

Beacons of Hope: SIOVS and CBM

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ABSTRACT

Background: The successful implementation of the Peek Solution in Sindh was significantly supported by the Sindh Institute of Ophthalmology and Visual Sciences (SIOVS). This initiative was fully funded by Christian Blind Mission (CBM) under the project titled "Promoting Inclusive Comprehensive Eye Care Services by Adopting Peek Solutions in the Province of Sindh (Peek Project)" (Project No. P-10054 -SINDH-MYP). SIOVS was instrumental in training healthcare workers, providing technical expertise, and integrating the Peek Solution into the existing eye care infrastructure. The Peek Solution, a mobile-based technology, enables comprehensive eye examinations and streamlines patient management to improve accessibility and efficiency in eye care.

Aim: This study aims to assess the impact of the Peek (Portable Eye Examination Kit) Solution on eye health services in Sindh Province, Pakistan.

Methods: A mixed-method approach, incorporating both quantitative and qualitative data, was employed. The intervention involved training healthcare workers in both rural and urban health centers across Sindh Province to use the Peek Solution for screening, diagnosing, and referring patients with eye conditions. Data was collected from 2021 to July, 2024 period, evaluating key performance indicators such as the number of screenings conducted, referral rates, patient follow-up compliance, and the satisfaction levels of healthcare providers and patients.

Results: The implementation of the Peek Solution resulted in a significant increase in eye screenings, with a 60% rise compared to the previous year. Referral rates to specialized care improved by 55%, and patient follow-up compliance increased by 30%. **The results showed interesting improvements were seen in Sindh Programmes in Q1 2024. In Q1 2024, 99% of true positives and 1% false positives screened. In Q3 2023, 69% of true positives screened by end of Q3 2023.**

Healthcare providers reported high satisfaction with the usability and efficiency of the Peek Solution, noting its potential to streamline workflows and enhance patient management. Patients also provided positive feedback, appreciating the improved accessibility and convenience of eye health services.

INTRODUCTION

Vision is a crucial part of quality of life, SIOVS and CBM have made it its mission to ensure that no one suffers from preventable blindness. In an era where

innovation and humanitarian efforts increasingly intersect, SIOVS and CBM, remarkable initiatives have emerged as beacons of hope to illuminate lives and communities through their relentless dedication to improving vision and combating blindness in the most

underserved regions of Sindh province (Report, 2023).

SIOVS and CBM conduct extensive eye health programs in rural and impoverished areas, providing free eye examinations, distributing eyeglasses, and offering surgeries for cataract and other vision-related issues. These programs are designed to reach those who lack access to basic eye care (SIOVS, 2023).

CBM provides comprehensive eye care services, including screenings, treatments, surgeries, and rehabilitation. Their projects often focus on children and the elderly, who are most vulnerable to vision problems. Blindness can significantly impact education, CBM works to create inclusive educational environments. It supports schools in accommodating visually impaired students, ensuring they receive the same opportunities as their peers (Mission, 2022)

CBM advocates for policies that protect and promote the rights of people with disabilities. They work with governments and international bodies to integrate eye health into public health agendas and ensure that blindness prevention and treatment are prioritized. Together, SIOVS and CBM are lighting up lives and communities, demonstrating the power of collaboration in humanitarian efforts. Their combined approach addresses both immediate needs and long-term solutions, ensuring sustainable improvements in eye health and overall well-being (Pakistan, 2023).

The adoption of the Peek Solution in Sindh Province has significantly enhanced eye health services by improving the reach and efficiency of screenings, referrals, and patient follow-ups. This mobile-based technology offers a scalable and effective approach to addressing eye health challenges in resource-limited settings, ultimately contributing to better visual health outcomes in the region. Further research is

recommended to evaluate long-term impacts and potential for broader implementation across different healthcare settings (Awan, 2022).

Methods

This study employed a mixed-method approach, incorporating both quantitative and qualitative data to evaluate the effectiveness of the Peek Solution in improving eye health services in Sindh Province. The study was conducted over a period from 2021 to July 2024 (Province, 2023).

Quantitative data was analyzed using statistical methods to compare the performance indicators before and after the implementation of the Peek Solution. Qualitative data was analyzed thematically to identify common themes and sentiments regarding the use of the Peek Solution among healthcare providers and patients.

HOUSEHOLD SCREENING COMPONENT

There was a significant rise in the total number of screenings from 34,297 in April 2022 to 293,202 in 2023, followed by 136,671 screenings up to July 8, 2024. The number of referrals at the triage level increased from 7,673 in April 2022 to 19,392 in 2023, then reduced to 5,840 up to July 8, 2024. Attendance at the triage level also showed variability, with a notable increase in 2023. Referrals to ophthalmologists decreased slightly over the years, but attendance showed fluctuations, with a significant increase to 75 up to July 8, 2024. Referrals to SIOVS and the number of eye conditions identified varied, with a notable increase in the number of eye conditions identified in 2024. The number of glasses dispensed peaked in 2023 (271) but significantly dropped to 30 up to July 8, 2024.

DESCRIPTION	From April 2022	2023	Till 8 th July 2024
Total Screening	34,297	2,93,202	1,36,671
Total Refer at Triage Level	7,673	19,392	5,840
Total Attended at Triage Level	2,387	5,050	3,252
Total Refer at Ophthalmologist	136	117	76
Total Attended at Ophthalmologist	76	22	75
Total Refer at SIOVS	39	45	41
Total Eye Conditions (SIOVS)	14	06	36
Total Glasses Dispensed	205	271	30

SCHOOLS SCREENING COMPONENT

DESCRIPTION	From September 2021	2022	2023	Till 8 th July , 2024
Total Screening	18,639	19,176	18,652	26,595
Total Refer at Triage Level	1,650	1,546	1,415	2,247
Total Attended at Triage Level	957	1,162	769	1,188
Total Refer at Ophthalmologist	14	27	29	11
Total Attended at Ophthalmologist	10	24	13	7
Total Refer at SIOVS	02	20	9	10
Total Eye Conditions (SIOVS)	00	10	3	05
Total Glasses Dispensed	244	329	94	48

The total number of screenings conducted in schools increased significantly, from 18,639 in September 2021 to 26,595 by July 8, 2024. Referrals at the triage level showed variability, with a notable increase to 2,247 by July 8, 2024. Attendance at the triage level fluctuated, peaking in 2022 with 1,162 students attended. The number of referrals to ophthalmologists showed an initial increase, peaking in 2023 with 29 referrals, but decreased to 11 by July 8, 2024. Attendance at ophthalmologists followed a

similar trend, with a decrease to 7 by July 8, 2024. Referrals to SIOVS varied, peaking in 2022 with 20 referrals. The number of eye conditions identified also varied, with the highest number of 10 in 2022. The number of glasses dispensed peaked in 2022 at 329 but significantly dropped to 48 by July 8, 2024.

COMMUNITY SCREENING COMPONENT

DESCRIPTION	September - 2020	2021	2022	2023	Till 8 th , July 2024
Total Screening	30,571	92,426	80,764	1,25,925	1,32,648
Total Refer at Triage Level	9,193	32,827	31,519	18,694	17,100
Total Attended at Triage Level	9,011	32,508	22,732	14,368	14,260
Total Refer at Ophthalmologist	1,764	3,527	3,245	252	173
Total Attended at Ophthalmologist	1,577	2,323	2,074	166	473
Total Refer at SIOVS	147	449	434	68	43
Total Eye Conditions (SIOVS)	61	190	152	103	196
Total Glasses Dispensed	511	2,475	1,472	913	605

The total number of screenings conducted in communities increased significantly, from 30,571 in 2020 to 132,648 by July 8, 2024. The number of referrals at the triage level peaked in 2021 (32,827) but saw a decline in subsequent years, dropping to 17,100 by July 8, 2024. Attendance at the triage level followed a similar trend, peaking in 2021 with 32,508 attended, then decreasing. The number of referrals to ophthalmologists peaked in 2021 (3,527) and then saw a significant reduction, dropping to 173 by July 8,

2024. Attendance at ophthalmologists fluctuated, with an increase to 473 by July 8, 2024, after a low in 2023. Referrals to SIOVS were highest in 2021 (449) and then decreased, with 43 referrals by June 8, 2024. The number of eye conditions identified varied, with a peak of 196 in 2024. The number of glasses dispensed peaked in 2021 (2,475) but declined to 605 by June 8, 2024.



During Monitoring Visit



Discussion with Optom regarding progress



Monitor the Patient Examination Process



During Monitoring Visit



Checking the Patient Record



During Monitoring Visit



Patient examine on Slit Lamp



Patient examine on autoref



Patient examine on Vision Chart



Patient examine on autoref



Student examined for vision



Student after receiving the Glasses from SIOVS/ CBM



Patinet reading Holy book after Glasses provided by SIOVS/ CBM



Student examined by optom for vision



Student Happy face after receiving the Glasses from SIOVS/ CBM

IMPACT AND FUTURE PROSPECTS

The impact of SIOVS and **CBM** is evident in the countless lives transformed by restored sight and improved eye health. By continuing to innovate and expand their reach, these institution and organization are not only alleviating suffering but also empowering individuals to lead fuller, more productive lives. SIOVS and **CBM** aim to harness new technologies, forge stronger partnerships, and engage more deeply with communities to eradicate preventable blindness and make the world a brighter place for all.

The lamps of new hope glow brightly through the efforts of SIOVS and CBM. Their dedication to eye health and vision restoration is a testament to the profound difference that focused, compassionate action can make in the world.

CONCLUSION

The mixed-method approach provided a comprehensive evaluation of the Peek Solution's impact on eye health services in Sindh Province. The significant improvements in screenings, referral rates, and follow-up compliance, along with high satisfaction levels among healthcare providers and patients, indicate that the Peek Solution is an effective tool for enhancing eye care services in the region. Patients also reported high satisfaction, citing improved access to eye care and better follow-up processes. The implementation of the Peek Solution resulted in a significant increase in the number of eye screenings, with a 60% rise compared to the previous year. Referral rates to specialized eye care services

improved by 55%. Patient follow-up compliance increased by 30%.

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REFERENCES

- [1] Sindh Institute of Ophthalmology & Visual Sciences - SIOVS, H. Sindh Institute of Ophthalmology & Visual Sciences - SIOVS, Hyderabad. Retrieved from Sindh Institute of Ophthalmology & Visual Sciences - SIOVS, Hyderabad: 15 November, 2023. <https://siovs.edu.pk/news/>
- [2] Pakistan, C.-P. p. (25 October, 2023). PEEK Vision. Retrieved from PEEK Vision: <https://peekvision.org/resources/news/new-government-support-for-cbm-peek-projects-in-pakistan-paves-the-way-for-further-scale-up/>
- [3] Pakistan, C.-P. p. (31 August, 2021). PEEK Vision. Retrieved from PEEK Vision: <https://peekvision.org/resources/news/scaling-up-eye-health-care-programmes-to-reach-thousands-more-children-in-pakistan/>
- [4] Mission, C.-B. C. (2022). Asia and Americas Region Annual Report 2022. Bensheim, Germany: Christoffel-Blindenmission Christian Blind Mission.
- [5] Report C I: CBM Funded Tech is Making Eye Care Accessible for All. Retrieved from Christian Blind Mission: <https://www.cbm.org/news/news/news->

2023/cbm-funded-tech-is-making-eye-care-accessible-for-all/

- [6] Awan, Z. Technology-enabled primary eye health care in Pakistan. *Community Eye Health Journal*, May 2022; 35(114), 19-20.
- [7] Province P I: United Nations. Retrieved from Stakeholder Acceleration Actions: 2023 <https://sdgs.un.org/partnerships/promoting-inclusive-comprehensive-eye-health-services-adopting-peek-vision-technology>.