ONESIGHT
EssilorLuxottica Foundation

ADVOCACY FACT SHEET

Brazil Overview

1. **Prevalence of Poor Vision:** Unmet uncorrected refractive error in Brazil is 33.0%. A 2014 São Paulo study found 15.4% had moderate vision impairment (VI), 10.2% severe VI, and 4.2% blindness, with significant improvement after optical correction. Other studies show high prevalence of refractive errors and cataracts, emphasizing the need for targeted correction programs and eye health policy implementation.
2. **Higher Risk Populations:** Older adults in Brazil have high rates of visual impairment due to URE, with significant improvement upon correction, highlighting the need for accessible eye care. Inequality in health access, socio-economic factors, and education put many at higher risk of uncorrected refractive error (URE).
3. **Children and Students:** Myopia (nearsightedness) rates are increasing among Brazilian children and students, with significant disparities across regions and socioeconomic groups. This indicates a need for comprehensive vision screening and eye care programs in schools. In southern Brazil, 2023 data showed a 17.4% myopia prevalence among public school children, with females at higher risk, linked to increased screen access.

The Global State of Vision

The World Health Organization (WHO) recognizes URE as **the primary cause of vision impairment** (VI), **the second cause of blindness**, and **the largest unaddressed disability worldwide**.[1]

Globally, 2.7 billion or 1 in 3 people live with poor vision caused by URE[2] (URE includes myopia, hyperopia, astigmatism and presbyopia. It results in reduced visual acuity, leading to blurred vision and, when severe, visual impairment).[3]

Vision impairment costs the global economy **US$411 billion** in yearly **productivity losses**.[4]

Without action, half the global population, roughly **4.8 billion,** is set to have a VI, primarily myopia, by **2050.**[4]

Over 90% of VI cases **are preventable**, and/or **treatable** with existing, cost-effective interventions.[4] Globally, only 36% of people with distance VI due to refractive error (RE) have access to the appropriate care they need.[5]

40% eREC

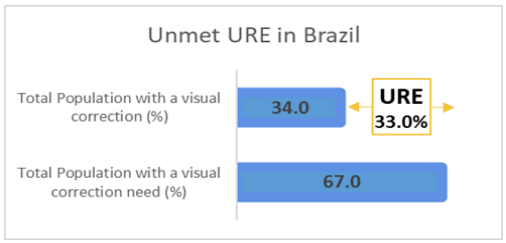
With this baseline (36%), the 74th World Health Assembly (WHA) endorsed a global target for a **40% increase in effective coverage of refractive errors (eREC)** by 2030.[6]

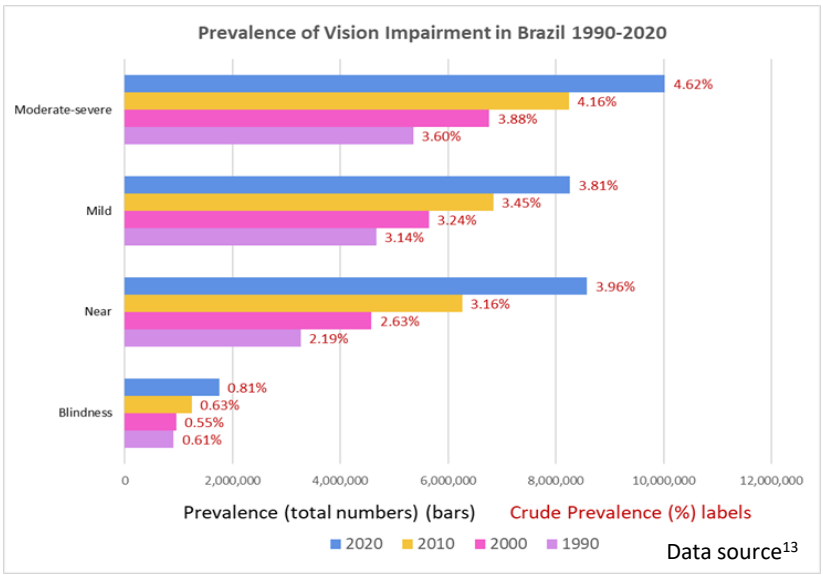
The **WHO SPECS 2030 Initiative**[7], building on WHA[8]/UNGA[9] resolutions and particularly the eREC target, assists countries and stakeholders in addressing the unmet need for spectacles while ensuring the delivery of quality eye care.

Vision Needs in Brazil

General prevalence data:

- The 2009 Botucatu Eye Study found 5.2% with low vision and 2.2% with blindness, mainly due to refractive error (72.3%) and cataracts (50%). Best corrected low vision and blindness were 1.3% and 0.4%, respectively.[10]
- A 2014 study in São Paulo found 15.4% had moderate VI, 10.2% severe VI, and 4.2% blindness. Corrected, normal visual acuity increased from 70.2%.to 84.1%.[11]
- A 2017 Brazilian Amazon survey showed 85.6% of older adults with reliable visual acuity, 21.6% having uncorrected VI, reduced with best-corrected visual acuity (BCVA). [12]





Older adults: Age- and sex-adjusted prevalence of FLV in those 50+ ranged from 0.9% in Guatemala, Mexico, and Uruguay to 2.2% in Brazil and Cuba, increasing with age.[14] In the Brazilian Amazon, 96.5% of older adults had uncorrected near VI, 20.5% with correction. Presbyopia was the main cause (71.8%), followed by cataracts (16.5%) and pterygium (2.5%).[15] URE was the top cause of VI among adults 45+ in Parintins.[16]

Children/Students:

- The prevalence of childhood myopia increased from 3.6% in 1995-2000 to 9% in 2014.[17]
- In 2007, the prevalence of uncorrected, presenting, and BCVA in Gurupi City, Tocantins, was 5.72%, 2.83%, and 0.81%, respectively, mainly due to refractive error (89%).[18] Among schoolchildren in Aracati, myopia prevalence was 20.4%, with high myopia at 1.4%.[19]

(1) World Health Organization. (2019, October 8). World report on vision. Www.who.int; Geneva: World Health Organization. https://www.who.int/publications/i/item/9789241516570 (2) Essilor. (2019, November 5). Eliminating Poor Vision in a Generation. What Will It Take To Eliminate Uncorrected Refractive Errors by 2050? The OneSight EssilorLuxottica Foundation. https://onesight.essilorluxottica.com/research/eliminate-poor-vision-by-2050/ (3) WHO TEAM Noncommunicable Diseases. (2013, October 6). Blindness and vision impairment: Refractive errors. Www.who.int; World Health Organization. https://www.who.int/news-room/questions-and-answers/item/blindness-and-vision-impairment-refractive-errors (4) Burton, MJ, Ramke, J, Marques, AP, Bourne, RRA, Congdon, N, Jones, I, et al. The Lancet Global Health Commission on Global Eye Health: Vision beyond 2020. Lancet Glob Health (2021), 9(4), e489–e551. https://doi.org/10.1016/S2214-109X(20)30488-5 (5) World Health Organization. (2022). Report of the 2030 targets on effective coverage of eye care. World Health Organization. https://iris.who.int/handle/10665/363158 (6) World Health Organization. (2021). Integrated people-centred eye care, including preventable vision impairment and blindness Global targets for 2030 Draft decision. In World Health Organization. https://apps.who.int/gb/ebwha/pdf_files/WHA74/A74_9Add3-en.pdf (7) World Health Organization. (n.d.). SPECS 2030. Www.who.int; WHO. http://www.who.int/initiatives/specs-2030 (8) Resolution WHA73.4. Integrated people-centred eye care, including preventable vision impairment and blindness. In: Seventy-third World Health Assembly, Geneva, 3 August 2020. Geneva: World Health Organization; 2020, https://apps.who.int/gb/ebwha/pdf_files/WHA73/A73_R4-en.pdf (9) United Nations General Assembly Resolution A/75/L.108 – Vision for Everyone; accelerating action to achieve the Sustainable Development Goals, 6 July 2021. New York: United Nations; 2021, https://www.undocs.org/en/A/75/L.108 (10) Schellini, S. A., Durkin, S. R., Hoyama, E., Hirai, F., Cordeiro, R., Casson, R. J., et al. (2009). Prevalence and causes of visual impairment in a Brazilian population: The Botucatu Eye Study. BMC Ophthalmology, 9(1). https://doi.org/10.1186/1471-2415-9-8 (11) Ferraz, F. H., Corrente, J. E., Opromolla, P., & Schellini, S. A. (2014). Influence of uncorrected refractive error and unmet refractive error on visual impairment in a Brazilian population. BMC Ophthalmology, 14(1). https://doi.org/10.1186/1471-2415-14-84 (12) Salomão, S. R., Berezovsky, A., Furtado, J. M., Fernandes, A. G., Muñoz, S., Cavascan, N. N., et al. (2018). Vision Status in Older Adults: The Brazilian Amazon Region Eye Survey. Scientific Reports, 8(1). https://doi.org/10.1038/s41598-018-19338-6 (13) The International Agency for the Prevention of Blindness (IAPB). (2020). Country Map & Estimates of Vision Loss - Brazil. IAPB Vision Atlas; The International Agency for the Prevention of Blindness (IAPB). https://www.iapb.org/learn/vision-atlas/magnitude-and-projections/countries/brazil/ (14) Limburg H et al. (2015). Functional low vision in adults from Latin America: findings from population-based surveys in 15 countries. (https://iris.paho.org/handle/10665.2/2693). (15) Cunha, C. C., Berezovsky, A., Furtado, J. M., Ferraz, N. N., Fernandes, A. G., Muñoz, S., et al. (2018). Presbyopia and Ocular Conditions Causing Near Vision Impairment in Older Adults From the Brazilian Amazon Region. American Journal of Ophthalmology, 196, 72–81. https://doi.org/10.1016/j.ajo.2018.08.012 (16) Furtado, J. M., Berezovsky, A., Ferraz, N. N., Muñoz, S., Fernandes, A. G., Watanabe, S. S., et al. (2019). Prevalence and Causes of Visual Impairment and Blindness in Adults Aged 45 Years and Older from Parintins: The Brazilian Amazon Region Eye Survey. Ophthalmic Epidemiology, 26(5), 345–354. https://doi.org/10.1080/09286586.2019.1624783 (17) Garcia, C. A. de A., Oréfice, F., Nobre, G. F. D., Souza, D. de B., Rocha, M. L. R., & Vianna, R. N. G.. (2005). Prevalence of refractive errors in students in Northeastern Brazil. Arquivos Brasileiros De Oftalmologia, 68(3), 321–325. https://doi.org/10.1590/S0004-27492005000300009 (18) Ibrahim, F. T., Ibrahim, M. M., Camargo, J. A., de Lourdes, M., Scott, I. U., & Paula, J. S. (2013). Visual Impairment and Myopia in Brazilian Children. Optometry and Vision Science, 90(3), 223–227. https://doi.org/10.1097/opx.0b013e31828197fd (19) Yotsukura, E., Torii, H., Ozawa, H., Hida, R. Y., Shiraishi, T., Corso Teixeira, I., Rautha, Y. V. B. L., Moraes do Nascimento, C. F., Mori, K., Uchino, M., Kurihara, T., Negishi, K., & Tsubota, K. (2020). Axial Length and Prevalence of Myopia among Schoolchildren in the Equatorial Region of Brazil. Journal of clinical medicine, 10(1), 115. https://doi.org/10.3390/jcm10010115

- Another study found 75.1% of schoolchildren emmetropic, 2.8% of 5-7-year-olds myopic, increasing to 19.3% among 16-18-year-olds, with significant hyperopia and astigmatism.[20]
- In 2021, 15.2% São Paulo public school children had myopia, 17.5% hyperopia, and 30.5% astigmatism.[21] The 2023 myopia prevalence among children who never had vision screenings in south Brazil was 17.4%, with girls having x1.6 higher risk than boys. All social classes had screen access contributing to increasing myopia.[22] In the Americas, Brazil and Mexico had higher prevalence of URE among female children (15.2 per 1000).[23]
- At Centro Universitário Saúde ABC/FMABC, 74.57% of medical students had ametropia, with myopia being most common (59.05%), increasing from 1st to 4th year, higher than the global average (22%).[24] A study in Cuiabá, Brazil found 47.7% of university students were myopic, 14.1% hyperopic, 32% emmetropic, and 6.3% had high myopia.[25]

Vision Care in Brazil

- **Overview of Brazil's Health Care System:** Brazil's Unified Health System (SUS) aims for comprehensive healthcare at all levels. Health expenditure rose to USD 1,514 per capita in 2019, with private spending over 50%. Public providers dominate, but private providers are significant. Brazil performs well in only few wellbeing measures compared to OECD countries, with notable health system underutilization by those without private insurance.[26]
- **Health Access:** All residents and visitors, including refugees[27] (562,589 in 2022)[28] and undocumented, can access free services, with no cost-sharing or application process. Access to primary and emergency care is direct, but referrals are needed for specialties and hospitals. Geographic distribution of doctors is skewed towards wealthier cities. [27] About 25% of Brazilians have private insurance, granting better access and health outcomes. [26] 14.7% of Brazilians use both public and private services, with higher income linked to dual use, often from public to private, exacerbating health inequities.[29]
- **Challenges**: Despite universal coverage, Brazil struggles with unequal access, low care quality, and poor coordination. Increased spending to obtain care requires further investment in infrastructure, workforce development, and digital technologies.[30] Brazil's health system faces threats from structural weaknesses, economic and political crises, and austerity policies limiting public expenditure growth.[31] Persistent socioeconomic inequalities favor the wealthy in health care utilization, preventive services, and hospital admissions, particularly in poorer regions.[32]
- **Perception**: In 2019, 3.8% of Brazilians reported unmet health care needs, and 7.5% unmet medication needs. Policy interventions should improve access for vulnerable populations.[33] 11.5% of older adults rated their health as poor, concentrated among the poorer, with income, education, and private insurance need contributing to this inequality.[34]
- **Vision Care:** One can search online for eye clinics or an ophthalmologist, can additionally refer to the Brazilian Council of Ophthalmology (Conselho Brasileiro de Oftalmologia) directory of registered ophthalmologists, or get their doctor's referral.[35] There is high inequality in the distribution of ophthalmologists in Latin America, with a concentration in more developed areas.[36] Brazil has 6.74 ophthalmologists-per 100,000 population.[13]
- **School Health Program (PSE):** Brazil's PSE focuses on eye screening and visual acuity but needs more comprehensive evaluation, health promotion, and intersectoral work between health and education professionals.[37] PSE monitoring in 2019 showed a 65.1% increase in activities from 2014-19, identifying visual issues in 15,325 students, though only 38.2% of municipalities adhered to PSE actions, indicating slow growth.[38]
- **Corrective Lens Awareness:** A study showed 73% had used corrective lenses for over 5 years, but many were unaware of their lens type or ametropia due to inadequate doctor explanations, low health literacy, and lack of interest.[39]
- **Impact of Mobile Eye Care Units:** A São Paulo study found mobile eye care units identified refractive errors in 78.6% of cases, provided vision correction prescriptions to 60.9%, and resolved 81.7% of issues in a single visit, with 18.1% referred for specialized care.[40]

Action and Policy

- **Professional bodies and associations:** Conselho Brasileiro de Oftalmologia (CBO), the Brazilian Council of Ophthalmology; Sociedade Brasileira de Oftalmologia (SBO), the Brazilian Society of Ophthalmology; Sciedade Brasileira de Lentes de Contato, Córnea e Refratometria (SOBLEC), the Brazilian Society of Contact Lenses, Cornea, and Refractometry; Associação Brasileira de Catarata e Cirurgia Refrativa **(**ABCCR**)**, the Brazilian Association of Cataract and Refractive Surgery (BRASCRS); Associação Brasileira dos Profissionais de Saúde Ocular (ABRASO), the Brazilian Association of Eye Health Professionals.
- **Organizations supporting the visually impaired and blind:** Laramara - Associação Brasileira de Assistência à Pessoa com Deficiência Visual, Brazilian Association for Assistance to Visually Impaired Persons; Fundação Dorina Nowill para Cegos, Dorina Nowill Foundation for the Blind; Instituto Benjamin Constant (IBC); Associação de Deficientes Visuais e Amigos (ADEVA), the Foundation of the Association of Visually Impaired and Friends; Colégio Vicentino de Cegos Padre Chico; Associação Brasileira de Assistência ao Deficiente Visual, the Association for the Assistance of the Visually Impaired of Poços de Caldas (AADV); Visualiza Clínica Oftalmológica
- **Research entities:** Associação Brasileira de Catarata e Cirurgia Refrativa **(**ABCCR**)**, the Brazilian Association of Cataract and Refractive Surgery (BRASCRS); Instituto da Visão (IPEPO); Hospital de Olhos de Pernambuco (HOPE); Fundação Altino Ventura (FAV); Universidade de São Paulo (USP); Centro de Estudos e Pesquisas em Oculistas (CEPOA); Sociedade Brasileira de Oftalmologia (SBO)

- The Botucatu Eye Study underscores the need for targeted programs to correct REs and manage cataracts to reduce visual impairment.[10] Many had no prior access to RE screening, suggesting it may have significantly improved their vision.[11] About 30.9% could improve vision by 3 or more lines with proper refraction, emphasizing the need for better eye care access and affordable glasses, especially for women and rural residents.[41] The cost of spectacles can be a barrier in low-middle income countries like Brazil, making it essential to provide affordable, low-cost optical devices for proper rehabilitation.[42] 69.8% of participants received free reading glasses in an Amazon study, showing a clear need for affordable visual correction.[43]
- Mobile eye health units can be supportive in providing access to basic eye care, as seen in a 2021 study, additionally promoting eye health education to prevent blindness. This can aid particularly in underserved areas underserved areas, with high rates of detection and effective treatment of URE.[40]
- Brazil needs national eye health education policies due to demographic changes and high prevalence of myopia, cataracts, glaucoma, and diabetic retinopathy. School-based screenings, teacher training, and public awareness are crucial, alongside technological advancements and targeted education for better disease management.[44] Joint efforts of government, public and private actors will allow Brazil to ensure access to eye care for all and meet growing needs. The OneSight EssilorLuxottica Foundation can support delivery of care and education at eye clinics for in-need communities, to eliminate uncorrected poor vision in a generation, while leveraging the expertise of eye care professionals and local partners.

(21) Lira, R. P. C., do Espírito Santo, I. F., do Valle Astur, G. L., Maziero, D., Passos, T. H. M., & Arieta, C. E. L. (2014). Refractive error in school children in Campinas, Brazil. Arquivos Brasileiros de Oftalmologia, 77(3). https://doi.org/10.5935/0004-2749.20140052 (21) Costa, D. R. da, Debert, I., Susanna, F. N., Falabretti, J. G., Polati, M., & Susanna Júnior, R. (2021). Vision for the Future Project: Screening impact on the prevention and treatment of visual impairments in public school children in São Paulo City, Brazil. Clinics, 76. https://doi.org/10.6061/clinics/2021/e3062 (22) Gus, P. I., de Maman, R. S., Lengler, A. D., Marinho, D., Tartarella, M. B., & Pakter, H. (2024). Prevalence of Refractive Errors under Cycloplegia and Associated Factors with Focus on the Myopia Epidemic among Public School Children from Southern Brazil. Journal of Clinical and Experimental Ophthalmology, 15(3). https://doi.org/10.35248/2155-9570.24.15.976 (23) Cao H, Cao X, Cao Z, Zhang L, Han Y, et al. (2022) The prevalence and causes of pediatric uncorrected refractive error: Pooled data from population studies for Global Burden of Disease (GBD) sub-regions. PLOS ONE 17(7): e0268800. https://doi.org/10.1371/journal.pone.0268800 (24) Santos, G. C., Almeida, R. C. de, Reinaldo, W. V., Rocha Oliveira, F., Schofield, S., Santos, R. C., da Veiga, G. . L., Fonseca, F. L. A., Lima, V. L., & Leça, R. G. C. (2021). Prevalence and Progression of Ametropias in Medical Students. International Journal of Medical Students, 9(2), 112–116. https://doi.org/10.5195/ijms.2021.809 (25) Cunha, C. M., Marchezine, G., Cunha, J. T., de Lima, G. M. B., Monteiro da Silva, I. M., Rosa, et al. (2023). Refractive Error and Ocular Biometry among Young Adults from Cuiabá, Brazil. The Open Ophthalmology Journal, 17(1). https://doi.org/10.2174/18743641-v17-e230109-2022-33 (26) OECD (2021), OECD Reviews of Health Systems: Brazil 2021, OECD Reviews of Health Systems, OECD Publishing, Paris, https://doi.org/10.1787/146d0dea-en (27) Tikkanen, R., Osborn, R., Mossialos, E., Djordjevic, A., & Wharton, G. A. (2020, June 5). Brazil | Commonwealth Fund. Www.commonwealthfund.org. https://www.commonwealthfund.org/international-health-policy-center/countries/brazil (28) UNHCR US. (2022). Brazil. UNHCR US. https://www.unhcr.org/us/countries/brazil (29) Silva, B., Hens, N., Gusso, G., Lagaert, S., Macinko, J., & Willems, S. (2022). Dual Use of Public and Private Health Care Services in Brazil. International Journal of Environmental Research and Public Health, 19(3), 1829. https://doi.org/10.3390/ijerph19031829 (30) Roman, A. (2023). A Closer Look Into Brazil's Healthcare System: What Can We Learn? Cureus, 15(5). https://doi.org/10.7759/cureus.38390 (31) Massuda, A., Hone, T., Leles, F. A. G., de Castro, M. C., & Atun, R. (2018). The Brazilian health system at crossroads: progress, crisis and resilience. BMJ Global Health, 3(4), e000829. https://doi.org/10.1136/bmjgh-2018-000829 (32) Coube, M., Nikoloski, Z., Mrejen, M., & Mossialos, E. (2023). Persistent inequalities in health care services utilisation in Brazil (1998–2019). International Journal for Equity in Health, 22(1). https://doi.org/10.1186/s12939-023-01828-3 (33) Coube, M., Nikoloski, Z., Mrejen, M., & Mossialos, E. (2023). Inequalities in unmet need for health care services and medications in Brazil: a decomposition analysis. The Lancet Regional Health - Americas, 19, 100426. https://doi.org/10.1016/j.lana.2022.100426 (34) Pérez, R. A., Tejada, C. A. O., Triaca, L. M., Bertoldi, A. D., & dos Santos, A. M. A. (2022). Socioeconomic inequality in health in older adults in Brazil. Dialogues in Health, 1, 100009. https://doi.org/10.1016/j.dialog.2022.100009 (35) Expat Focus. (2023, August 19). Brazil - Eye Care - Expat Focus. Expat Focus. https://www.expatfocus.com/brazil/guide/brazil-eye-care (36) Hong, H., Mújica, O. J., Anaya, J., Lansingh, V. C., López, E., & Silva, J. C. (2016). The Challenge of Universal Eye Health in Latin America: distributive inequality of ophthalmologists in 14 countries. BMJ Open, 6(11), e012819. https://doi.org/10.1136/bmjopen-2016-012819 (37) Fernandes, L. A., André, M., & Köptcke, L. S. (2022). Eye healthcare and the School Health Program: a documentary research. Saúde Em Debate, 46(spe3), 213–226. https://doi.org/10.1590/0103-11042022e316i (38) Fernandes, L. A., & Köptcke, L. S. (2021). Análise da ação de saúde ocular do Programa Saúde na Escola no Brasil de 2014 a 2019: um estudo transversal. Epidemiologia E Serviços de Saúde, 30(2). https://doi.org/10.1590/s1679-49742021000200008 (39) Khan, N. E., Mahomedy, M., Mngadi, L., Moola, Z., Moosa, Z., Ndwandwe, G., et al. (2022). Knowledge, attitudes and practices towards refractive error amongst students. African Vision and Eye Health, 81(1), 7. https://doi.org/10.4102/aveh.v81i1.633 (40) Satto, L. H., Meneghim, R. L. F. de S., Hirai, F. E., Padovani, C. R., & Schellini, S. A. (2021). Impact of a mobile unit on access to eye care in São Paulo, Brazil. Arquivos Brasileiros De Oftalmologia, 84(1), 51–57. https://doi.org/10.5935/0004-2749.20210009 (41) Salomão, S. R., Berezovsky, A., Furtado, J. M., Fernandes, A. G., Muñoz, S., Cavascan, N. N., et al. (2018). Vision Status in Older Adults: The Brazilian Amazon Region Eye Survey. Scientific Reports, 8(1). https://doi.org/10.1038/s41598-018-19338-6 (42) Ferreira, M. M., Antunes-Foschini, R., & Furtado, J. M. (2022). Causes of functional low vision in a Brazilian rehabilitation service. Scientific Reports, 12(1). https://doi.org/10.1038/s41598-022-06798-0 (43) Cunha, C. C., Berezovsky, A., Furtado, J. M., Ferraz, N. N., Fernandes, A. G., Muñoz, S., et al. (2018). Presbyopia and Ocular Conditions Causing Near Vision Impairment in Older Adults From the Brazilian Amazon Region. American Journal of Ophthalmology, 196, 72–81. https://doi.org/10.1016/j.ajo.2018.08.012 (44) Louzada, R. N., Filho, A. de A. C., & Alves, M. R. (2024). Sobre a necessidade de políticas nacionais de educação em saúde ocular no Brasil. EOftalmo, 10(1), 1–4. https://doi.org/10.17545/eoftalmo/2024.0001