



An analysis of health policy programmes on eye health implemented by Local Government Units (LGUs) in Poland, 2015–2023

Maciej Kamiński^{1,A-D,F}, Mateusz Jankowski^{2,A,C-F}, Olga Adamska^{3,C-D,F}, Jarosław Pinkas^{2,D-F}, Agnieszka Kamińska^{3,A,C-F}

¹ Faculty of Medicine, Lazarski University, Warszawa, Poland

² School of Public Health, Centre of Postgraduate Medical Education, Poland

³ Department of Ophthalmology, Faculty of Medicine, Collegium Medicum, Cardinal Stefan Wyszyński University, Poland
A – Research concept and design, B – Collection and/or assembly of data, C – Data analysis and interpretation, D – Writing the article, E – Critical revision of the article, F – Final approval of the article

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Abstract

Introduction and Objective. Local Government Units (LGUs) in Poland may develop health policy programs on different health conditions according to the rules and templates defined by the Agency for Health Technology Assessment and Tariff System (AHTATS). This study aimed to analyze health policy programs on eye health implemented by LGUs in Poland between 2015 and 2023.

Materials and Method. This is a retrospective analysis of data on health policy programs on eye health implemented by LGUs in Poland from 1 January 2015 to 31 December 2023. Data were received from the public information and announcements published by the AHTATS. Full texts of health policy programs on eye health were with particular focus on the target population, type of intervention, timeline, budget, and characteristics of LGU.

Results. Between 2015 and 2023, a total of 1568 health policy programs were submitted to AHTATS by LGUs, of which only 41 (2.6%) programs addressed eye health. Health policy programs on eye health were prepared by 4 of 16 voivodeships, 2 of 314 poviats, and 30 of 2477 communes. Only 3 of 1464 (0.2%) of rural communes prepared health policy programs on eye health. Program duration varied from 24 to 72 months, whereas 53.7% of programs were planned for 36 months. Only 33 programs were rated positively by ATHATS and could be implemented. Most of the programs (85.4%; n=35) were targeted at primary school children and 78% (n=32) also included parents and caregivers. Out of 41 programs, 92.7% included secondary prevention interventions. Visual acuity test was the most common eye test (n=34; 82.9%) offered within the eye health programs implemented by LGUs.

Conclusions. This study revealed significant gaps in the implementation of health policy programs on eye health implemented by LGUs in Poland, especially in rural areas.

Key words

Poland, prevention, health policy, screening, public health, ophthalmology, local government, vision impairment, eye health, health policy programs.

INTRODUCTION

Eye health is a broad term defined as complex vision health, ocular health, and functional ability to maintain overall well-being and quality of life [1, 2]. It integrates the promotion of prevention and treatment of any eye conditions and refractive errors [1, 2]. The number of people at any age affected by the conditions leading to vision loss is increasing substantially with the population aging [3]. Most cases of vision loss worldwide are preventable if detected at an early stage [2]. The leading causes of vision impairment and blindness are cataracts, diabetic retinopathy, glaucoma, and age-related macular degeneration (AMD) [4]. World Health Organization (WHO) estimates that by 2050 aging population and urbanization might lead to 895 million people affected by distant vision impairment, of whom 61 million will be completely blind [2]. The visual impairment decreases

productivity, mobility, and mental health [2–4]. However, eye health and education on eye diseases are often skipped in nationwide health policies.

Older age and genetic predisposition are non-modifiable factors for eye diseases [3, 4]. However, smoking, dietary habits, and occupational exposure are common modifiable risk factors for eye conditions that can be addressed in educational campaigns and primary prevention strategies [2, 4, 5]. However, eye health and education on eye diseases are often skipped in nationwide health policies.

Most of the eye conditions are painless [2, 4]. Symptoms of eye disease are often present at the advanced stage of the disease [2, 4]. Eye care behaviors and eye health screening are essential for the early detection of eye diseases [6]. In children, eye examinations are mostly offered within childhood screening programs [7]. In adults, eye examinations are part of the occupational medicine tests [8]. Moreover, eye examinations may be offered as a part of voluntary screening as well as health services offered by central or local government.

Access to eye care services (including ophthalmologists, and optometrists) may influence the frequency of eye

Address for correspondence: Mateusz Jankowski, School of Public Health, Centre of Postgraduate Medical Education, Kleczewska 61/63, 01-826, Warsaw, Poland
E-mail: mjankowski@cmkp.edu.pl

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examination and eye care behaviors in local populations [9]. Individuals from rural areas may be at high risk of barriers to accessing eye care services, mostly due to transportation barriers or lack of accessible medical facilities and healthcare providers [9]. Appropriate access to eye care is particularly important for school-age children [7]. Early detection of vision impairments in school-aged children may affect the education abilities of children [7]. WHO recognized eye health and published a guide on integrating eye care in health systems that encourages Member States to strengthen eye care services [10]. In Poland, there is access to ophthalmological care within the public health system funded by mandatory health insurance [11]. Patients may visit an ophthalmologist after receiving a referral from the primary care physician [11]. Moreover, there is a high availability of private ophthalmological care paid out-of-pocket by the patient. However, to reduce barriers to accessing ophthalmological care in Poland as well as to promote eye health, local government units (LGUs) may develop health policy programs on different health conditions, including those focused on eye health [12].

Health policy programs are developed by LGUs according to the rules and templates defined by the Ministry of Health and the Agency for Health Technology Assessment and Tariff System (AHTATS) [12, 13]. LGUs are obligated to define health problems, the aim of the health policy program, the characteristics of the target population, the type of health intervention and resources allocated for the program, monitoring, and evaluation principles as well as the expected budget [14].

Health policy programs are an important part of local health policies developed by LGUs [15]. They also reflect the priority issues of LGUs and the health needs of local populations [15]. Previously published data showed that LGUs in Poland implemented health policy programs on infectious disease prevention through vaccination, cardiovascular diseases, diabetes, overweight, and obesity [12, 13, 16, 17]. There is a lack of data on eye health programs implemented in local communities in Poland as well as their cope and target populations.

Therefore, this study aimed to analyze health policy programs on eye health implemented by Local Government Units in Poland between 2015 and 2023 as well as to identify gaps in public health interventions on eye health that should be addressed in local communities.

MATERIALS AND METHOD

Data source. This study is a retrospective analysis of data on health policy programs on eye health implemented by Local Government Units (LGUs) in Poland from 1 January 2015 to 31 December 2023. LGUs in Poland are legally obligated to submit the health policy program proposal to the Agency for Health Technology Assessment and Tariff System (AHTATS) – a public agency tasked with health economics, technology assessment, and health policy programs review [12, 14]. AHTATS must evaluate the program and make recommendations: approved; approved after changes (conditionally approved); rejected. According to Polish law, only health policy programs approved or conditionally approved can be implemented and funded by public funds [14]. Data on health policy programs evaluated by the Agency are

published online (publicly available) on a dedicated website [14]. Health policy programs on eye health were identified using the following combination of keywords: vision (pol. “wzrok”); health (pol. “zdrowie”); eye (pol. “oczy”); health policy program (pol. “program polityki zdrowotnej”).

This is a retrospective analysis of publicly available datasets, so the application for the approval of the local Ethical Committee was not needed.

Methods. According to the guidelines on health policy program preparation published by AHATS, the title of the health policy program should indicate the health problem that is the scope of the program. Titles of all health policy programs submitted to AHATS between 2015 and 2023 were screened. All health policy programs on eye health were included in the analysis. Full texts of health policy programs on eye health were analyzed by two independent researchers (MK and MJ). Datasets were compared and differences in the assessment of health policy programs were resolved by the entire research team. The following data on health policy programs were assessed: (1) program title; (2) characteristics of the LGU (commune; poviat; voivodship; number of residents); (3) submission year; (4) AHTATS opinion (approved/conditionally approved/rejected); (5) target population; (6) planned funding; (7) type of prevention (primary/secondary/tertiary); (8) public health interventions planned within the program.

Data on health policy programs on eye health were entered into the electronic database (MS Excel, Microsoft Corp., Redmont, US). Descriptive statistics were used with frequencies and proportions. Only programs with positive or conditionally positive (approved after correction) could be implemented by the LGUs. Health policy programs on eye health were assessed using the following categories: (1) general characteristics; (2) target population; (3) type of intervention; and (4) eye health screening procedures provided within the program.

RESULTS

Between 2015 and 2023, a total of 1568 health policy programs were submitted to AHTATS by LGUs, of which only 41 (2.6%) programs addressed eye health (Table 1).

Table 1. Number of health policy programmes on eye health prepared by LGUs between 2015–2023

Year	Total number of health policy programmes submitted by LGUs	Number of health policy programs on eye health	
	n	n	% of all health policy programmes submitted by LGUs
2015	212	4	1.9
2016	240	3	1.3
2017	352	9	2.6
2018	239	5	2.1
2019	195	3	1.5
2020	97	4	4.1
2021	80	2	2.5
2022	68	5	7.4
2023	85	6	7.1
Total	1,568	41	2.6

Table 2. Health policy programmes on eye health prepared by LGUs in Poland (2015–2023) by type of LGU

Type of LGU	Overall		LGUs that prepared health policy programmes on eye health % of all LGUs
	n	n	
Province	16	4	25.0
County	314	2	0.6
Commune	2,477	30	1.2
type of commune			
rural	1,464	3	0.2
urban (including cities)	302	18	6.0
rural-urban	711	9	1.3

Out of 16 voivodeships in Poland, only 4 voivodeships planned health policy programs on eye health: Małopolskie (2 programs), Świętokrzyskie (1 program), Zachodniopomorskie (1 program) and Wielkopolskie (1 program). Out of 314 poviats, only 2 (piaseczyński and bocheński) poviats planned health policy programs on eye health. Out of 2477 communes in Poland, 30 planned health policy programs on eye health, including 4 communes that submitted two health policy programs on eye health in different years. Most of the communes (n=18; 60%) that submitted health policy programs on eye health were urban communes (cities), 9 (30%) were urban-rural communes, and 3 (10%) were rural communes (Table 2). Out of all LGUs in Poland, there were no health policy programs on eye health submitted

Table 3. Characteristics of health policy programmes on eye health prepared by LGUs in Poland between 2015–2023 (n=41)

No.	Title of the programme	LGU	Popu- lation	Budget [PLN]	Budget per one inhabitant [PLN]	Sub- mission year	Duration time [months]	AHATS opinion
Health policy programmes on eye health submitted by Province								
1	Diabetic retinopathy prevention programme in the Wielkopolskie Province (2nd edition)	Wielkopolskie Province	30,000	6,199,017	206.6	2023	36	conditionally approved
2	Early detection and rehabilitation of vision defects among first grades primary school students	Świętokrzyskie Province	no data	6,585,217	not calculable	2019	36	conditionally approved
3	Early detection of vision defects in children aged 5 years	Małopolskie Province	85,080	6,442,550	75.7	2018	36	conditionally approved
4	Early detection of vision defects in children aged 4-7 years	Małopolskie Province	32,475	7,980,000	245.7	2018	36	conditionally approved
5	Early detection and rehabilitation of vision defects among first-grade primary school students for 2019–2021	Zachodniopomorskie Province	no data	6,780,000	not calculable	2017	48	rejected
Health policy programs on eye health submitted by poviats								
6	Glaucoma - the insidious thief of sight	Piaseczyński County	67,000	60,000	1.1	2017	24	conditionally approved
7	I hear and I see. Local government hearing and vision screening programme for secondary school students in the Bochnia district.	Bocheński County	6,750	251,700	37.3	2015	36	conditionally approved
Health policy programmes on eye health submitted by urban communes (cities, towns and communes)								
8	Health policy programme for early detection of vision defects in children from Poznań County	Poznań city	6,435	300,000	46.6	2023	24	conditionally approved
9	Health policy programme for early detection of vision defects in children, especially myopia, including in connection with the implementation of distance learning during the COVID-19	Kraków city	114,200	1,189,755	10.4	2023	48	conditionally approved
10	Programme for early detection of hearing and vision defects in children living in the City of Opole, 2023-2026	Opole city	3,696	1,040,000	281.4	2023	48	conditionally approved
11	Programme for early detection of vision defects in children aged 10 living in the Tczew commune, 2023-2025	Tczew city?	1,691	60,000	35.5	2023	36	conditionally approved
12	Vision prevention and correction programme "Let's save children's eyesight" in the City of Zgierz, 2022-2024	Zgierz city	no data	123,000	not calculable	2022	36	conditionally approved
13	Prevention and early detection of vision defects programme for third-grade students of primary schools located in the city of Będzin, 2022-2024	Będzin city?	1,415	141,500	100.0	2022	36	conditionally approved
14	Health policy programme for early detection and rehabilitation of vision defects among primary school students living in the City of Puszczkowo for the years 2022-2025	Puszczkowo city?	1,111	180,905	162.8	2022	48	conditionally approved
15	Programme for the prevention and early detection of vision defects among children and school youth up to 18 years of age and for people over 30 years of age living in the city of Żory (Silesian Province), and early detection of vision defects among children and school youth up to 18 years of age and for people over 30 years of age residing in the city of Żory (Silesian Province), and early detection of vision defects among children and school youth up to 18 years of age and for people over 30 years of age residing in the city of Żory.	Żory city?	1,000	200,000	200.0	2021	60	conditionally approved

No.	Title of the programme	LGU	Population	Budget [PLN]	Budget per one inhabitant [PLN]	Submission year	Duration time [months]	AHATS opinion
16	Programme for early detection of hearing and vision defects in children living in the City of Zielonka, 2021-2023	Zielonka city?	516	189,642	367.5	2020	36	conditionally approved
17	Health policy programme for early detection of vision defects in children aged 5 years living in the City of Toruń, 2020-2025. Toruń keeps an eye on children.	Toruń city	8,953	659,390	73.7	2019	72	conditionally approved
18	Glaucoma – don't let yourself be surprised. Screening programme for early diagnosis of familial glaucoma among residents of the Toruń City Commune, 2016-2020.	Toruń city	4,200	25,000	6.0	2016	60	rejected
19	Prevention and early detection of visual defects and strabismus in children aged 3-5 in the Stalowa Wola (Province?).	Stalowa Wola city	4,621	106,645	23.1	2018	36	conditionally approved
20	Prevention and early detection of vision defects among children aged 4-6 in the city of Krosno (Province?)	Krosno city?	1,220	33,800	27.7	2018	24	conditionally approved
21	Health policy programme - early detection of vision defects in children aged 6 years living in the City of Kalisz, 2019-2021.	Kalisz city	2,071	112,000	54.1	2018	36	conditionally approved
22	Programme for early detection of Age-Related Vision Diseases	Sopot city?	900	674,000	748.9	2017	36	rejected
23	Detection of eye defects and diseases among second-grade students of primary schools.	Szczecin city	8,087	510,000	63.1	2017	48	rejected
24	Programme for early detection of vision defects in children aged 5 living in the City of Chorzów, 2018-2020.	Chorzów city	3,043	252,000	82.8	2017	36	conditionally approved
25	Good eyesight, better start	Gliwice city	no data	650,500	not calculable	2017	36	conditionally approved
26	Preventive programme for early detection of vision defects and strabismus for second-grade students of primary schools in the City of Lublin	Lublin city	10,000	500,000	50.0	2015	72	conditionally approved
Health policy programmes on eye health submitted by urban-rural communes								
27	Programme for early detection of hearing and vision defects in children in the Gogolin Commune, 2024-2027	Gogolin commune	784	240,000	306.1	2023	48	conditionally approved
28	Programme for early detection of hearing and vision defects among children and adolescents in the Gogolin Commune, 2015-2020	Gogolin commune	no data	90,000	not calculable	2015	72	conditionally approved
29	Programme for early detection of hearing and vision defects among children aged 6 in the Świebodzin commune, 2022-2024	Świebodzin commune	no data	297,980	not calculable	2022	36	conditionally approved
30	Programme for the prevention and early detection of vision and hearing defects among early school children in the Chociwel commune, 2022-2026	Chociwel commune	506	74,000	146.2	2022	60	conditionally approved
31	Eye examination program mefor students of schools in the Nowogard commune, 2021-2023	Nowogard commune	no data	15,000	not calculable	2021	36	rejected
32	Eye health screening programme for primary school students in the Nowogard commune, 2020-2022	Nowogard commune	5,000	15,000	3.0	2020	36	conditionally approved
33	Early detection of vision defects among first-grade students primary schools in Wieluń Commune, 2020-2023	Wieluń commune	1,015	59,583	58.7	2020	48	conditionally approved
34	Programme for the prevention of early detection of eye defects and diseases among children in Wieluń Commune, 2017-2022	Wieluń commune	1,648	6,060	3.7	2017	72	rejected
35	Programme for early detection of hearing and vision defects among first-grade students of primary schools in the Zbąszynek commune, 2018-2020.	Zbąszynek commune	264	no data	not calculable	2017	36	conditionally approved
36	Programme for early detection of vision and hearing defects among children in the Drzewica commune, 2016-2018.	Drzewica commune	385	34,025	88.4	2016	36	conditionally approved
37	Programme for the prevention of eye diseases, with particular emphasis on glaucoma and cataracts.	Konstancin-Jeziorna commune	9,129	20,000	2.2	2016	36	rejected
38	Long-term health programme for the prevention of early detection of glaucoma in the Drawsko Pomorskie Commune.	Drawsko Pomorskie commune	5,796	10,000	1.7	2015	no data	rejected
Health policy programmes on eye health submitted by rural communes								
39	Programme for early detection of hearing and vision defects among children and youth in Walce commune, 2020-2022.	Walce commune	100	10,000	100	2020	36	conditionally approved
40	Programme for the prevention and early detection of vision defects among children aged 6 in the Długoleka commune, 2020-2022	Długoleka commune	1,258	95,260	75.7	2019	36	conditionally approved
41	Programme for preventive early detection of visual defects and strabismus in children aged 4-6 in the Radomyśl nad Sanem commune	Radomyśl-nad-Sanem commune	no data	67,968	not calculable	2017	48	conditionally approved

by LGUs from 2 voivodeships: Warmińsko-Mazurskie and Podlaskie.

Out of 41 health policy programs on eye health submitted by LGUs to AHTATS, 8 were rejected (19.5%) and only 33 programs were approved (or conditionally approved) for the implementation by LGUs. Program duration varied from 24 to 72 months, whereas 22 (53.7% of all submitted programs on eye health) programs were planned for 36 months. In one program there was no data on the planned budget, one program missed with duration time, and in 8 programs (20% of all submitted programs on eye health) there was no data on the number of the target population. Detailed characteristics of health policy programs on eye health prepared by LGUs in Poland between 2015 and 2023 is presented in Table 3.

Most of the health policy programs on eye health (85.4%; n=35) were targeted to children, including 34 programs (82.9%) targeted to primary school children and 3 programs (7.3%) targeted to secondary school children (Figure 1). In 32 programs (78%) parents or caregivers were listed as one of the target populations (mostly with education on eye health) and 10 (24.4%) programs were partially addressed to teachers. Only 3 programs were targeted to adults with eye diseases (7.3%) and 6 programs also included Healthcare workers (14.6%) as one of the target populations (Figure 1).

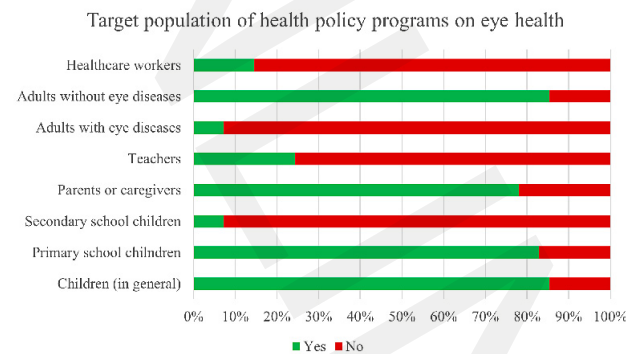


Figure 1. Target population of health policy programs on eye health planned by LGUs in Poland, 2015–2023

Out of 41 health policy programs on eye health, 36 (87.8%) included primary prevention activities and health education, 38 (92.7%) programs included secondary prevention activities, and 2 programs (4.9%) included tertiary prevention activities. Visual acuity test was the most common eye test (n=34) offered within the eye health programs (82.9%) implemented by LGUs (Figure 2). Moreover, in 18 (43.9%) programs refraction

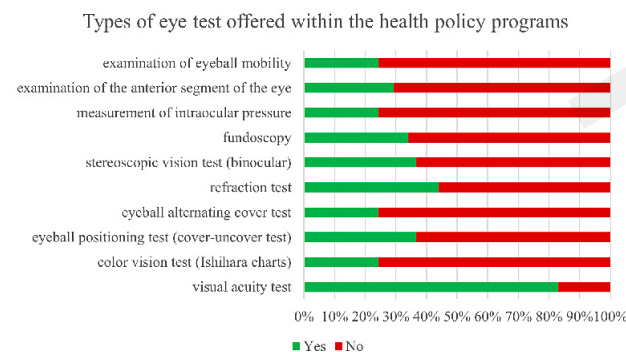


Figure 2. Types of eye test offered within the health policy programs on eye health planned by LGUs in Poland, 2015–2023

test was offered, in 15 (36.6%) programs stereoscopic vision test (binocular) or eyeball positioning test (cover-uncover test) were offered. Fundoscopy was offered in 14 programs (34.1%) and 12 (29.2%) programs planned examination of the anterior segment of the eye (Figure 2). Color vision test (Ishihara charts), eyeball alternating cover test, measurement of intraocular pressure, and examination of eyeball mobility were offered in 10 (24.4%) programs (Figure 2).

DISCUSSION

Out of 1568 health policy programs developed by LGUs in Poland between 2015 and 2023, only 41 programs were focused on eye health. While one-quarter of voivodeships implemented health policy programs on eye health, only 2 of 314 poviats and 30 of 2477 communes developed health policy programs on eye health. Most of the health policy programs were targeted to primary school children and their parents. Visual acuity test was the most common eye examination offered within the health policy programs implemented by LGUs. Findings from this study point out a low engagement of local governments in the implementation of eye health programs targeted to local communities.

Early detection of vision impairments allows for the timely implementation of optical aids, medication, or surgical procedures [3, 4]. Affordability, awareness, and accessibility are the most common barriers to eye care [18]. Thus, health policies and strategies both at the national and local levels may have a significant impact on eye health and eye diseases in local communities. There are three levels of local government in Poland, including 16 voivodeships, 314 poviats, and 2477 communes [19]. All local government units had the right to develop and implement local health policy programs financed by public funds [14]. Findings from this study showed that during the 9 years (2015–2023), only 41 health policy programs on eye health were developed by LGUs in Poland. Study carried out among local government workers showed that in poviats there is a lack of uniform structures dealing with health issues, including health policy programs [15]. Limited funding and lack the skills needed to plan health policy programs [15] are considered as important barriers in the implementation of health policy programs by LGUs. Out of 41 health policy programs on eye health in Poland, 8 were rejected by AHTATS and could not be implemented due to significant mistakes in the programs (mostly related to the type of intervention, target population calculations, and budget estimates. Central government and national public health institutions should strengthen competencies of local government workers related to health policy planning and implementation of health policy programs [15].

Out of 1464 rural communes in Poland [19], only 3 prepared health policy programs on eye health. Distance to healthcare facilities and shortage of healthcare providers are the most common barriers to access healthcare for inhabitants of rural areas [20]. Local health policy programs may provide and access to eye care for populations at risk of health inequalities [20]. Local populations in rural areas may benefit from health policy programs on eye health, particularly on early detection of cataracts, glaucoma, or AMD that pose major causes of vision loss [4].

During the study period, there were no health policy programs on eye health from two voivodeships located

in North-Eastern Poland (Podlaskie and Warmińsko-Mazurskie). This observation also showed local inequalities in health policy priorities and points to LGUs that may have a greater burden of eye diseases due to the limited number of health activities aimed at eye health.

This study showed that LGUs targeted their health policy programs to homogenous populations. Most of the programs were targeted at the pediatric population (primary school children) [7]. This can be explained by the fact that at the local level, it is easier to identify and reach target groups when several dozens of individuals coming from one class can be examined at one time [21]. However, such planning does not cover the response to the health needs in Poland, as pediatric populations obtain ophthalmological check-ups quite frequently during childhood as a part of primary care services. Adults are faced with limited access to ophthalmological care and waiting times [22]. Adults have eye check-ups mostly as a part of occupational medicine visits, but this preventive eye screening does not cover sustainable complex eye examinations. Age is a serious known risk factor for developing irreversible eye disorders, therefore selecting a correct target population for eye care services is an important part of public health actions [3].

Most of the programs on eye health developed by LGUs offered a visual acuity test (82.9%) which is a simple test for vision impairments [23]. Refraction tests were offered in 42.5% of programs and fundoscopy was offered in 34.1% of programs. The abovementioned tests are simple methods used in ophthalmological examination, but their results cannot be used for most common age-related eye diseases like cataracts, glaucoma, diabetic retinopathy, or AMD [22]. Health policy programs on eye health that will include screening for age-related eye diseases are needed. Eye health screening should also include a specialistic examination to bring effective diagnostics and prevention [24, 25]. Screening programs, undertaken by appropriately trained personnel and utilizing effective screening tools for age-related, diseases of civilization eye diseases are necessary due to the rapid population aging in Poland.

Practical implications

This is one of the first studies on health policy programs implemented by LGUs in Poland and the first study focused on programs on eye health. This study showed the small number of health policy programs on eye health, their scope, and content. Moreover, this study also showed that there is a need to train local government workers in the preparation of health policy programs, as almost one-fifth of submitted programs on eye health were graded negatively. Data presented in this study underlines the need to support LGUs in the implementation of local health policies and health programs. Moreover, differences in the target populations and planned interventions (types of eye tests) point out the need to develop templates of health policy programs on eye health that can be adapted and implemented by LGUs. Further studies are needed to identify reasons for the low number of health policy programs on eye health planned by LGUs.

Limitations of the study. This study is a retrospective analysis of publicly available data on health policy programs published by the Agency for Health Technology Assessment and Tariff System (AHTATS). The scope of analysis is limited to data

provided in the templates of the health policy programs and summaries of the opinions issued by the AHTATS. Study dates were limited to 2015–2023, as health policy programs submitted before 2014, were published online using different templates and with a limited number of data compared to those published since 2015. Moreover, data on the effects of the health policy programs on eye health implemented by LGUs are not available and 8 programs were rated negatively, so they could not be implemented. The scope of eye tests included in the analysis was limited to the 10 most common tests listed in the programs, whereas the full list of eye tests included 27 tests (but some of them were offered in single programs).

CONCLUSIONS

This study revealed the low number of health policy programs on eye health implemented by Local Government Units in Poland, especially in rural areas. Most of the health policy programs on eye health were targeted to primary-school children and their parents/caregivers and were focused on early diagnosis of vision impairments and eye diseases. There is a need to include interventions on eye health in the local health policies, especially in those regions with barriers to accessing ophthalmological care. The large discrepancy in the scope of planned interventions within eye health programs indicates the need to develop a template of the health policy program on eye health that can be replicated by different LGUs across the country and strengthen the competencies of local government workers related to health policy planning and implementations.

REFERENCES

- Ramke J, Ah Tong BA, Stern J, et al. Defining eye health for everyone. *Ophthalmic Physiol Opt.* 2022;42(1):1–3. <https://doi.org/10.1111/opo.12922>.
- Burton MJ, Ramke J, Marques AP, 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](https://doi.org/10.1016/S2214-109X(20)30488-5).
- Swenor BK, Ehrlich JR. Ageing and vision loss: looking to the future. *Lancet Glob Health.* 2021;9(4):e385–e386. [https://doi.org/10.1016/S2214-109X\(21\)00031-0](https://doi.org/10.1016/S2214-109X(21)00031-0).
- GBD 2019 Blindness and Vision Impairment Collaborators; Vision Loss Expert Group of the Global Burden of Disease Study. Causes of blindness and vision impairment in 2020 and trends over 30 years, and prevalence of avoidable blindness in relation to VISION 2020: the Right to Sight: an analysis for the Global Burden of Disease Study. *Lancet Glob Health.* 2021;9(2):e144–e160. [https://doi.org/10.1016/S2214-109X\(20\)30489-7](https://doi.org/10.1016/S2214-109X(20)30489-7).
- Trott M, Smith L, Veronese N, et al. Eye disease and mortality, cognition, disease, and modifiable risk factors: an umbrella review of meta-analyses of observational studies. *Eye (Lond).* 2022;36(2):369–378. <https://doi.org/10.1038/s41433-021-01684-x>.
- Kamińska A, Pinkas J, Tyszkowski P, et al. Eye Care Behaviors among Adults in Poland: A Nationwide Cross-Sectional Survey. *Int J Environ Res Public Health.* 2023;20(4):3590. <https://doi.org/10.3390/ijerph20043590>.
- Atowa UC, Wajuihian SO, Hansraj R. A review of paediatric vision screening protocols and guidelines. *Int J Ophthalmol.* 2019;12(7):1194–1201. <https://doi.org/10.18240/ijo.2019.07.22>.
- Gallagher S, Clasing J, Hall E, et al. Eye Health, COVID-19, and the Occupational Health Professional: Round Table. *Workplace Health Saf.* 2021;69(8):352–358. <https://doi.org/10.1177/21650799211022990>.
- Solomon SD, Shoge RY, Ervin AM, et al. Improving Access to Eye Care: A Systematic Review of the Literature. *Ophthalmology.* 2022;129(10):e114–e126. <https://doi.org/10.1016/j.ophtha.2022.07.012>.

10. World Health Organization (WHO). Package of eye care interventions. Geneva: World Health Organization; 2022. Accessed May 06, 2024. Available online: <https://www.who.int/publications/item/9789240048959>
11. Sagan A, Panteli D, Borkowski W, et al. Poland health system review. *Health Syst Transit*. 2011;13(8):1–193.
12. Kurowska P, Królak A, Giermaziak W. Health policy programs realised in Poland in 2016–2017. *Rocz Panstw Zakl Hig*. 2018;69(2):209–217.
13. Augustynowicz A, Borowska M, Lewtak K, et al. Financing of Immunization Programs by Local Government Units in Poland as an Element of Health Policy. *Vaccines (Basel)*. 2021;10(1):28. <https://doi.org/10.3390/vaccines10010028>.
14. Agency for Health Technology Assessment and Tariff System (AHTATS). Health policy programmes. Accessed April 04, 2024. Available online: <https://www.aotm.gov.pl/en/health-policy-programmes/>
15. Cianciara D, Piotrowicz M, Urban E, et al. Health policy programmes implemented by local governments – an inside perspective. *Hygeia Public Health*. 2019;54(2):97–104.
16. Augustynowicz A, Czerw A, Borowska M, et al. Prevention of overweight and obesity undertaken by local government units in Poland. *Health Policy*. 2019;123(5):499–502. <https://doi.org/10.1016/j.healthpol.2019.03.006>.
17. Augustynowicz A, Czerw A, Kowalska M, et al. Preventive healthcare and health promotion in local governments based on the example of health policy programmes concerned with cardiovascular diseases implemented in Poland in 2009–2014. *Kardiologia Pol*. 2017;75(6):596–604. <https://doi.org/10.5603/KP.a2017.0041>.
18. Hicks PM, Kang L, Armstrong ML, et al. A scoping review of patients' barriers to eye care for glaucoma and keratitis. *Surv Ophthalmol*. 2023;68(4):567–577. <https://doi.org/10.1016/j.survophthal.2023.03.005>.
19. Statistics of Poland. Administrative division of Poland. Access April 04, 2024. Available online: <https://stat.gov.pl/en/regional-statistics/classification-of-territorial-units/administrative-division-of-poland/>.
20. Dawkins B, Renwick C, Ensor T, et al. What factors affect patients' ability to access healthcare? An overview of systematic reviews. *Trop Med Int Health*. 2021;26(10):1177–1188. <https://doi.org/10.1111/tmi.13651>.
21. Mettla AL, Marmamula S, Khanna RC. Children's eye health programmes: Successful strategies and challenges. *Community Eye Health*. 2017;30(98):S28–S30.
22. Wong TY, Sun J, Kawasaki R, et al. Guidelines on Diabetic Eye Care: The International Council of Ophthalmology Recommendations for Screening, Follow-up, Referral, and Treatment Based on Resource Settings. *Ophthalmology*. 2018;125(10):1608–1622. <https://doi.org/10.1016/j.ophtha.2018.04.007>.
23. Thirunavukarasu AJ, Hassan R, Limonard A, et al. Accuracy and reliability of self-administered visual acuity tests: Systematic review of pragmatic trials. *PLoS One*. 2023;18(6):e0281847. <https://doi.org/10.1371/journal.pone.0281847>.
24. Vujosevic S, Aldington SJ, Silva P, et al. Screening for diabetic retinopathy: new perspectives and challenges. *Lancet Diabetes Endocrinol*. 2020;8(4):337–347. [https://doi.org/10.1016/S2213-8587\(19\)30411-5](https://doi.org/10.1016/S2213-8587(19)30411-5).
25. Bechange S, Buttan S. Effectiveness of community-based eye care: process and considerations. *Lancet Glob Health*. 2022;10(4):e451–e452. [https://doi.org/10.1016/S2214-109X\(22\)00032-8](https://doi.org/10.1016/S2214-109X(22)00032-8)