

## SLEPI I SLABOVIDE OSOBE U ZDRAVSTVENOJ ZAŠTITI: ANALIZA PROBLEMA I POTENCIJALNIH REŠENJA

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### SAŽETAK

Cilj ovog preglednog rada je da se na osnovu relevantnih naučnih izvora analiziraju problemi sa kojima se slepi i slabovidni ljudi suočavaju u zdravstvenoj zaštiti, kao i da se identifikuju mogućnosti za rešenja ovih izazova. Slepilo i slabovidnost predstavljaju ozbiljna zdravstvena stanja koja mogu značajno uticati na kvalitet života pojedinca. Ove osobe se često suočavaju sa brojnim izazovima prilikom pristupa zdravstvenoj zaštiti. Pristupačnost fizičkog okruženja, komunikacija sa zdravstvenim radnicima, pristup informacijama i korišćenje medicinskih uređaja su neki od ključnih problema. Kroz primenu tehnološkog rešenja, obuku zdravstvenih radnika, pružanje pristupačne komunikacije i informacija, kao i uključivanje slepih i slabovidnih osoba u planiranje zdravstvene zaštite, može se unaprediti pristup zdravstvenoj zaštiti za ove osobe.

**Ključne reči:** slepi, slabovidni, zdravstvena zaštita, kvalitet života

### Uvod

Prema međunarodnoj klasifikaciji bolesti oštećenja vida se klasifikuju u dve grupe: oštećenje vida na daljinu (blago, umereno, teško oštećenje i slepilo) i oštećenje vida na blizinu (1). Procenjuje se da oko 2,2 milijarde ljudi širom sveta ima neku formu oštećenja vida, od toga skoro polovina ima oštećenje vida na blizinu (1). Verovatnoća oštećenja vida raste sa godinama među svim populacijama, posebno kod starijih od 60 godina (2). Najčešći uzroci oštećenja vida su katarakta, nekorigovana greška refrakcije, glaukom, starosna degeneracija makule i dijabetička retinopatija. Prevalencija, kao i težina oštećenja vida, varira u različitim geografskim područjima u zavisnosti od etiologije, starosti, rase, etničke pripadnosti i pola, stavljajući određene populacije u veći rizik za određene vrste gubitka vida (1,2). Kako na globalnom nivou stanovništvo stari, predviđa se da će se prevalencija slepila i slabovidnosti udvostručiti u narednih 30 godina(3).

Prema podacima Evropskog saveza slepih (eng. *European Blind Union* - EBU) za 2020. godinu u Re-

publici Srbiji ima oko 1,4 miliona osoba sa oštećenim vidom, od toga oko 24.000 slepih osoba (4).

Vid utiče na to kako ljudi percipiraju i tumače svet oko sebe, koristi se za svakodnevnu komunikaciju, društvene i profesionalne aktivnosti, održavanje ličnog zdravlja, nezavisnosti i mobilnosti kao i brigu o drugima (2). Uticaji slepila i slabovidnosti su širokog spektra, uključujući rizik od padova, kognitivnog oštećenja i demencije, depresije, invaliditeta i gubitka nezavisnosti (5,6). Njihov invaliditet dovodi do specifičnih potreba i povezan je sa većom incidencijom zdravstvenih problema i hroničnih bolesti, kao i nižim nivoom blagostanja, samoocenjivanja zdravlja i kvaliteta života u vezi sa zdravljem u poređenju sa opštom populacijom (7,8). Stariji ljudi često imaju komplikovanije zdravstvene potrebe od mlađih odraslih zbog dodatnog redukovanja funkcionalnih sposobnosti, fizičke bolesti i psihosocijalnih potreba. Neispunjene zdravstvene potrebe povećavaju težinu bolesti, komplikacije i smrtnost (9). Nekoliko studija navodi da su slepilo i slabovidnost povezani sa povećanim rizikom od smrtnosti (10).

## BLIND AND VISUALLY IMPAIRED PERSONS IN HEALTH CARE: ANALYSIS OF PROBLEMS AND POTENTIAL SOLUTIONS

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### SUMMARY

The aim of this review is to analyze, based on relevant scientific sources, the problems faced by blind and partially sighted people in health care, as well as to identify opportunities for solutions to these challenges. Blindness and visual impairment are serious health conditions that can significantly affect an individual's quality of life. These individuals often face numerous challenges when accessing health care. Accessibility of the physical environment, communication with healthcare professionals, access to information, and use of medical devices are some of the key issues. Improving access to health care can be realized through the application of technological solutions, education of health workers, provision of accessible communication and information, and the inclusion of blind and partially sighted people in health care planning.

**Key words:** blind, visually impaired, health care, quality of life

### Introduction

The International Classification of Diseases 11 classifies vision impairment into two groups: distance (mild, moderate, severe impairment and blindness) and near-presenting vision impairment. Globally, at least 2.2 billion people worldwide have some form of visual impairment, of which nearly half have near vision impairment (1). The probability of vision impairment increases with age across all populations, especially among individuals aged 60 and above. The most common causes of visual impairment are cataracts, uncorrected refractive error, glaucoma, age-related macular degeneration, and diabetic retinopathy (2). The prevalence, and the severity of visual impairment, vary across geographic areas depending on etiology, age, race, ethnicity, and gender, placing some populations at greater risk for certain types of vision loss (1,2). As the global population ages, the prevalence of blindness and low vision is expected to double over the next 30 years (3).

According to the data of the European Blind Union (EBU), there are about 1.4 million visually

impaired people in Serbia, of which about 24. 000 are blind (4).

Vision plays a crucial role in how individuals perceive and interpret the world, facilitating everyday communication, social interactions, professional activities, and overall well-being. It also enables personal health maintenance, independence, mobility, and caregiving responsibilities (2). The impacts of blindness and low vision are extensive, encompassing various risks such as falls, cognitive impairment, dementia, depression, disability, and loss of independence (5,6). People with visual disabilities have unique needs and experience a higher incidence of health problems and chronic conditions, along with lower levels of well-being, self-rated health, and health-related quality of life compared to the general population (7,8). Older individuals often encounter more complex health requirements compared to younger adults, as they may experience further functional decline, physical ailments, and psychosocial needs. Unmet healthcare needs contribute to increased disease

Osim toga, osobe sa vizuelnim oštećenjima, suočavaju se sa brojnim izazovima u pristupu zdravstvenoj zaštiti (6). Prema Svetskoj zdravstvenoj organizaciji jedna od glavnih prepreka u ostvarivanju zdravstvene zaštite za osobe sa invaliditetom je pristupačnost (1). Prema Zakonu o zdravstvenoj zaštiti, načelo pristupačnosti zdravstvene zaštite podrazumeva obezbeđivanje odgovarajuće zdravstvene zaštite građanima, koja je fizički, komunikacijski, geografski i ekonomski dostupna, odnosno kulturološki prihvatljiva, a posebno osobama sa invaliditetom (11). Uprkos tome što se populacija i zdravstveni sistemi u različitim zemljama sasvim sigurno razlikuju na mnogo načina, pristupačnost zdravstvene zaštite za slepe i slabovide širom sveta je često izazov zbog različitih prepreka sa kojima se ove osobe suočavaju.

Cilj ovog preglednog rada je da se na osnovu relevantnih naučnih izvora analiziraju problemi sa kojima se slepi i slabovidni ljudi suočavaju u zdravstvenoj zaštiti, kao i da se identifikuju mogućnosti za rešenja ovih izazova.

## Problemi sa kojima se suočavaju slepi i slabovidni u zdravstvenoj zaštiti

### Komunikacijski problemi

Komunikacija predstavlja ključni deo pružanja zdravstvene usluge, međutim, mnogi zdravstveni radnici nemaju iskustva u radu sa slepim i slabovidnim osobama, što može dovesti do poteškoća u komunikaciji sa njima (6). Jedan od ključnih problema je nedostatak prilagođenog načina informisanja (12). Na primer, osobe sa oštećenim vidom mogu imati problem u razumevanju pisanih uputstava, potvrđivanju svojih ličnih podataka, čitanju napisa na lekovima ili razumevanju uputstva za korišćenje, što može dovesti do grešaka u uzimanju lekova i pogoršanja zdravstvenog stanja (6,12). Većina informacija u vezi sa zdravljem dostupna je u vizuelnom formatu, kao što su brošure, leci, plakati, a to je problem za slepe i slabovide. Pored toga, informacije koje se odnose na procedure prijema u bolnicu, informacije pre prijema, formulare za pristanak za operaciju i procedure, opšte informacije o bolničkim uslugama i osoblju, informacije o lekovima, takođe su u pisanom obliku (13). Nedostatak nezavisnog pristupa ovim informacijama stvara nepotrebnu zavisnost od drugih i ugrožava privatnost i dostojanstvo slepih osoba (7).

Osim toga, nedostatak obuke zdravstvenih radnika o adekvatnoj komunikaciji može dodatno otežati komunikaciju (6). Za razliku od fizičkog oštećenja, oštećenje vida je retko očigledno slučajnom posmatraču. Neki ljudi imaju dovoljno samopuzdanja da obaveste zdravstvene radnike o svojim poteškoćama, ali mnogima je, posebno starijim osobama, neprijatno što ne vide dobro. Mnogi će uzeti pisane informacije ili se potpisati, bez razumevanja šta je dogovoreno i bez postavljanja pitanja. Zdravstveni radnici treba da budu oprezni na suptilne znake koje osoba sa oštećenim vidom može imati u smislu ne uspostavljanja kontakta očima tokom razgovora, ili ne reagovanja kada im se nešto pruža i slično (6,7).

### Nedostatak pristupačnih tehnologija

Nedostatak pristupačnih tehnologija za slepe i slabovide osobe u zdravstvenoj zaštiti predstavlja ozbiljan problem s kojim se suočavaju mnogi pacijenti širom sveta. Ovi nedostaci mogu imati negativan uticaj na kvalitet i dostupnost zdravstvenih usluga za ove osobe, što može dovesti do nejednakosti u pristupu i lošijeg zdravlja. Jedan od glavnih izazova jeste pristup medicinskim informacijama (13). Mnoge zdravstvene ustanove nemaju pristupačne tehnologije za slepe i slabovide osobe, kao što su Brajevi pisači, govorni računari, tehnički uređaji za prevođenje teksta u govor (12) i druge tehnologije koje bi im olakšale pristup zdravstvenoj zaštiti (6).

### Poteškoće prilikom korišćenja medicinskih uređaja i lekova

Slepim i slabovidnim osobama može predstavljati izazov korišćenje medicinskih uređaja i lekova koji zahtevaju vizuelno uputstvo ili precizno doziranje (14). Većina medicinskih uređaja se oslanja na vizuelne prikaze ili interfejse, kao što su monitori, indikatori i uputstva. Medicinski uređaji često zahtevaju preciznu kontrolu i navigaciju, na primer, podešavanje parametara ili unošenje podataka (15). Uputstva za upotrebu medicinskih uređaja uglavnom su pisana i pružaju detaljne informacije o funkcionalnosti i postupku korišćenja. Zatim, identifikacije i oznake na medicinskim uređajima takođe se oslanjaju na vizuelne elemente, kao što su natpisi ili simboli. Na primer, čitanje i upotreba insulinske pumpe ili pravilno doziranje lekova može biti teško za osobe sa oštećenim vidom (15,16). Zatim, mnogi uređaji za merenje krvnog

severity, complications, and mortality rates (9). Several studies have demonstrated that blindness and low vision are associated with a heightened mortality risk (10).

Individuals with visual impairments encounter numerous difficulties when it comes to accessing healthcare services (6). According to the World Health Organization, one of the primary barriers to healthcare for people with disabilities is accessibility (1). By the Law on Health Care, the principle of healthcare accessibility entails providing suitable healthcare to citizens that are physically, communicatively, geographically, and economically accessible, while also being culturally acceptable, particularly for individuals with disabilities (11). While populations and healthcare systems may vary across different countries, ensuring accessible healthcare for the blind and visually impaired remains a consistent challenge globally, given the diverse barriers faced by these individuals.

The aim of this review is to analyze, based on relevant scientific sources, the problems faced by blind and partially sighted people in health care, as well as to identify opportunities for solutions to these challenges.

## Challenges faced by the blind and visually impaired in healthcare

### Communication problems

Effective communication is a fundamental aspect of healthcare provision. Nonetheless, many healthcare professionals lack experience in effectively interacting with individuals who are blind or visually impaired, resulting in challenges in communication with this population. (6). One of the problems is the insufficient availability of adapted information resources (12). For example, individuals with visual impairments may have trouble understanding written instructions or confirming their personal information. They may also face challenges in reading medication labels or comprehending usage instructions, consequently increasing the risk of medication errors and exacerbating their health conditions (6,12). The majority of information is available in visual formats such as brochures, leaflets, and posters, which poses a challenge for the blind and visually impaired. Moreover, information regarding hospital admission procedures, pre-admission

information, consent forms for surgery and procedures, general information about hospital services and staff, and medication information are also in written form (13). The lack of independent access to this information creates unnecessary dependence on others and compromises the privacy and dignity of blind individuals (7).

Moreover, the inadequate training of healthcare professionals in effective communication can exacerbate the challenges in interpersonal interaction (6). Unlike physical impairments, visual impairment is rarely evident to a casual observer. Some individuals may have enough confidence to inform healthcare professionals about their difficulties, but many, especially older individuals, may feel uncomfortable about their poor vision. Many will either rely on written information or remain silent, without understanding what has been agreed upon or asking questions. Healthcare professionals should be observant of subtle cues that individuals with visual impairment may display, such as avoiding eye contact during conversations or not acknowledging when something is being presented to them, among other signs (6,7).

### Lack of accessible technologies

Many patients worldwide face a significant issue due to the absence of accessible technologies for individuals who are blind or visually impaired in healthcare. These deficiencies can hurt the quality and availability of healthcare services for these individuals, leading to disparities in access and poorer health outcomes. One of the main challenges is accessing medical information (13). Many healthcare institutions do not have accessible technologies for blind and visually impaired individuals, such as Braille printers, speech-enabled computers, text-to-speech translation devices (12), and other technologies that would facilitate their access to healthcare (6).

### Difficulties in using medical devices and drugs

Using medical devices and medications that require visual instructions or precise dosage can pose challenges for individuals who are blind or visually impaired (14). Most medical devices rely on visual displays or interfaces, such as monitors, indicators, and instructions. Medical devices often require precise control and navigation, such as adjusting parameters or inputting data (15). User manuals for medical devices are almost entirely

pritisaka nisu prilagođeni za osobe sa invaliditetom, što može dovesti do netačnih merenja i neadekvatnog lečenja i nege (17).

### Fizičke prepreke

Slepim i slabovidim osobama može biti teško snalaženje u fizičkom okruženju zdravstvenih ustanova, uključujući stepenice, nepravilno postavljene ili nedostajuće oznake, nedostatak taktilnih staza, kao i nedostatak pristupačnih informacija o rasporedu i uputstvima za kretanje. Slepim i slabovidim ljudima često se susreću sa neprilagođenim prostorima, opremom i informacijama u zatvorenim prostorima (18). Kretanje unutar bolnice može biti veoma teško zbog velikog broja pacijenata, medicinskih sestara, lekara i posetilaca, buke i mnogo prepreka, zbog čega im je veoma teško da se orijentišu i pronađu pravi put (19). To može uticati na njihovu sposobnost da se samostalno kreću po zdravstvenim ustanovama, što dovodi do pojačanog stresa i lične frustracije. Moderne bolnice su sve veće i složenije organizacije, u kojima se čini da se malo pažnje posvećuje pronalaganju puta za slepe osobe u ovim složenim okruženjima, a u većini je skoro nemoguće njihovo samostalno kretanje (20).

### Potencijalna rešenja za probleme slepih i slabovidih u zdravstvenoj zaštiti

Na osnovu analize problema sa kojima se slepe i slabovide osobe suočavaju u zdravstvenoj zaštiti, identifikovana su potencijalna rešenja koja mogu unaprediti pristup i kvalitet zdravstvene zaštite za ove osobe.

### Tehnološka rešenja

Implementacija tehnoloških rešenja može značajno poboljšati pristup zdravstvenoj zaštiti slepim i slabovidim osobama. Neka od tehnoloških rešenja mogu da budu razvoj mobilnih aplikacija sa podrškom za čitače ekrana i alternativnim formatima informacija, kao i upotreba tehnologija za prepoznavanje glasa i prevod teksta u govor kako bi se olakšala komunikacija sa zdravstvenim radnicima (14,21,22).

### Obučavanje zdravstvenih radnika

Zdravstveni radnici treba da budu obučeni o potrebama slepih i slabovidih osoba, kao i o prilagođenim tehnikama komunikacije (23). Ova obuka treba da obuhvati upotrebu alternativnih sredstava za komunikaciju, kao i razumevanje kako

pružiti podršku u fizičkom okruženju (14). Efikasna komunikacija zdravstvenih radnika sa slepim i slabovidim osobama podrazumeva nekoliko osnovnih principa. U vezi sa tim, važno je predstaviti se pacijentu imenom i ulogom u organizaciji, davati kratka jednostavna uputstva, ponuditi fizičku pratnju, voditi računa da mogu da prepoznaju neverbalne znakove, gestove ili informacije, odvojiti vreme da se pacijent informiše o fizičkom okruženju, obraćati se direktno pacijentu, a ne preko treće osobe, i slično (6,7,14). Ne pretpostavljati da osobe sa oštećenjem vida imaju manji nivo razumevanja ili autonomije od onih koji mogu da vide (22).

### Dostupna komunikacija i informacije

Zdravstvene ustanove treba da osiguraju adekvatnu komunikaciju sa slepim i slabovidim osobama. To uključuje obezbeđivanje alternativnih sredstava komunikacije, kao što su Brajevo pismo, govorni prevodioci ili tehnološke aplikacije. Takođe je važno pružiti pristupačne informacije o dijagnozi, terapiji i uputstvima za lečenje i negu putem različitih formata, kao što su zvučni zapisi ili elektronski tekstovi (6,13,14).

### Prilagođavanje fizičkog okruženja

U cilju prilagođavanja fizičkog okruženja ovim osobama neophodno je postavljanje taktilnih orijentacionih planova, podnih taktilnih traka za kretanje i orijentaciju na stepenicama i u hodnicima, taktilnih oznaka na vratima, ali i poboljšati kontrast boja za bolju vidljivost, instalirati sistem zvučnih obaveštenja i koristiti navigacioni sistem za olakšano kretanje. Neophodna je i obuka zdravstvenih radnika o tome kako pružiti podršku slepim i slabovidim osobama prilikom njihovog dolaska u zdravstvenu ustanovu (2,18,19).

### Uključivanje slepih i slabovidih osoba u planiranje zdravstvene zaštite

Važno je da slepe i slabovide osobe budu aktivno uključene u proces planiranja zdravstvene zaštite. Ovo uključuje njihovo učešće u donošenju odluka, savetovanje i učenje o svojim pravima i mogućnostima. Ova inkluzivna praksa može osigurati da se njihove potrebe i izazovi uzmu u obzir prilikom razvoja politika i pružanja usluga (6,7,14).

### Monitoring i evaluacija

Zdravstvene ustanove i relevantne organizacije treba da uspostave sistemsko praćenje i evaluaciju

written and provide detailed information on functionality and usage procedures. Additionally, identification and labels on medical devices also rely on visual elements, such as labels or symbols. For example, reading and using an insulin pump or correctly dosing medications can be challenging for individuals with visual impairments (15,16). Furthermore, people with disabilities often face difficulties as many blood pressure monitoring devices are not adapted to their needs, potentially resulting in inaccurate measurements and inadequate treatment and care (17).

### Physical barriers

Navigating the physical environment of healthcare institutions, including encountering stairs, improperly placed or missing signage, the absence of tactile paths, and inaccessible scheduling information and directions, can pose significant challenges for people with visual impairments. Moreover, within indoor settings, individuals who are blind or visually impaired often encounter spaces, equipment, and information that do not accommodate their specific needs (18). Moving within a hospital environment can be exceptionally difficult due to the large number of patients, nurses, doctors, and visitors, as well as the presence of noise and numerous obstacles. This makes it difficult for individuals to orient themselves and find the correct paths to follow (19). Consequently, their ability to independently navigate healthcare facilities is compromised, leading to increased stress and personal frustration. In the case of modern hospitals, which are growing in size and complexity, there is often a lack of attention given to creating pathways that facilitate independent navigation for blind individuals within these intricate settings (20).

### Potential solutions for the issues faced by blind and visually impaired individuals in healthcare

Through the analysis of the challenges faced by individuals who are blind or visually impaired in healthcare settings, several potential solutions have been identified. These solutions aim to improve access to healthcare services and enhance the quality of care for this population.

### Technological solutions

The fulfillment of technological solutions can significantly improve the accessibility of health care for blind and partially sighted people. That may include the development of mobile applications with support for screen readers and alternative information formats, as the use of voice recognition and text-to-speech technologies to facilitate communication with healthcare professionals (14,21,22).

### Training of healthcare professionals

Healthcare professionals should receive training on the needs of individuals who are blind or visually impaired, as well as on adapted communication techniques (23). This training should include the use of alternative means of communication, as well as understanding accessibility and providing support in the physical environment (14). Effective communication between healthcare professionals and individuals who are blind or visually impaired relies on several fundamental principles. It is important to introduce yourself to the patient by name and role within the organization, provide concise and simple instructions, offer physical assistance if needed, be mindful that these individuals may not perceive nonverbal cues, gestures, or visual information, take the time to orient the patient to the physical environment, address the patient directly rather than through a third party, and so on (6,7,14). It is crucial not to assume that individuals with visual impairments have lower levels of understanding or autonomy compared to those with sight (22).

### Accessible communication and information

Healthcare institutions should ensure adequate communication with individuals who are blind or visually impaired. That includes providing alternative means of communication, such as Braille, sign language interpreters, or technological applications. Additionally, it is important to offer accessible information about diagnoses, therapies, and treatment instructions through various formats, such as audio recordings or electronic texts (6,13,14).

### Adapting the physical environment

This may involve installing tactile orientation maps, floor tactile paths for navigation in staircases and corridors, tactile markings on doors, improving

implementiranih rešenja kako bi se ocenio njihov uticaj i identifikovala područja za poboljšanje. Ovo može uključivati prikupljanje povratnih informacija od slepih i slabovidnih osoba, analizu podataka o pristupačnosti i kvalitetu usluga, i redovno izveštavanje o postignutim rešenjima. Osim toga, veoma je važno uključiti slepe i slabovide osobe kao aktivne učesnike u buduća istraživanja (24,25), što će omogućiti identifikovanje napretka, prepoznavanje prepreka i prilagođavanje strategija u skladu s potrebama slepih i slabovidnih osoba (12).

### Javne politike i podrška

Države treba da usvoje jasne politike i propise koji štite prava slepih i slabovidnih osoba u zdravstvenoj zaštiti (14). To može uključivati pravne okvire za pristupačnost, finansijsku podršku za implementaciju tehnoloških rešenja, kao i podsticaje za obuku zdravstvenih radnika. Takođe je važno da se javnost informiše o pravima i potrebama slepih i slabovidnih osoba kako bi se stvorila podrška i razumevanje u društvu (26).

Efikasnost i primenljivost predloženih rešenja mogu se razlikovati u različitim kontekstima zdravstvene zaštite. Implementacija tehnoloških rešenja može biti skupa i zahtevati infrastrukturne promene. Obuka zdravstvenih radnika zahteva ulaganje vremena i resursa. Takođe, pristupačnost komunikacije i informacije zahteva promene prakse u zdravstvenim ustanovama. Potrebno je prepoznati ove izazove i raditi na pronalaženju održivih i prilagođenih rešenja (26).

U literaturi postoji tendencija da se osobe sa oštećenim vidom tretiraju kao homogena grupa, pod pretpostavkom da svi imaju iste potrebe, bez obzira na starost, pol, etničku pripadnost, stepen oštećenja, proteklo vreme od pojave oštećenja ili prisustvo drugih bolesti. Međutim, ne sme se zaboraviti da pacijenti imaju različite potrebe za informacijama u različitim fazama procesa bolesti. Potrebe za zdravstvenom zaštitom značajno variraju od pojedinca do pojedinca, a osobe sa oštećenim vidom, kao i osobe sa potpuno očuvanim vidom, imaju svoje individualne preferencije i potrebe (12).

### Zaključak

Pružanje pristupačne i kvalitetne zdravstvene usluge slepim i slabovidnim osobama predstavlja izazov koji zahteva sistemski pristup i saradnju između zdravstvenih ustanova, organizacija

za slepe i slabovide osobe, stručnjaka i društva u celini. Samo kroz zajedničke napore može se osigurati da unapređenje pristupa zdravstvenoj zaštiti postane stvarnost za slepe i slabovide osobe.

Implementacija tehnoloških rešenja, prilagođavanje okruženja, obuka zdravstvenih radnika i pružanje pristupačnih informacija su ključni koraci ka unapređenju pristupa zdravstvenoj zaštiti za ove osobe. Dalja istraživanja u ovoj oblasti su neophodna kako bi se bolje razumeli ovi problemi i identifikovala efikasna rešenja za pružanje kvalitetne i bezbedne zdravstvene usluge slepim i slabovidnim osobama.

### Konflikt interesa

Autor je izjavio da nema konflikta interesa.

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color contrast for better visibility, installing auditory notification systems, or utilizing navigation systems to facilitate movement. There is also a highlighted need for training healthcare professionals on how to provide support to individuals who are blind or visually impaired upon their arrival at healthcare facilities (2,18,19).

### **Inclusion of blind and partially sighted people in health care planning**

It is crucial for individuals who are blind or visually impaired to be actively involved in the process of healthcare planning. That includes their participation in decision-making, counseling, and learning about their rights and possibilities. This inclusive practice can ensure that their needs and challenges are taken into account in the development of policies and provision of services (6,7,14).

### **Monitoring and evaluation**

Healthcare institutions and relevant organizations should establish systematic monitoring and evaluation of implemented solutions to assess their impact and identify areas for improvement. That may involve collecting feedback from individuals who are blind or visually impaired, analyzing data on accessibility and service quality, and regularly reporting on the achieved solutions. Additionally, it is crucial to involve individuals who are blind or visually impaired as active participants in future research (24,25), enabling the identification of progress, recognition of barriers, and adaptation of strategies according to the needs of individuals who are blind or visually impaired (12).

### **Public policy and support**

Countries should adopt clear policies and regulations that protect the rights of individuals who are blind or visually impaired in healthcare (14). That may include legal frameworks for accessibility, financial support for implementing technological solutions, and incentives for healthcare professionals' training. It is also important to raise public awareness about the rights and needs of individuals who are blind or visually impaired in order to foster support and understanding in society (26).

The effectiveness and applicability of proposed solutions may vary across different healthcare contexts. The implementation of

technological solutions can be costly and may require infrastructure changes. Training healthcare professionals necessitates the investment of time and resources. Additionally, ensuring accessible communication and information requires changes in practices within healthcare institutions. It is important to acknowledge these challenges and work towards finding sustainable and tailored solutions (26).

There is a prevailing tendency in the literature to treat individuals with visual impairments as a uniform group, assuming that they share the same needs regardless of factors such as age, gender, ethnicity, severity of impairment, time since onset, or coexisting conditions. However, it is important to acknowledge that patients have distinct information needs that can vary at different stages of the disease process. Healthcare requirements significantly differ from one person to another, and individuals with visual impairments, like those with unimpaired vision, have unique preferences and needs (12).

### **Conclusion**

Providing accessible and quality healthcare services to individuals who are blind or visually impaired presents a challenge that requires a systematic approach and collaboration among healthcare institutions, organizations for the blind and visually impaired, experts, and society in general. Only through collective efforts can we ensure that improving access to healthcare becomes a reality for individuals who are blind or visually impaired. Implementing technological solutions, adapting the environment, training healthcare professionals, and providing accessible information are crucial steps toward improving access to healthcare for these individuals. Further research is necessary in order understand these issues and identify effective solutions for delivering high-quality and safe healthcare to individuals who are blind or visually impaired.

### **Competing interests**

The author declared no competing interests.

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