815.
67. Gupta SC, Sinha SK, Dagar AB. Evaluation of the effectiveness of diagnostic & management decision by teleophthalmology using indigenous equipment in comparison with in-clinic assessment of patients. *Indian J Med Res*. 2013;138(4):531-535.
68. Ribeiro AG, Rodrigues RA, Guerreiro AM, Regatieri CV. A teleophthalmology system for the diagnosis of ocular urgency in remote areas of Brazil. *Arq Bras Oftalmol*. 2014;77(4):214-8.
69. Maa AY, Evans C, DeLaune WR, Patel PS, Lynch MG. A novel tele-eye protocol for ocular disease detection and access to eye care services. *Telemed J E Health*. 2014;20(4):318-323.
70. Lynch MG, Maa AY. The Use of Telemedicine to Extend Ophthalmology Care. *JAMA Ophthalmol*. 2016.
71. Sreelatha OK, Ramesh SV. Teleophthalmology: improving patient outcomes? *Clin Ophthalmol*. 2016;10:285-295.
72. Sreelatha OK, and Ramesh SV. Teleophthalmology: improving patient outcomes? *Clin Ophthalmol*. 2016; 10: 285–295.
73. Maa AY, Wojciechowski B, Hunt KJ, et al. Early experience with technology-based eye care services (TECS): a novel ophthalmologic telemedicine initiative. *Ophthalmology*. 2017;124(4):539-546.
74. Tan IJ, Dobson LP, Bartnik S, Muir J, Turner AW. Real-time teleophthalmology versus face-to-face consultation: A systematic review. *J Telemed Telecare*. 2017;23(7):629-38.
75. Caffery LJ, Taylor M, Gole G, Smith AC. Models of care in tele-ophthalmology: A scoping review. *J Telemed Telecare*. 2019 Feb;25(2):106-122.
76. Parikh D, Armstrong G, Liou V, Husain D. Advances in Telemedicine in Ophthalmology. *Semin Ophthalmol*. 2020 May 18;35(4):210-215.
77. Mohita Sharma, Neha Jain, Sridhar Ranganathan, Naman Sharma, Santosh G Honavar, Namrata Sharma, Mahipal S Sachdev. Tele-ophthalmology: Need of the hour. *Indian J Ophthalmol*. 2020 Jul;68(7):1328-1338.
78. Karthika Bhaskaran, Pradeep Sharma. Distancing? But still I-care: Tele-ophthalmology during COVID-19 era. *Indian J Ophthalmol* 2020 Jul;68(7):1243-1244.
79. Chaitra Jayadev 1, Padmamalini Mahendradas 1, Anand Vinekar 1, Vasudha Kemmanu 1, Roshni Gupta 1, Zia S Pradhan 1, Sharon D'Souza 1, Chaithra D Aroor 1, Luci Kaweri 1, Rohit Shetty 1, Santosh G Honavar 1, Bhujang Shetty 1. Tele-consultations in the wake of COVID-19 - Suggested guidelines for clinical ophthalmology. *Indian J Ophthalmol*. 2020 Jul;68(7):1316-1327.

## Appendix A

80. Saleem SM, Pasquale LR, Sidoti PA, Tsai JC. Virtual ophthalmology: telemedicine in a COVID-19 era. *Am J Ophthalmol.* 2020;216:237-242.
81. Arntz A, Khaliliyh D, Cruzat A, Rao X, Rocha G, Grau A, Altschwager P, Azócar V. Open-care telemedicine in ophthalmology during the COVID-19 pandemic: a pilot study. *Arch Soc Esp Oftalmol (Engl Ed).* 2020 Dec;95(12):586-590.
82. Bon V, Ghemame M, Fantou P, Philliponnet A, Mouriaux F. Feedback on ophthalmologic telemedicine in a nursing home. *J Fr Ophtalmol.* 2020 Nov;43(9):e293-e297.
83. Aruljyothi, L.; Bavishi, A.; Balasundaram, M. B.; Janakiraman, A.; Shekar, K.; Atmakur, H. Expanding the scope of tele-ophthalmology from vision centers to home. *Indian Journal of Ophthalmology* 02 2021;69(2):442-446.
84. Aguwa, U. T.; Aguwa, C. J.; Repka, M.; Srikumaran, U.; Woreta, F.; Singman, E. L.; Jenkins, S. G.; Srikumaran, D. *Teleophthalmology in the Era of COVID-19: Characteristics of Early Adopters at a Large Academic Institution.* *Telemedicine Journal & E-Health* 07 2021;27(7):739-746.
85. Aziz, K.; Moon, J. Y.; Parikh, R.; Lorch, A. C.; Friedman, D. S.; Miller, J. B.; Armstrong, G. W. Association of Patient Characteristics With Delivery of Ophthalmic Telemedicine During the COVID-19 Pandemic. *JAMA Ophthalmology* 11 01 2021;139(11):1174-1182.
86. Berkenstock, M. K.; Liberman, P.; McDonnell, P. J.; Chaon, B. C. Changes in patient visits and diagnoses in a large academic center during the COVID-19 pandemic. *BMC Ophthalmology* Mar 20 2021;21(1):139.
87. Walsh L, Hong SC, Chalakkal RJ, Ogbuehi KC. A Systematic Review of Current Teleophthalmology Services in New Zealand Compared to the Four Comparable Countries of the United Kingdom, Australia, United States of America (USA) and Canada. *Clin Ophthalmol.* 2021 Oct 4;15:4015-4027.
88. Newman-Casey PA, De Lott L, Cho J, Ballouz D, Azzouz L, Saleh S, Woodward MA. Telehealth-based Eye Care During the COVID-19 Pandemic: Utilization, Safety, and the Patient Experience. *Am J Ophthalmol.* 2021 Oct;230:234-242.
89. Aziz K, Moon J, Parikh R, Lorch AC, Friedman DS, Miller JB, Armstrong GW. Association of Patient Characteristics With Delivery of Ophthalmic Telemedicine During the COVID-19 Pandemic. *JAMA Ophthalmol.* 2021 Nov 1;139(11):1174-1182. doi: 10.1001/jamaophthalmol.2021.3728.
90. Chen EM, Andoh JE, Nwanyanwu K. Socioeconomic and Demographic Disparities in the Use of Telemedicine for Ophthalmic Care during the COVID-19 Pandemic. *Ophthalmology.* 2022 Jan;129(1):15-25. doi: 10.1016/j.jophtha.2021.07.003.
91. Bellsmith, K. N.; Gale, M. J.; Yang, S.; Nguyen, I. B.; Prentiss, C. J.; Nguyen, L. T.; Mershon, S.; Summers, A. I.; Thomas, M. Validation of Home Visual Acuity Tests for Telehealth in the COVID-19 Era. *JAMA Ophthalmology* May 01 2022;140(5):465-471.
92. Sanaye N, Albrecht MM, Martin DC, Marin N, Fereshtian S, Baker S, Subramanian ML, Ness S, Siegel NH, Chen X. Outcomes of a Hybrid Ophthalmology Telemedicine Model for Outpatient Eye Care During COVID-19. *JAMA Netw Open.* 2022 Aug 1;5(8):e2226292.
93. Stewart C, Coffey-Sandoval J, Souverein EA, Lee TC, Nallasamy S. Provider-to-provider synchronous telemedical consultations in ophthalmology: Advice for implementation. *Digit Health.* 2022 Aug 2;8:2055207622117744.
94. Yuen J, Pike S, Khachikyan S, Nallasamy S. Telehealth in Ophthalmology. In: Linwood SL, editor. *Digital Health [Internet].* Brisbane (AU): Exon Publications; 2022 Apr 29. Chapter 4. PMID: 35605075
95. Koriat Y, Saveliev N, Koriat A, Heller D. Tele-ophthalmology as an aid tool for primary care physicians in the IDF, during the Covid-19 lockdown. *Int Ophthalmol* 2022 Sep;42(9):2741-2748.
96. Wong JK, Zhu MM, Lam JC, Leung KM, Lian JX, Lam CL, Shih KC, Lai JS. Prospective Comparative Study Investigating Agreement between Tele-Ophthalmology and Face-to-face Consultations in Patients Presenting with Chronic Visual Loss. *Ophthalmol Ther.* 2022 Jun;11(3):1199-1213.

97. Nesemann, J. M.; Munoz, M.; Talero, S. L.; Honorio-Morales, H. A.; Lescano, A. G.; Keenan, J. D. Telemedicine for screening eye disease in the remote Peruvian Amazon: proof-of-concept. *Transactions of the Royal Society of Tropical Medicine & Hygiene* Jun 01 2022;116(6):589-591
98. Bachmann, B. C.; Bachofner, M.; Mickan, S.; Stojcic, D.; Carnier, K. A.; Giamboni, A.; Neugebauer, Z.; Lienhard, K. R.; Bachmann, L. M. Frequency of Eye Diseases in Residents of Nursing Homes - 1-Year Results of a Novel Telemedicine Service in Switzerland. *Klinische Monatsblatter fur Augenheilkunde* Apr 2022;239(4):610-61.
99. Babenko B, Traynis I, Chen C, Singh P, Uddin A, Cuadros J, Daskivich LP, Maa AY, Kim R, Kang EY, Matias Y, Corrado GS, Peng L, Webster DR, Semturs C, Krause J, Varadarajan AV, Hammel N, Liu Y. A deep learning model for novel systemic biomarkers in photographs of the external eye: a retrospective study. *Lancet Digit Health.* 2023 May;5(5):e257-e264.

## Cornea

100. Busin, M.; Yu, A. C.; Ponzin, D. Coping with COVID-19: An Italian Perspective on Corneal Surgery and Eye Banking in the Time of a Pandemic and Beyond. *Ophthalmology* 09 2020;127(9):e68-e69
101. Collon, S.; Chang, D.; Tabin, G.; Hong, K.; Myung, D.; Thapa, S. Utility and Feasibility of Teleophthalmology Using a Smartphone-Based Ophthalmic Camera in Screening Camps in Nepal. *Asia-Pacific Journal of Ophthalmology* Jan-Feb 2020;9(1):54-58.
102. Cui, T.; Yun, D.; Wu, X.; Lin, H.. Anterior Segment and Others in Teleophthalmology: Past, Present, and Future. *Asia-Pacific Journal of Ophthalmology* Jul 01 2021;10(3):234-243.
103. Komal S, Radhakrishnan N, Vardhan S A, Prajna NV. Effectiveness of a Tele-Ophthalmology Vision Center in Treating Corneal Disorders and Its Associated Economic Benefits. *Cornea.* 2022 Jun 1;41(6):688-691.
104. Bareket, D.; Gutfreund, S.; Goldstein, M.; Loewenstein, A.; Gamzu, R.; Varssano, D. Evaluation of a Telemedicine Model for Following Keratoconus Patients in the Era of COVID-19 Pandemic. *Telemedicine Journal & E-Health* Jul 2022;28(7):1023-1027.

## Cataract

105. Askarian, B.; Ho, P.; Chong, J. W. Detecting Cataract Using Smartphones. *IEEE Journal of Translational Engineering in Health and Medicine* 2021;9():3800110.
106. Pathak S, Raj R, Singh K, Verma PK, Kumar B. Development of portable and robust cataract detection and grading system by analyzing multiple texture features for Tele-Ophthalmology. *Multimed Tools Appl* 2022;81(16):23355-23371.

## Neuro-ophthalmology

107. Lai KE, Ko MW, Rucker JC, Odel JG, Sun LD, Winges KM, Ghosh A, Bindiganavile SH, Bhat N, Wendt SP, Scharf JM, Dinkin MJ, Rasool N, Galetta SL, Lee AG. Tele-Neuro-Ophthalmology During the Age of COVID-19. *J Neuroophthalmol.* 2020 Sep;40(3):292-304. doi: 10.1097/WNO.0000000000001024.
108. Ko MW, Busis NA. Tele-neuro-ophthalmology: vision for 20/20 and beyond. *J Neuroophthalmol.* 2020;40(3):378-384.
109. Liu YA, Ko MW, Moss HE. Telemedicine for neuro-ophthalmology: challenges and opportunities. *Curr Opin Neurol.* 2021;34(1):61-6.
110. Ramakrishnan MR, Aubrey L, Gilbert AL. Telemedicine in neuro-ophthalmology. *Curr Opin Ophthalmol* 2021, 32:499–503

## Pediatric Ophthalmology

111. Akkara, J. D.; Kuriakose, A. Commentary: Teleophthalmology is a different ball game for kids. Indian Journal of Ophthalmology 07 2020;68(7):1391-1392.
112. Areaux, R. G., Jr.; de Alba Campomanes, A. G.; Indaram, M.; Shah, A. S.; Pediatric Tele-Ophthalmology, Consortium. Your eye doctor will virtually see you now: synchronous patient-to-provider virtual visits in pediatric tele-ophthalmology. Journal of Aapos: American Association for Pediatric Ophthalmology & Strabismus 08 2020;24(4):197-203.
113. Al-Khaled T, Valikodath NG, Patel SN, Cole E, Chervinko M, Douglas CE, Tsai ASH, Wu WC, Campbell JP, Chiang MF, Paul Chan RV. Addressing the Third Epidemic of Retinopathy of Prematurity Through Telemedicine and Technology: A Systematic Review. J Pediatr Ophthalmol Strabismus. 2021 Jul-Aug;58(4):261-269.
114. Souverein EA, Kim JW, Loudin NN, Johnston J, Stewart C, Reid MW, Lee TC, Nallasamy S. Feasibility of asynchronous video-based telemedicine in the diagnosis and management of paediatric blepharoptosis. J Telemed Telecare. 2021 Jan 20:1357633X20985394.
115. Stewart C, Coffey-Sandoval J, Souverein EA, Ho TC, Lee TC, Nallasamy S. Patient and Provider Experience in Real-Time Telemedicine Consultations for Pediatric Ophthalmology. Clin Ophthalmol. 2022 Sep 1;16:2943-2953.

## Ophthalmic Emergencies

116. Rosengren D, Blackwell N, Kelly G, Lenton L, Glastonbury J. The use of telemedicine to treat ophthalmological emergencies in rural Australia. J Telemed Telecare. 1998;4 Suppl 1:97-99.
117. Ribeiro AG, Rodrigues RA, Guerreiro AM, Regatieri CV. A teleophthalmology system for the diagnosis of ocular urgency in remote areas of Brazil. Arq Bras Oftalmol. 2014;77(4):214-8.
118. Scanzera AC, Chang AY, Valikodath N, Cole E, Hallak JA, Vajaranant TS, Kim SJ, Chan RVP. Assessment of a novel ophthalmology tele-triage system during the COVID-19 pandemic. BMC Ophthalmol. 2021 Sep 24;21(1):346.
119. Li JO, Thomas AAP, Kilduff CLS, Logeswaran A, Ramessur R, Jaselsky A, Sim DA, Hay GR, Thomas PBM. Safety of video-based telemedicine compared to in-person triage in emergency ophthalmology during COVID-19. EClinicalMedicine. 2021 Apr;34:100818.

## Devices

120. Brady CJ, Eghrari AO, Labrique AB. Smartphone-based visual acuity measurement for screening and clinical assessment. JAMA. 2015;314(24):2682-2683.
121. Mehrdad Mohammadpour, Zahra Heidari, Masoud Mirghorbani, Hassan Hashemi. Smartphones, tele-ophthalmology, and VISION 2020. Int J Ophthalmol. 2017 Dec 18;10(12):1909-1918.
122. Ozgur OK, Emborgo TS, Vieyra MB, Huselid RF, Banik R. Validity and acceptance of color vision testing on smartphones. J Neuroophthalmol. 2018;38(1):13-16.
123. Giardini, M. E.; Livingstone, I. A. T. Extending the Reach and Task-Shifting Ophthalmology Diagnostics Through Remote Visualisation. Advances in Experimental Medicine & Biology 2020;1260():161-174.
124. Maa AY, Medert CM, Lu X, Janjua R, Howell AV, Hunt KJ, McCord S, Giangiocomo A, Lynch MG. Diagnostic Accuracy of Technology-based Eye Care Services: The Technology-based Eye Care Services Compare Trial Part I. Ophthalmology. 2020 Jan;127(1):38-44.
125. Rahul Kapoor, MD, Cansu Yuksel-Elgin, MD, Vipul Patel, Jennifer Alcantara-Castillo, COA, Maya Ramachandran, BS, Kamran Ali, BS, Rahm Alshamah, Deborah Popplewell, OD, Emery Jamerson, MD, Cecile Truong, BS, Janet Sparrow, MD, William J. Mallon, MD, Adam M. Katz, MD, Lama A. Al-Aswad,

- MD, MPH. Detecting Common Eye Diseases Using the First Teleophthalmology GlobeChek™ Kiosk in the United States: A Pilot Study. *Asia Pac J Ophthalmol (Phila)*. 2020 Jul-Aug;9(4):315-325.
126. Lin, T. C.; Chiang, Y. H.; Hsu, C. L.; Liao, L. S.; Chen, Y. Y.; Chen, S. J. Image quality and diagnostic accuracy of a handheld nonmydriatic fundus camera: Feasibility of a telemedical approach in screening retinal diseases. *Journal of the Chinese Medical Association: JCMA* Oct 2020;83(10):962-966.
127. Armstrong, G. W.; Kalra, G.; De Arrigunaga, S.; Friedman, D. S.; Lorch, A. C. Anterior Segment Imaging Devices in Ophthalmic Telemedicine. *Seminars in Ophthalmology* May 19 2021;36(4):149-156.
128. Chen TA, Li J, Schallhorn JM, Sun CQ. Comparing a Home Vision Self-Assessment Test to Office-Based Snellen Visual Acuity. *Clin Ophthalmol*. 2021 Jul 28;15:3205-321.
129. Dutt, S.; Nagarajan, S.; Vadivel, S. S.; Baig, A. U.; Savoy, F. M.; Ganapathy, V. M.; Dominic, M.; Sivaraman, A.; Rao, D. P. Design and Performance Characterization of a Novel, Smartphone-Based, Portable Digital Slit Lamp for Anterior Segment Screening Using Telemedicine. *Translational Vision Science & Technology* 07 01 2021;10(8):29.
130. de Araujo, A. L.; Rados, D. R. V.; Szortyka, A. D.; Falavigna, M.; Moreira, T. C.; Hauser, L.; Gross, P. B.; Lorentz, A. L.; Maturro, L.; Cabral, F.; Costa, Alfa; Martins, Tgds; da Silva, R. S.; Schor, P.; Harzheim, E.; Goncalves, M. R.; Umpierre, R. N. Ophthalmic image acquired by ophthalmologists and by allied health personnel as part of a telemedicine strategy: a comparative study of image quality. *Eye* May 2021;35(5):1398-1404.
131. Al-Aswad LA, Elgin CY, Patel V, Popplewell D, Gopal K, Gong D, Thomas Z, Joiner D, Chu CK, Walters S, Ramachandran M, Kapoor R, Rodriguez M, Alcantara-Castillo J, Maestre GE, Lee JH, Moazami G. Real-Time Mobile Teleophthalmology for the Detection of Eye Disease in Minorities and Low Socioeconomics At-Risk Populations. *Asia Pac J Ophthalmol (Phila)*. 2021 Sep-Oct 01;10(5):461-472.
132. Bhaskaran A, Babu M, Abhilash B, Sudhakar NA, Dixitha V. Comparison of smartphone application-based visual acuity with traditional visual acuity chart for use in tele-ophthalmology. *Taiwan J Ophthalmol*. 2022 May 13;12(2):155-163.
133. Blais N, Tousignant B, Hanssens JM. Tele-refraction in tele-eye care settings. *Clin Exp Optom*. 2022 Aug;105(6):573-581.
134. Mina Iskander, BA, Galen Hu, Sc.B., Shefali Sood, BA, Noah Heilenbach, BA, Victor Sanchez, BA, Titilola Ogunsola, BS, Dinah Chen, MD, Ceyhun Elgin, Ph.D, Vipul Patel, Andrew Wronka, Lama A. Al-Aswad, MD, MPH. Validation of the NYU Langone Eye Test application, a Smartphone-Based Visual Acuity Test. *Ophthalmology Science Volume 2, Number 3, June 2022*.
135. Sink, J.; Blatt, S.; Yoo, D.; Henry, M.; Yang, S. D.; Vasaiwala, R.; Ghadiali, L.; Adams, W.; Bouchard, C. S. A novel telemedicine technique for evaluation of ocular exam findings via smartphone images. *Journal of Telemedicine & Telecare* Apr 2022;28(3):197-202.
136. van der Star, L.; Mulders-Al-Saady, R.; Phan, A.; Truong, B.; Suen, B.; Krijgsman, M.; Persoons, R.; Bourgonje, V. J. A.; van Dijk, K.; Talke, F. E.; Melles, G. R. J. First Clinical Experience With Ophthalmic e-Device for Unaided Patient Self-Examination During COVID-19 Lockdown. *Cornea* 03 01 2022;41(3):353-358.
137. Sharma, A.; Bilong, Y.; Patil, J.; Katte, J. C.; Ahmad Khaqan, H.; Kumar Gupta, N.; Patel, A.; Sundaramoorthy, S. K.; Madhusudan, R. J.; Vidhya, N.; Lekha, T.; Shah, P. K.; Saravanan, V. R.; Dharwadkar, S. S.; Rishi, P.; Franco, M. F. E.; Chelo, D.; Kagmeni, G.; Assumpta Bella, L.; Kuppermann, B. D. MIIRetCam (Make In India Retina Camera) assisted retinal imaging in paediatric patients: Useful artefacts, learning curve. *Journal Francais d Ophthalmologie* Jan 2020;43(1):e35-e38.
138. Yao, X.; Son, T.; Ma, J. Developing portable widefield fundus camera for teleophthalmology: Technical challenges and potential solutions. *Experimental Biology & Medicine* 02 2022;247(4):289-299.

## Artificial Intelligence applied to Ophthalmology

139. Gunasekeran, D. V.; Wong, T. Y. Artificial Intelligence in Ophthalmology in 2020: A Technology on the Cusp for Translation and Implementation. *Asia-Pacific Journal of Ophthalmology* Mar-Apr 2020;9(2):61-66.
140. Ting, D. S. J.; Foo, V. H.; Yang, L. W. Y.; Sia, J. T.; Ang, M.; Lin, H.; Chodosh, J.; Mehta, J. S.; Ting, D. S. W. Artificial intelligence for anterior segment diseases: Emerging applications in ophthalmology. *British Journal of Ophthalmology* 02 2021;105(2):158-168.
141. Gao, Q.; Amason, J.; Cousins, S.; Pajic, M.; Hadziahmetovic, M. Automated Identification of Referable Retinal Pathology in Teleophthalmology Setting. *Translational Vision Science & Technology* 05 03 2021;10(6):30.
142. Shah, P.; Mishra, D.; Shanmugam, M.; Vighnesh, M. J.; Jayaraj, H. Acceptability of artificial intelligence-based retina screening in general population. *Indian Journal of Ophthalmology* 04 2022;70(4):1140-1144.

## Vision Impairment & Rehabilitation

143. Christy, B.; Mahalakshmi, M.; Aishwarya, T. V.; Jayaraman, D.; Das, A. V.; Rani, P. K. Guidelines in establishing telerehabilitation services for people with vision impairment. *Indian Journal of Ophthalmology* Jul 2022;70(7):2397-2400.