

## Comment on “Ophthalmology Census 2021: A Demographic Characterisation of Ophthalmologists in Portugal”

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**Palavras-chave:** Oftalmologia; Oftalmologistas/estatísticas e dados numéricos; Portugal

To the Editor,

Regarding the article “Ophthalmology Census 2021: A Demographic Characterization of Ophthalmologists in Portugal” published in your esteemed journal, I would like to address several points raised by this study. The article highlights that while the number of ophthalmologists in Portugal meets international recommendations, there is a shortage in the public sector, with most ophthalmologists practicing in large urban centers.<sup>1</sup>

The uneven distribution of ophthalmologists mirrors the broader pattern of physician distribution across Portugal. There is a concentration of medical professionals in areas such as Porto, Coimbra, and Lisbon, while regions like Alentejo and Algarve suffer from shortages.<sup>2</sup>

The need for ophthalmology care among the elderly is increasing in Portugal, which is expected to have a population of over 35% elderly by 2050.<sup>2</sup> Additionally, the time allocated to teaching ophthalmology in medical education has decreased in various parts of the world, including in the United States, where it declined from 68% in 2000 to 30% in 2004.<sup>3</sup> Consequently, we may end up with generalist physicians lacking basic knowledge to address common ophthalmology issues, further driving demand for specialist care.<sup>3</sup>

For instance, the direct ophthalmoscopy examination, which should be within the skill set of all generalist physicians, presents challenges. In a study conducted at a Canadian university involving 208 students, 47% felt inadequately confident in performing direct ophthalmoscopy.<sup>4</sup> This contradicts the International Council of Ophthalmology’s recommendation that generalist physicians should possess at least a basic level of ophthalmology knowledge,

including recognizing the red reflex and examining the optic nerve, identifying conditions that can threaten not only the patient’s vision but also the patient’s life, such as papillary edema.<sup>4</sup>

Addressing these issues requires establishing better working conditions and remuneration for ophthalmologists in the public healthcare system, where the bulk of patient care is concentrated. Additionally, there’s a need to emphasize the training of generalist physicians to handle basic ophthalmology problems. This can be achieved through the development of new teaching methodologies, including low-cost teaching models that enable students to grasp the fundamental principles of direct ophthalmoscopy and enhance their skills, thus increasing their confidence in examinations where diagnostic sensitivity and specificity are directly linked to physician training.<sup>5</sup>

Another consequence of the deficiencies in ophthalmology education and care is the growing development of artificial intelligence algorithms for triaging diseases such as diabetic retinopathy, cataracts, glaucoma, and even prescribing glasses, which also indicates a consequence of technological development in these areas. This can lead to more reliable diagnoses and treatment recommendations, regardless of geographical location or individual clinician expertise.<sup>5</sup>

In this way, the irregular distribution of ophthalmologists hampers access to healthcare for a significant portion of the population reliant solely on the public healthcare system. The solution to this problem lies not only in increasing the number of specialists in the public healthcare system but also in implementing public policies to enhance the value of the medical profession, improve the quality of ophthalmology education in medical schools, and advance new technologies.

### COMPETING INTERESTS

The author have declared that no competing interests exist.

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