VISION FOR THE BRIGHTER MIND

「大腦生病　眼睛提提你」
From Eye Health to Dementia

Organised by
主辦機構

THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大學

J.C.DISi
賽馬會社會創新設計院

Funded by
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Partners for Action Project
社創行動項目夥伴

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Kreative Beans

FOREWORD

Dementia affects over 55 million people worldwide including those in Hong Kong, where there is a "double ageing" of both the population and built infrastructure. Although emerging research shows potential connections between dementia and eye conditions, related issues are often overlooked in Hong Kong.

Combined with eye conditions, people with dementia (PwD) face unimaginable confusion and risks navigating the overwhelming city. A collaborative effort across society is needed to address the challenges of eye health and dementia.

It is in this context that Jockey Club Design Institute for Social Innovation (J.C.DISI) of The Polytechnic University of Hong Kong (PolyU) collaborated with academics and NGOs to spearhead this community-driven initiative "From Eye Health to Dementia" as an Action Project funded by The Hong Kong Jockey Club Charities Trust. The sixteenth season of the "One from Hundred Thousand" symposium of "PolyU Jockey Club 'Operation SoInno'" was held in October 2023 with the theme of "Smart Urban Living with Dementia". Building on J.C.DISI's previous efforts, this initiative aims to tackle the growing issue of "double ageing" and dementia.

In this project, eye health talks, co-creation workshops, and actual eye examinations were held to identify pain points and user-oriented innovative solutions related to eye health and dementia. The results also yielded valuable scientific insights.

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Professor of Practice (Planning)
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前言

認知障礙症在全球影響超過5500萬人，為各地城市帶來挑戰，尤其香港這個正面對人口及建築物「雙老化」的城市。近年研究顯示眼部健康與認知障礙症息息相關，惟香港社會對識別眼疾的意識薄弱，也缺乏關注認知障礙症人士眼睛健康的倡導者。

眼疾令認知障礙症人士在人煙稠密的城市裏生活難上加難，面對的困境及潛在危機也多不勝數。因此，其家庭、照顧者、專業人士、社區及政府需要攜手合作面對眼疾與認知障礙症帶來的挑戰。

本行動項目「大腦生病　眼睛提提你」就在這背景下應運而生。香港理工大學（理大）賽馬會社會創新設計院（J.C.DISI）為響應其社創項目「理大賽馬會社創『騷·In·廬』」第十六季的主題－「『腦』朋友的智慧城市」，在2023年10月舉辦的「十萬分一」社創研討會上總結本行動項目──「大腦生病　眼睛提提你」。承蒙香港賽馬會慈善信託基金的慷慨捐助，項目以學術界－非政府組織的合作模式開展提高社區意識的計劃，探討人口及建築「雙老化」的香港中，眼部健康與認知障礙症的關係。

項目透過一連串的健康資訊講座、共創工作坊及全面的眼科檢查，從用家的角度出發，辨認眼科醫療流程的痛點並提出創新方案，以提升眼疾及認知障礙症的公眾意識，同時為相關科學研究帶來重要的數據及啟示。

我們在此鳴謝東華三院及香港聖公會福利協會對此項目由試行階段以來的支持，他們的工作對提升社會對眼疾及認知障礙症的認識不可或缺。我們也在此鳴謝理大眼科視光學院為本項目約60名長者提供的全面眼科檢查及個人化分析，為長者眼部健康提供莫大的推進及研究貢獻。

特別鳴謝理大眼科視光學院的陳浩龍教授、理大眼科視光學院助理教授（研究）蔡啟業博士、理大眼科視光學診所高級駐院眼科視光師胡兆生先生、醫療健康顧問Kreative Beans創辦人及註冊護士莫姬莉女士。Kreative Beans悉心安排及執行各活動，沿途鼓勵不同參加者交流，使本項目能順利完成。

項目團隊亦感謝所有此項目的研究人員、醫護人員及各參與者的貢獻。希望我們能攜手為認知障礙症的護理及管理帶來啟示，藉此提升認知障礙症人士的安全和福祉，締造一個更包容的社會。

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香港理工大學
賽馬會社會創新設計院總監
實務教授（規劃）
凌嘉勤 銀紫荊勳賢

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EXECUTIVE SUMMARY

"From Eye Health to Dementia" encapsulates the innovative initiative undertaken by the Jockey Club Design Institute for Social Innovation (J.C.DISI) of PolyU as part of the "PolyU Jockey Club 'Operation SoInno'" programme's Season 16, themed "Smart Urban Living with Dementia". This Action Project, generously supported by The Hong Kong Jockey Club Charities Trust, addresses the intersection of eye health and dementia in the context of increasingly ageing populations.

Through co-creation workshops and user journey mapping, this project identified pain points and user-oriented recommendations to improve eye health care and prevent dementia-related ocular manifestations. In partnership with community NGOs, academic partners from the PolyU School of Optometry, and healthcare consultants, this project aims to enhance understanding of the complex interplay between eye health and dementia among elderly individuals and their caregivers, thereby improving long-term eye health care and alleviating the impact of dementia. In particular, this project seeks to address a gap in community awareness by highlighting that conditions including age-related macular degeneration (AMD), cataracts, and diabetic eye disease indicate increased risks of dementia that call for earlier consultations.

To achieve these objectives, this project adopted a three-stage interactive approach which includes (1) awareness-building health talk and workshops, (2) stakeholder engagement via co-creation workshops, and (3) comprehensive optometric examinations for elderly participants.

Remarkably, the health talk and workshops included a user journey mapping activity which pinpointed the challenges faced by elderly users at different stages of an eye examination. Insights from this activity shaped the subsequent co-creation workshops, and laid a foundation and awareness for the eye examinations afterwards, where users get to actually undergo detailed eye assessments otherwise inaccessible to them. These activities fostered empathy and promoted a shared sense of responsibility among different shareholders to tackle the issue of eye health and dementia.

With the innovative approaches of user journey mapping and co-creation workshops, the project identified 16 pain points and 15 underlying needs of the users throughout the entire process of eye health care, which were synthesized into 8 practical solutions for the users, caretakers, management, and other stakeholders in eye health and dementia care. This project embodies the power of joint efforts to improve eye health and dementia care in urban communities.

摘要

「理大賽馬會社創『騷·In·廬』」第十六季的主題為「『腦』朋友的智慧城市」。理大賽馬會社會創新設計院（J.C.DISI）根據該主題設立本社創行動項目——「大腦生病　眼睛提提你」，項目承蒙香港賽馬會慈善信託基金的慷慨捐助，探討香港在人口老化的背景下，眼睛健康與認知障礙症的關係。

本項目聯同非政府組織及理大眼科視光學院等學術界夥伴，透過共創工作坊及「使用者旅程圖」等創新方法，辨認出長者進行眼科檢查時遇到的痛點及相應建議，藉以改善眼部醫療服務及預防認知障礙症相關眼疾。項目希望提高社會對相關眼疾的意識，讓更多人知道老年黃斑病變、白內障、糖尿病視網膜病變（「糖尿上眼」）等眼疾可能是認知障礙症的早期表徵，相關人士應盡快求診。

為達到以上目標，本項目設有三階段的互動活動，包括（一）眼睛健康講座；（二）共創工作坊；及（三）全面眼科檢查。值得一提的是，講座及工作坊採用了創新的「使用者旅程圖」活動讓參加者深入了解長者在眼科檢查流程中面對的困難。這個活動為及後的工作坊及眼科檢查提供了討論基礎，豐富了年長參加者的知識，亦促進了一眾持份者共同抱著同理心解決問題的氛圍。

透過以上活動，本項目總結出長者在眼科檢查流程中的16個痛點及15項使用者需要，並將之整合成8項建議，以供其他使用者、照顧者、政策制定者及持份者參考，體現跨界別合作的力量。

HOW MIGHT WE IMPROVE OVERALL EYE HEALTH & EYE CHECK EXPERIENCE OF OUR ELDERLY IN THE COMMUNITY?

我們可以如何改善社區中長者的整體眼睛健康和視力檢查體驗？

INTRODUCTION
引言

About 55 million individuals are affected by dementia globally. It presents significant challenges to those living in such densely populated urban environments as Hong Kong, where there is a "double ageing" of both the population and built infrastructure. A critical question then arises: Is our ageing city prepared to support people with dementia and their caretakers?

世界各大城市都正面臨認知障礙症帶來的挑戰。 面對人口及建築物「雙老化」的香港能為認知障礙症人士及其照顧者提供足夠適切的支援嗎？

In particular, eye health problems and sensory difficulties impact the daily lives of PwD and increase their risk of injury as they navigate complex urban settings. However, currently, there is a knowledge gap in our society regarding dementia-related eye health concerns. While dementia is often associated with cognitive and sensory impairments, including reduced acuity and attention deficits, the relationships between dementia, eye health, and visual difficulties remain underexplored and receive less public attention in Hong Kong.

認知障礙症加上眼疾，令患者在複雜的城市環境中穿梭時碰上不少生活細節上的阻礙及受傷的風險。認知障礙症與眼部健康的關係密切，但香港社會在這方面的意識仍有待改善。香港社會對認知障礙症的理解一般為專注力不足及敏銳度減退等認知及感官上的退化，對眼疾的警覺性不高，使認知障礙症人士的睛健康未得到充分關注。

Emerging research has indicated potential connections between dementia and certain eye conditions including age-related macular degeneration (AMD), cataracts, diabetic eye disease, which demonstrates the importance of early detection of eye conditions in managing dementia.

近年研究顯示，眼部健康與認知障礙症息息相關。某些眼疾如老年黃斑病變、白內障和糖尿病視網膜病變（「糖尿上眼」），可能是認知障礙症的跡象，相關人士應及早求診。

The complex interplay between eye health and dementia has emerged as a pressing concern. A collaborative effort across communities, families, caregivers, professionals, and public authorities is needed. In response, J.C.DISI has embarked on this initiative to tackle the growing issue of "double ageing" and the rising incidence of dementia. As a community awareness initiative, this collaborative project taps into the knowledge and experience of NGOs, academics from the PolyU School of Optometry, and healthcare specialists to achieve the following threefold mission:

各界急需攜手應對認知障礙症人士加上眼疾構成的危機。本行動項目「大腦生病　眼睛提提你」就在這背景下應運而生。項目以學術界－非政府組織的合作模式開展提高社區意識的計劃，探討人口及建築「雙老化」的香港中，眼部健康與認知障礙症的關係，包括：

- Raise awareness of the link between eye health and dementia among the elderly, their caregivers, and other stakeholders;
  讓長者、社工及照顧者認識眼睛健康與認知障礙症的關係；

- Launch pilot community programmes for early diagnoses and monitoring of ocular issues related to dementia; and
  推行社區試驗計劃，幫助長者及早診斷和監察上述的眼疾；及

- Mitigate the effects of dementia by enhancing long-term eye health care.
  通過改善眼睛健康，長遠應對認知障礙症。

To achieve these goals, this project interweaves the following elements:

為達致以上目標，本項目揉合了以下元素：

■ Knowledge 知識:

The project organizes talks by optometrists to dispel common misconceptions and to explain the complex relationship between eye health and dementia in an accessible manner.
由專業視光師主講健康講座，拆解常見誤解，以簡明的方式說明眼疾與認知障礙症的複雜關係。

■ Experience 體驗:

The project organizes interactive workshops to boost understanding of dementia-related eye health issues while offering participants an opportunity to experience various visual impairments through simulation.
透過共創工作坊深入認識長者的眼疾，同時讓長者模擬體驗眼疾的實況。

■ Engagement 社區參與：

The project gathers feedback and opinions from a broad spectrum of stakeholders via interactive workshops to refine eye examination processes.
各方持份者在共創工作坊的深入對話中表達了改善眼科檢查配套及流程的寶貴意見。

■ Diagnosis 診斷：

This project arranges thorough eye examinations for elderly participants to improve their understanding of eye health and to facilitate early diagnoses and monitoring of dementia-related eye conditions.
由專業視光師為長者進行全面眼科檢查，檢查範圍超越一般眼科檢查，為他們提供詳細的診斷，並安排相應的跟進治療及監察。

■ Recommendations 心得與建議：

This project synthesizes the pain points and needs identified into concrete, user-oriented recommendations.
就預防認知障礙症相關眼疾提供心得及建議。

眼疾病

CURRENT SITUATION OF ELDERLY EYE HEALTH CARE IN HONG KONG
香港長者眼睛健康現況

Hong Kong's elderly population is currently facing an eye health crisis due to insufficiency and inaccessibility of related care services and awareness. As the city's population ages, the need to address this issue becomes increasingly urgent, not only to improve the quality of life of the elderly but also to ensure their safety.

香港大多數長者缺乏眼部護理知識，或不懂尋找適當的醫療服務。為確保長者的生活質素及安危，香港社會急需正視迫在眉睫的長者眼睛健康危機。

In 2021, the PolyU School of Optometry, in collaboration with Kwai Tsing Safe Community and Healthy City Association, conducted an extensive evaluation of the visual health of approximately 13,000 elderly individuals. The results were startling, revealing that nearly 80% of the surveyed elderly had some level of cataract. Though a common eye condition, cataract can cause significant vision loss and even blindness if left untreated, greatly affecting patients' self-care abilities and quality of life.

2021年，理大眼科視光學院與葵青安全社區及健康城市協會合作，為約13,000名長者進行了全面的視力評估，當中近八成人士患有一定程度的白內障。白內障雖然十分普遍，但如果缺乏治療，可能引致視力大幅下降甚至失明，嚴重影響患者的自理能力與生活質素。

The study also identified other serious eye conditions among the referral cases. Out of the 1,318 referral cases, 44% were diagnosed with severe cataract conditions, 21% had suspected glaucoma, and 16% showed signs of retinal degeneration. These conditions are treatable if detected early, but they can still lead to irreversible damage and vision loss if left unchecked.

該研究更在轉介病例中識別出其他嚴重眼疾。在1,318個轉介病例中,約580個（44%）患有嚴重白內障,約280個（21%）患有疑似青光眼,約210個（16%）出視網膜病變的跡象[1]。若不及時處理,這些病症可導致不可逆轉的視力傷害甚至失明。

Nonetheless, most of the participants in the study had never had comprehensive eye examinations. This lack of preventive and routine eye care is a major concern, as early detection and treatment are key to managing these conditions.

雖然如此,上述研究中大部分長者均未曾進行全面的眼科檢查,且缺乏恆常的預防性眼部護理。

This dire situation is further exacerbated by the long waiting time in the public health sector. Waiting time for new referrals in the ophthalmology department can take up to 138 weeks (about 2.6 years), and the median waiting time for cataract surgeries, a relatively simple and common procedure, can take 22 months (about 1.8 years), during which the eye conditions could quickly worsen.

加上公共醫療的輪候時間冗長，使長者眼睛健康危機進一步惡化。新症轉介眼科部門的排期時間長達138週（約2.6年），而白內障手術這項相對簡單的手術，輪候時間中位數仍長達22個月（約1.8年），情況令人擔憂[1]。

80%
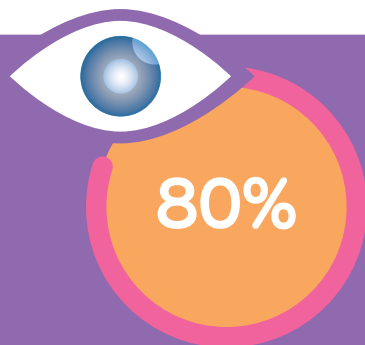
From extensive evaluation of the vision health of approximately 13,000 elderly individuals, nearly 80% of the surveyed elderly had some level of cataract
為約 13,000 名長者的視力健康進行廣泛評估之中，
顯示近80%的受訪長者患有不同程度的白內障

Out of the 1,318 referral cases
在 1,318 例轉診病例中

44% with severe cataract conditions
被診斷為嚴重白內障

21% had suspected glaucoma
疑似青光眼

16% showed signs of retinal or macular degeneration
出現視網膜或黃斑部病變跡象

To address this crisis, there is an urgent need to promote regular eye checks by optometrists at the primary care level to facilitate early detection and treatment, and to ease the burden on public ophthalmology services. It also highlights the need for innovative community-based initiatives and the relevance of this project, which consists of three main components detailed in the following section.

應對長者眼睛健康危機必須從基層醫療層面入手,由視光師定期進行眼科檢查並及早診治。這可以減輕眼科專科的負擔,更有效地分配資源,確保更多長者得到適當的醫療資源,改善他們的生活質素和健康。從上述現況可見本行動項目在社區層面推進創新措施的迫切性和重要性。以下部分將詳細紀錄本項目的三大活動如何應對當今香港長者面臨的眼睛健康挑戰。

[1] Oriental Daily News (on.cc) (2021) "80% of the elderly suffer from varying degrees of cataracts. Groups promote elderly eye examination services.".
Available at https://hk.on.cc/hk/bkn/cnt/news/20210905/bkn-20210905133252461-0905_00822_001.html
[1] 東網,《80%長者患不同程度白內障 團體促推老友記眼睛檢查服務》(2021年9月5日)。
下載連結:https://hk.on.cc/hk/bkn/cnt/news/20210905/bkn-20210905133252461-0905_00822_001.html

眼睛健康

PROJECT COMPONENTS AND SERVICES
項目要素和服務

To accurately identify pain points and provide user-oriented recommendations to improve the eye health care in Hong Kong outlined in the above section, this project consists of three components including eye health talks, co-creation workshop, and the comprehensive eye examination. Details and significance of each of these project components are described in the following section.

本項目透過眼部健康講座、共創工作坊和全面眼部檢查三個活動,準確識別用家痛點並提供以用家為本的建議,藉以改善香港的眼科醫療系統。以下部分將詳述每個項目活動。
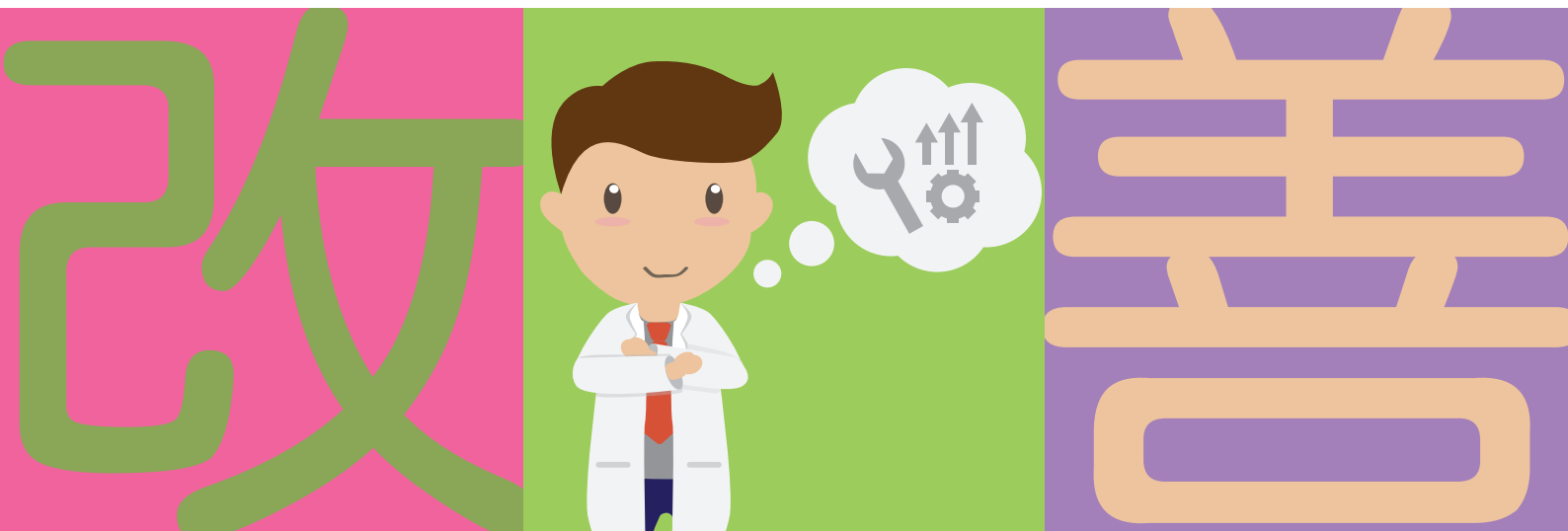
STEP 1: EYE HEALTH TALKS
第 1 步：眼睛健康講座

The first component of the project is a series of eye health talks to explain and raise awareness of the complex relationship between eye health and dementia. The talks also emphasized the importance of early and comprehensive eye examinations in detecting dementia-related visual conditions.

項目希望透過眼睛健康講座加深參加者對認知障礙症及眼部健康的了解，並強調及早的全面檢查能預防相關眼疾。

To embody cross-disciplinary collaboration, J.C.DISI, in partnership with two NGOs, assembled a team of clinical optometrists from the PolyU School of Optometry along with eager optometry students and instructors for the eye health talks. Remarkably, the talks took a novel approach diverging from conventional health workshops: it incorporated co-creation based on the actual experiences and needs of the elderly. An innovative "user journey mapping" activity was conducted during the eye health talks to foster deeper understanding and empathy.

J.C.DISI與兩個非政府組織合作，匯聚理大視光學院的臨床視光師、學生和導師組成專業團隊，為參加者舉行眼睛健康講座。與傳統的健康工作坊不同，是次活動包涵了創新的「使用者旅程圖」共創活動，讓參與者深入了解長者用家實際的經驗和需求。

Two eye health talks were held on 31 May and 1 June 2023 respectively, each lasting 2 hours. These talks engaged altogether nearly 80 elderly participants, along with their caregivers, and NGO staff members.

兩節眼睛健康講座分別於2023年5月31日和6月1日舉行，每節2小時，參與者包括約80名長者、其照顧者、視光學生及相關工作人員。

Eye health talk 眼睛健康講座 1

Date and time: 09:30-11:30, 31 May 2023
日期和時間：2023年5月31日，09:30-11:30

Location: TWGHs Wong Cho Tong District`
　　　　　　Elderly Community Centre
地點：東華三院黃祖棠長者地區中心

Number of participants*: 48
參加者人數*：48

Eye health talk 眼睛健康講座 2

Date and time: 14:30-16:30, 1 June 2023
日期和時間：2023年6月1日，14:30-16:30

Location: S.K.H. Holy Carpenter Church
　　　　　　District Elderly Community Centre
地點：聖公會聖匠堂長者地區中心

Number of participants*: 38
參加者人數*：38

* Including elderly participants, NGO staff, optometry students, and facilitators from J.C.DISI.
* 包括長者、照顧者、非政府組織工作人員、視光學生和J.C.DISI的工作人員

Each talk consists of three parts, namely (1) a talk on the relationship between dementia and eye health by clinical optometrists; (2) an experiential activity simulating eye conditions; and (3) an innovative "user journey mapping" to probe users' actual experiences and needs during the entire eye care assessment process:

每次講座均由三部分組成：（一）認知障礙症與眼睛健康講座；（二）模擬眼疾體驗活動；及（三）「使用者旅程圖」共創活動：
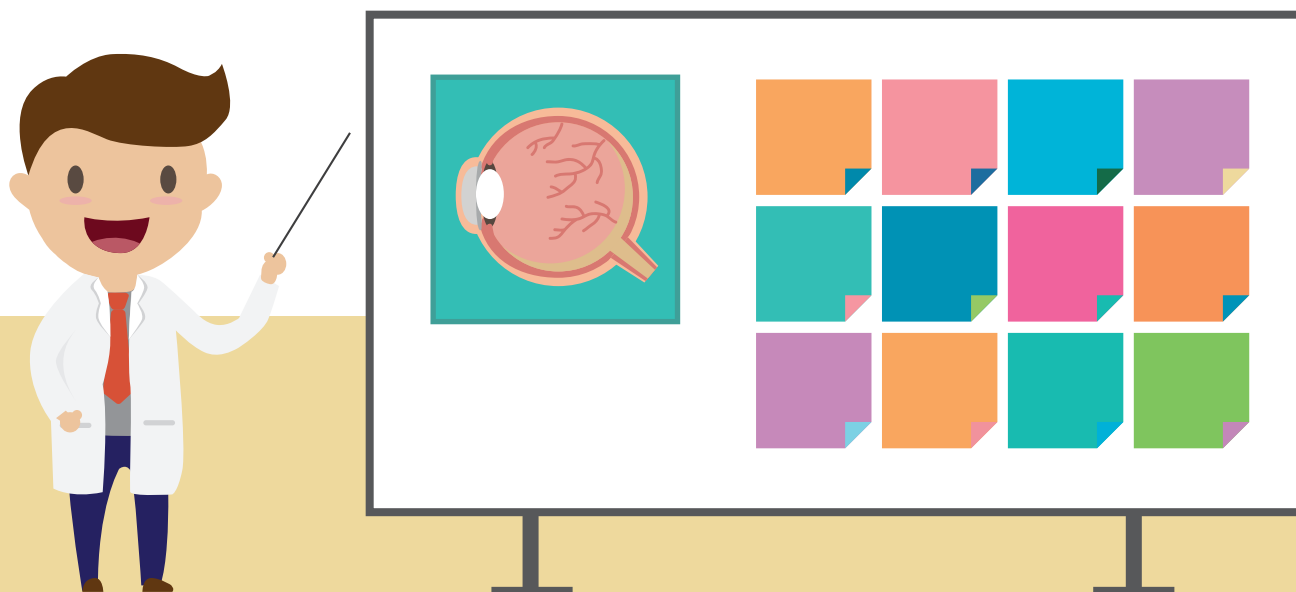
Talk on the Relationship between Dementia and Eye Health by Clinical Optometrists
認知障礙症與和眼晴健康關係的講座

These talks given by clinical optometrists dispelled the common misconception that "deterioration in eye health and cognitive impairment are inevitable effects of aging". They also highlighted the risks of common eye conditions such as cataracts, glaucoma, and age-related macular degeneration. The talks also broke down the complex issue of cognitive impairments including dementia to make it accessible for elderly users. In particular, the talks emphasized the potential of eye health manifestations as early indicators and biomarkers of cognitive impairment, as recent research has shown.

講座由臨床視光師主講，消除了「人老了便難免患上眼疾和認知障礙」的常見誤解，以易於理解的手法講解常見眼疾（如白內障、青光眼和與年齡相關的黃斑變性）與認知障礙症的關係。講座強調，正如近年研究所示，眼疾可能是認知障礙症的早期指標和生物標誌。

The sessions encouraged a proactive approach to maintaining eye health and cognitive function among attendees. Both the elderly users and their caretakers demonstrated better understanding of their health and recognized the need for professional assistance in managing these concerns and the value of regular check-ups for early diagnosis and prevention.

講座鼓勵參與者積極保護眼睛及認知功能。講座後，參與者均表示加深了對自身健康的理解，並明白到及早求助及定期檢查的重要性。

Simulation of Eye Conditions
模擬眼疾體驗活動

Participants get to experience and gain a tangible and bodily understanding of these conditions through simulations and demonstrations, which could help them acknowledge the severity, inconvenience, and risks of the eye conditions. This is also a huge step in allaying their mental fears when some day they unfortunately develop these eye health conditions or when their conditions worsen. This part of the project highlighted the underappreciated link between vision, cognitive function, and overall mental health.

透過模擬活動讓參加者親身體驗眼疾,除了有助提升他們的警覺性,也讓他們將來不幸患上眼疾或情況惡化時,不會太慌張,有助緩解他們的心理恐懼。這個活動對應了視力、認知功能和整體心理健康之間的密切聯繫。

"User Journey Mapping" Activity
「使用者旅程圖」共創活動

Each of the user journey mapping activities lasted around 30 minutes during the talks. From pre-examination routines and decisions, to the examination process and post-examination period, the activity sought to explore the challenges and obstacles encountered by the elderly throughout the eye health journey. For healthcare professionals and NGO staff members, these sessions strengthened their empathy with a detailed, step-by-step patient experience, revealing previously unnoticed users' pain points. For the elderly and their caregivers, these sessions served as a reflective process that allows them to clarify their needs andexpectations, raised their awareness about the challenges they potentially face, and enhanced their understanding of the links between eye health and dementia.

「使用者旅程圖」共創活動每節約30分鐘，以15至20人的小組進行，每組由長者、照顧者和非政府組織工作人員組成。從眼科檢查前的日常習慣，至檢查期間和檢查後的跟進事宜，活動逐步探討長者在整個眼科檢查過程中遇到的難處及需要。對醫療人員和非政府組織職員來說，「使用者旅程圖」為他們逐步拆解患者在驗眼過程中的體驗，加深了他們對患者需要的理解；而對於長者及其照顧者來說，這個活動也是一個反思的過程，讓他們沉澱及釐清自己的需要和期望。而與相關的人士對話交流，也有助他們面對眼疾及認知障礙症的挑戰。

This insightful exercise set the stage for the subsequent project component: co-creation workshops, where the elderly joined hands with a multidisciplinary team to devise solutions to address these challenges.

這一連串活動提高了各參與者對問題的警覺性及認識，為後續的共創工作坊奠定了基礎，與跨學科團隊共同尋求解決方案。

STEP 2: CO-CREATION WORKSHOP
第 2 步：共創工作坊

After the eye health talks and the "user journey mapping" activity in the first component, the project would be followed by the second component of a series of co-creation workshops with professionals to further understand users' challenges and craft innovative solutions for their eye health journey.

共創工作坊旨在讓長者用家與本項目的跨界團隊更深入了解眼疾的求診過程，並制定創新的解決方案。

Two co-creation workshops were held on 7 and 26 June, 2023 respectively, each lasting 3 hours. These workshops engaged a diverse group of 60 participants including elderly users aged 60 to 91, their caregivers, optometry students, and NGO staff members. The diversity in age and cognitive abilities, coupled with a shared desire to contribute, turned the workshops into a vibrant platform for innovative problem-solving.

兩節共創工作坊分別於2023年6月7日和6月26日舉行，每節約3小時。工作坊匯聚了約60名參與者，他們的背景十分多元化，包括不同程度認知能力，年齡界乎60至91歲的長者用家、其照顧者、視光學生和非政府組織工作人員。參與者的積極參與，為工作坊的開放平台注入活力，共同以創新方法解決問題。

Co-Creation Workshop 共創工作坊 1

Date and time: 14:00-17:00, 7 June 2023
日期和時間：2023年6月7日，14:00-17:00

Location: TWGHs Wong Cho Tong District`
Elderly Community Centre
地點：東華三院黃祖棠長者地區中心

Number of participants*: 31
參加者人數*：31

Co-Creation Workshop 共創工作坊 2

Date and time: 14:30-16:30, 26 June 2023
日期和時間：2023年6月26日，14:00-17:00

Location: S.K.H. Holy Carpenter Church
District Elderly Community Centre
地點：聖公會聖匠堂長者地區中心

Number of participants*: 28
參加者人數*：28

* Including elderly participants, NGO staff, optometry students, and facilitators from J.C.DISI.
* 包括長者、照顧者、非政府組織工作人員、視光學生和J.C.DISI的工作人員

Each workshop consists of three parts, namely (1) a recap on the key health messages regarding the relationship between dementia and eye health; (2) crafting problem statements with the use of journey boards to map out pain points and issues, and (3) crafting solutions corresponding to the problem statements with the help of a special T-map design. Throughout the process, facilitators prioritized active listening and empathy to ensure an accessible and comfortable environment for the elderly users to effectively communicate their needs.

每節工作坊分為三部分：（一）回顧之前的健康講座，講述認知障礙症與眼疾的關係；（二）以「使用者旅程圖」勾劃出長者用家在驗眼過程中的痛點及問題；及（三）以「T-map」共同制定相應的解決方案。在整個過程中，工作人員積極地以同理心傾聽，確保參加者在一個安心和舒適的環境表達他們的需求。

豐富討論

Serving as an open discussion platform, the co-creation processes and dialogues yielded user-oriented insights regarding the eye health assessment process. Many revealed that check-ups in public hospitals are a lengthy process with mental burden. For example, users with visual impairments and limited mobility had to figure out where to complete the required procedures and ironically had to walk around the hospital without clear signage. And, if they went to the wrong place or tried to seek help in the hospital, staff members would answer rudely without stating their identity, which made the elderly users feel disrespected. There were limited explanations about the medication, and the users did not understand the English directions printed on the eye drops.

工作坊提供了一個開放討論平台，透過對話收集以用戶為本的聲音。不少參與者指公共醫療系統的檢查過程耗時，為他們帶來心理負擔。例如，對於視覺受損和行動能力有限的長者來說，要弄清相關程序的部門或地點本來已甚吃力，加上醫院沒有清晰指示，在醫院裏尋路可說是難上加難。而有時當他們迷路或尋求幫助時，卻會受到職員無禮的回應，或在沒有表明身份的情況下指令視障長者，讓他們感覺不被重視及慌張。此外，長者也未必能看清及理解藥物及眼藥水上的英文指引。

Corresponding to these challenges, the participants suggested using smart wristbands or coloured direction cards with clear fonts to guide users' navigation through different procedures and rooms, and to facilitate other medical staff members when they wanted to offer help. They also raised the need for a one-stop service, single point of contact, clear procedural explanations, and psychological support. They also emphasized the importance of user-friendly design elements including larger visual signs and an accessible mobile health management application.

針對這些問題，有參加者建議使用智能手環或帶有清晰字體的彩色指示卡，引導他們到適當的房間完成程序，此舉同時方便周遭的職員提供協助。參與者亦建議設一站式服務、單一聯絡人、清晰的程序指示，以及心理鼓勵等。他們也特別重視友好設計元素，例如更大的標誌和易用的健康管理手機應用程式。

These co-creation workshops serve as a project cornerstone which not only enhanced awareness towards dementia-related eye health complexities, but also fostered shared understanding and empathy among stakeholders. For the elderly users, the workshops have provided thorough but accessible explanation of ocular manifestations related to dementia, as well as the challenges faced by healthcare professionals. For healthcare professionals and NGO staff, the workshops allowed them to put themselves into the shoes of the elderly users. Most importantly, the workshops provided chances for them to craft solutions hand in hand to improve the eye health journey.

共創工作坊作為項目的基石，除了增進參與者對認知障礙相關的眼部健康的認識，還促進了各持份者之間的理解和同理心。長者進一步認識相關的健康資訊，也理解了醫護專業人員面臨的挑戰；而醫護專業人員和非政府組織職員則更深入明瞭長者用家的生活經歷。最重要的是，工作坊為他們提供了共同制定解決方案的機會，一起為改善香港的醫療系統作出貢獻。

These community inputs co-created through the workshops are invaluable for future service designs which should take patient-centered approaches that value accessibility, simplicity, and emotional support. Future service designs can integrate these insights to create more efficient, empathetic, and user-friendly services.

在工作坊期間收集的民間聲音，對日後相關醫療服務的設計至關重要，也展現了可負擔性、簡便性、情緒支援、以用家為本的重要性。日後的服務設計應考慮到這些用家意見，締造更高效、具同理心及簡便易用的服務，提升患者的治療體驗和生活質素。

STEP 3: COMPREHENSIVE EYE EXAMINATION
第 3 步：全面眼科視光檢查

The talks and the workshops have laid a solid foundation and awareness for the third component of the project: a comprehensive eye examination. Besides directly tackling the problem of inaccessible eye health care and easing the burden on public health services, these detailed examinations also aim to enhance understanding of the connection between eye health and cognitive function, especially in terms of dementia and Mild Cognitive Impairment (MCI).

上述兩項活動讓參加者帶著對認知障礙症及相關眼疾的認識及意識，進入項目的第三項活動：全面眼科檢查。此項目既直接幫助未能負擔此類詳細眼科檢查的參加者，又能減輕對公營醫療服務的需求，同時加深參加者對眼部健康及認知功能的關係之認識，尤其是認知障礙症及輕度認知障礙（MCI）。

The participants visited the PolyU Optometry Clinic for comprehensive eye examinations conducted by senior optometry students. The participants were first informed of their ocular conditions, and corresponding follow-ups and regular monitoring were arranged where necessary. The participants welcomed the service and the detailed explanations which were otherwise costly and inaccessible.

是次全面眼科檢查由理大視光學院的高年級生在校內的眼科視光學診所進行。檢查會讓參加者了解他們眼睛具體的健康狀況，也為有需要的參加者安排相應的跟進治療及檢查。市面上，這些服務及檢查價格高昂，因此參加者們都很慶幸能參與其中，進一步了解自己的健康狀況。

Details of the Tests
檢查細節

Between June and July 2023, the project enrolled around 60 elderly participants, among which 56 participants (44 females and 12 males) completed all the procedures including the eye examinations. Their ages ranged from 60 to 91, with an average age of 73.5 years.

項目在2023年6月至7月期間招募了大約60名長者，當中56位（包括44名女性及12名男性）參加了包括是次眼科檢查的所有活動。他們年齡介乎60歲至91歲，平均年齡為73.5歲。

以長者為中心
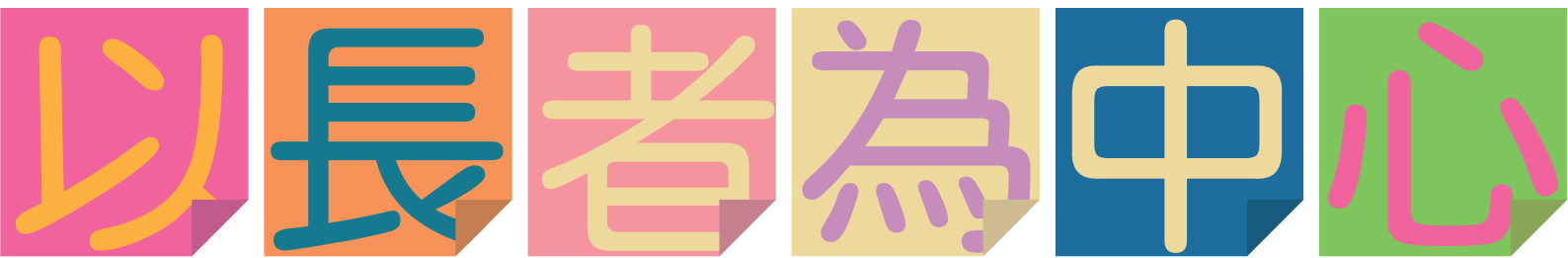
The detailed check-ups included the following items:
眼科檢查的細節如下：

■ Medical History Review 病史回顧:

To collect detailed medical and eye histories of the participants
收集並回顧參加者過往的詳細醫療紀錄

■ Vision Assessment 視力評估:

To check the participants' vision for any issues related to visual acuity or field loss
檢查參與者的視力銳度及視野等

■ Eye Coordination Check 眼部協調:

To test the ability of the participants' eyes to work together
檢查參與者的雙眼協調

■ Refractive Error Measurement 屈光折射:

To determine the extent of refractive errors in the participants' eyes
量度參與者的眼部屈光不正程度

■ Intraocular Pressure Measurement 眼內壓:

To measure intraocular pressure to identify risks of glaucoma
量度眼內壓以評定青光眼的風險

■ External and Internal Eye Health Evaluation 眼內及外部健康評估:

To check for eye health issues including cataracts, macular degeneration, glaucoma
檢查參與者有沒有白內障、黃斑病變及青光眼等問題

Furthermore, advanced ophthalmic assessments were also conducted. These included ocular structure scanning using Optical Coherence Tomography (OCT), retinal microvasculature assessment by OCT-Angiography (OCT-A), and eye and facial movement assessments using customized software and trackers.

除此之外，檢查也包括精密且先進的檢查，如透過光學相干斷層掃描（OCT）掃瞄眼部結構、以光學相干斷層掃描血管造影（OCT-A）掃描視網膜微血管，以及以特製的軟件及追蹤器評估眼部及面部運動能力。

Results of the Tests
檢查結果

Based on the Cantonese version of the Mini-Mental State Examination (MMSE), the average score was 24.5 out of 30. Using a cutoff of ≤ 24, 24 participants (43%) were classified as having MCI. It was found that cognitive function declined with age, and gender did not significantly affect cognitive function.

在廣東話版本的簡短智能測驗（MMSE）中，參加者平均在30分當中取得24.5分。以少於或等於24的參考值來說，有24名參與者（43%）被歸類為輕度認知障礙。檢查發現，認知功能會隨年齡增長而下降，而性別則對認知功能沒有顯著影響。

When comparing normal participants with those diagnosed with MCI, a similar distribution of refractive error (myopia, hyperopia, and astigmatism) was found. However, MCI participants reported worse vision both through subjective reporting and through clinical visual acuity measurements. Additionally, MCI participants had a higher proportion of ocular conditions, such as cataract, corneal and conjunctival anomalies, macular degeneration, and retinal anomalies. Only one-eighth of the cognitively normal participants required further assessments, while one-third of the MCI participants necessitated follow-ups. More results can be found in appendix.

相對之下，輕度認知障礙參與者與其他參與者的屈光不正（近視、遠視和散光）分佈情況相似。可是，輕度認知障礙參與者的主觀感知視力及臨床視力測試則更差。此外，輕度認知障礙參與者患有更多的眼疾，如白內障、角膜和結膜異常、黃斑病變和視網膜異常。只有八分之一的認知正常參與者需要進一步評估，而三分之一的輕度認知障礙參與者則需要後續跟進。更多結果詳見附錄。

The ophthalmic assessments conducted were advanced and beyond standard eye examination procedures. In particular, the tests covered contrast sensitivity, or the ability to view grey-on-white instead of black-on-white. Contrast sensitivities were significantly worse among MCI participants compared to cognitively normal participants. One particularly intriguing finding was the correlation between cognitive function and chromatic sensitivity (the ability to distinguish color). It was discovered that sensitivities to all primary colors (red, green, and blue) diminished with the MMSE score. Specifically, the decline in blue sensitivity could potentially serve as a new biomarker in eye examinations for the early detection of cognitive impairment. This highlights the innovative outcomes and potential future implications of this project.

是次評估範圍超出了一般眼部檢查程序。例如，是次檢查能測試參與者的對比敏感度（即分辨黑白明暗的能力）。結果顯示，與認知正常參與者相比，輕度認知障礙參與者的對比敏感度顯著較差。值得注意的是，是次評估獲得新的研究發現。就認知功能和色彩敏感度（區分顏色的能力）的相關性來說，評估發現所有主要顏色（紅色、綠色和藍色）的敏感度會隨著MMSE分數下降而降低。具體而言，眼部藍色敏感度下降或可作為檢測認知障礙的新生物標誌。這突顯了此跨界項目為科研帶來的創新成果。
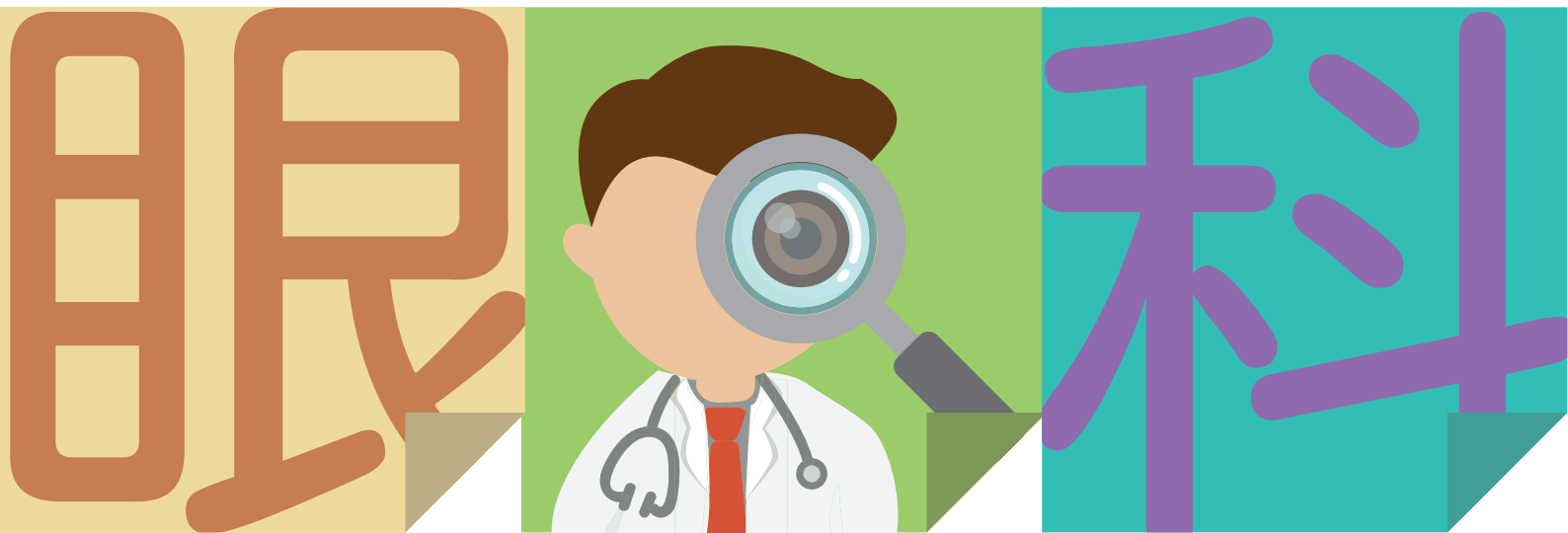
Significance of the Eye Examinations
檢查的重要性

The comprehensive eye examinations were important as many had not had the chance to undergo complete eye examinations. These examinations play a key role in early detection and prevention of eye disorders like glaucoma and macular degeneration, conditions that often worsen silently until irreversible vision loss occurs.

如此全面及先進的眼科檢查對不少參加者而言是遙不可及的。但是次檢查直接惠及參加者，及早替他們檢查，更為有眼疾跡象的參加者安排跟進治療及定期檢查，防止青光眼及黃斑病變等潛伏的眼疾，改善他們的健康，也減輕了醫療系統的壓力。

As the results showed, some participants showed signs of potential medical conditions. This highlighted the correlation between eye health and cognitive function, and the importance of regular cognitive and ophthalmic assessments for early treatment. The examinations also revealed signs of non-ocular diseases in participants, which indicated the intricate link between eye and overall health.

是次檢查也反映了參加者的一些眼部以外的健康問題，可見眼部健康與認知能力及整體健康的關聯，以及認知能力及眼部檢查的重要性。相信對不少長者用家來說，是次檢查是新鮮且難忘的體驗。

The examinations also made memorable events for the elderly users, especially for those who never had similar examinations, through which they could understand the importance of prevention for their wellbeing, and that blindness, as with many health conditions, can be avoided with holistic care and early prevention.

此具體體驗，除了有助鞏固相關的知識及意識，更重要的是讓他們更深入了解預防的重要性。只要全面護理和及早預防，失明是可以避免的。

PROJECT OUTCOMES
項目成果

This project successfully raised awareness of the links between eye health and cognitive functions. Through health talks, co-creation workshops, journey mapping, and comprehensive eye examinations, the project illuminated the complexities of these issues and paved the way for future initiatives to improve eye health and dementia care for the elderly. The project yielded the following useful outcomes:

本項目透過講座、工作坊、「使用者旅程圖」及全面的眼睛檢查等，提升了參加者對眼睛健康和認知能力的關係的認識，成功達致以下成果，為未來相關項目創下了可行的先例：

- **Increased Awareness**
  提升意識

- **Early Detection of Eye Conditions**
  及早發現眼疾

- **Community Engagement**
  社區參與

- **New Research Directions**
  對創新科研的貢獻

- **Eye Health Pamphlet**
  眼部健康小冊子

Increased Awareness
提升意識

Both the elderly users and their caretakers demonstrated better understanding of their ocular and cognitive health. They recognized the need for professional assistance and regular check-ups for early diagnosis and prevention.

長者及其照顧者進一步認識了視覺與認知健康的關係，也意識到及早求診及日常檢查對預防眼疾的重要性。

Early Detection of Eye Conditions
及早發現眼疾

Besides raising awareness of the importance of early detection through the talks and co-creation workshops, the project practically detected eye health issues for the participants and arranged follow-up accordingly through the comprehensive eye examination, which were otherwise inaccessible to participants.

除了透過講座及工作坊提升意識，此項目的眼科檢查切實地診斷出部分參與者的眼疾，並為他們安排相應的跟進，提供了他們較少機會接觸得到的服務，促進他們的安康。
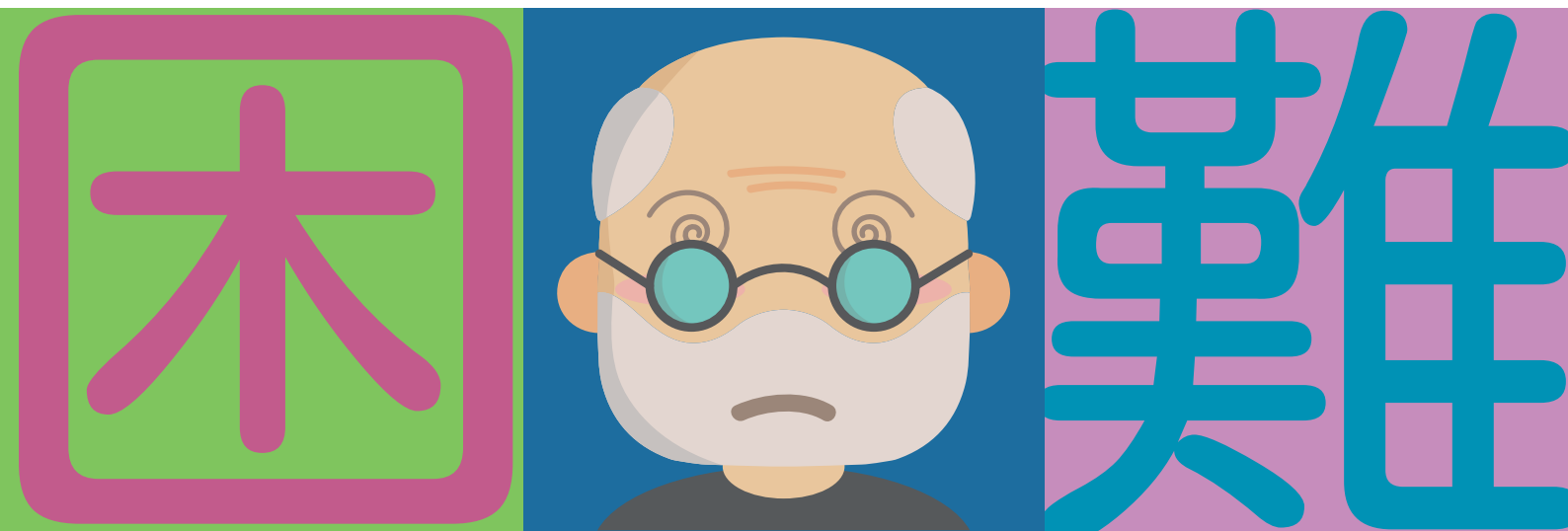
Community Engagement
社區參與

The project fostered open dialogues between elderly participants and the project team throughout all activities, yielding valuable insights into their needs and expectations at each stage of their eye health journey, such as the need for one-stop services, psychological support, and user-friendly design elements.

項目促進長者及相關持份者的對話，為他們在眼科檢查的每個環節帶來了新的認知，例如一站式服務、心理鼓勵及簡潔易明的友好設計元素。

"I would like to learn more about eye health & see how I can help others"
「我想了解更多關於眼睛健康的知識並了解如何幫助他人」
Ms.C

"Want to see what solutions we can use to change current complex eye check process"
「想看看我們可以使用什麼解決方案來改變當前複雜的眼科檢查流程」
Mr.L

New Research Directions
對創新科研的貢獻

The eye examination of this project yielded intriguing findings about the correlation between cognitive function and chromatic sensitivity (the ability to distinguish color). It was found that the decline in blue sensitivity could potentially serve as a new biomarker in eye examinations for the early detection of cognitive impairment. This suggests future research directions and highlights the innovative outcomes and potential future implications of this project.

全面眼科檢查的結果發現藍色敏感度下降或可作為檢測認知障礙的新生物標誌，突顯了這個跨界別項目對科研帶來的創新成果。

Eye Health Pamphlet
眼部健康小冊子

Synthesizing user-oriented insights gathered and co-created throughout the project, a pamphlet tailored to the needs of those experiencing eye conditions was created. It covered topics including simple self-tests, a walkthrough of standard eye examinations, medication management, and preventive measures. It incorporated user-friendly designs such as large fonts, easy-to-read colors, and a larger paper size to accommodate those with visual impairment and limited mobility. It served as a practical and informative tool for the elderly users that facilitates their autonomy.

本項目整合了活動過程中以用家為本的新想法，印製了一本小冊子解答長者的需要。內容包括簡單的自行視力測試、逐步解釋一般的眼科檢查程序、藥物注意事項及預防措施等。這本小冊子揉合了簡潔友善的設計元素，例如更大的字體、易於辨認的用色和以較大的紙張印刷，以配合視障人士的需要，提升長者的自主性。
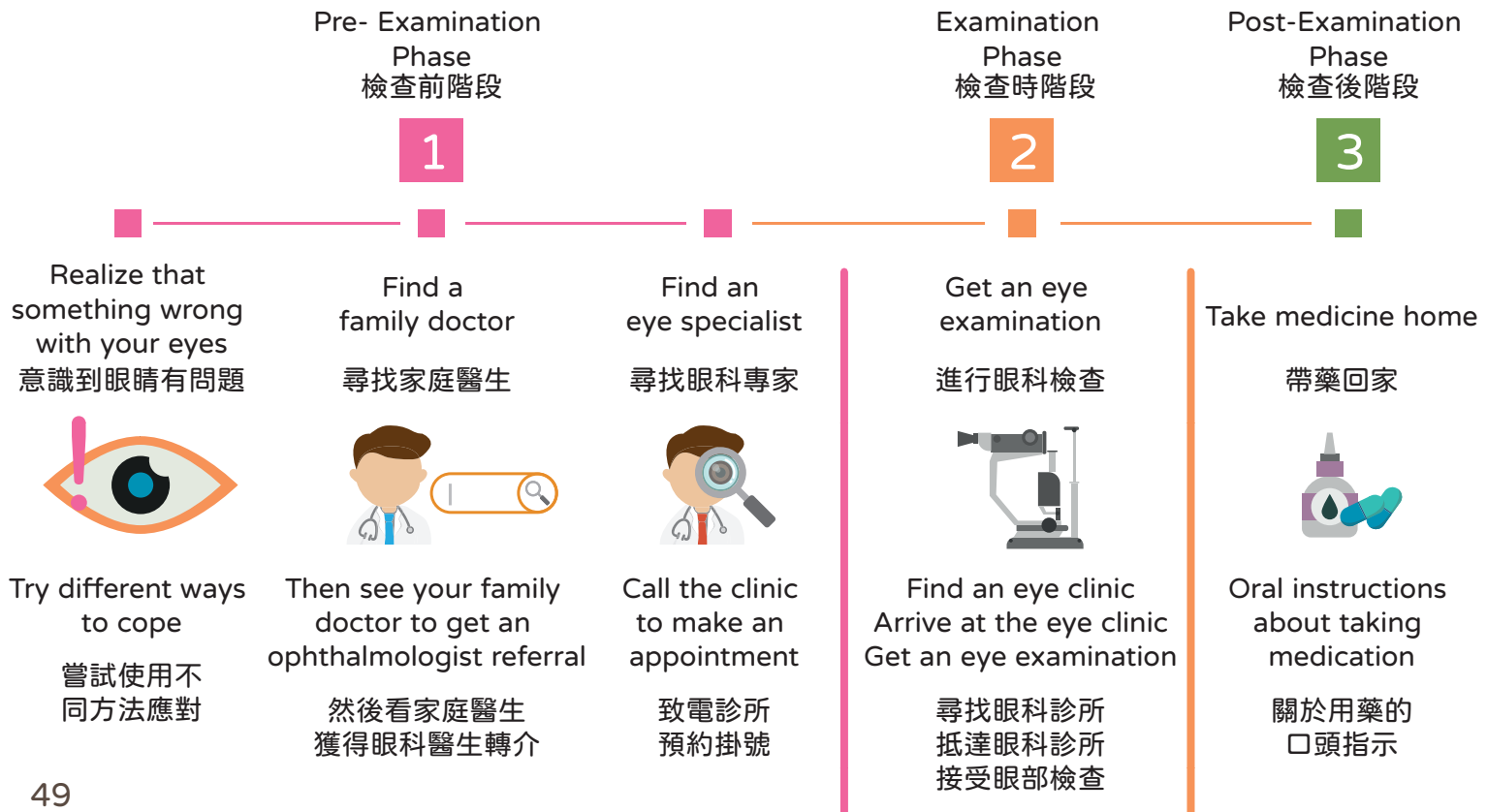
Eye Health Pamphlet
眼部健康小冊子

In addition to the above outcomes, this project particularly identified the following users' pain points and needs before, during, and after the eye examinations.

除了以上成果，此項目也辨認出眼科檢查前、中、後期的用家痛點。

Pre- Examination Phase 檢查前階段			Examination Phase 檢查時階段	Post-Examination Phase 檢查後階段
1			**2**	**3**
Realize that something wrong with your eyes 意識到眼睛有問題	Find a family doctor 尋找家庭醫生	Find an eye specialist 尋找眼科專家	Get an eye examination 進行眼科檢查	Take medicine home 帶藥回家
Try different ways to cope 嘗試使用不同方法應對	Then see your family doctor to get an ophthalmologist referral 然後看家庭醫生 獲得眼科醫生轉介	Call the clinic to make an appointment 致電診所 預約掛號	Find an eye clinic Arrive at the eye clinic Get an eye examination 尋找眼科診所 抵達眼科診所 接受眼部檢查	Oral instructions about taking medication 關於用藥的 口頭指示

1.

Fear of the Unknown
對未知的恐懼

Many participants expressed anxiety and uncertainty about what was happening with their eyesight, and fear of permanent blindness.

很多參加者都對他們的眼疾感到不安，也害怕永久失明。

"Not sure what's happening with eyes"
"不知道眼睛怎麼了"

2.

Solitude
孤獨

The fear of the unknown was magnified by solitude, especially for those living alone.

孤獨會放大那種對未知的恐懼及不安，尤其對獨居長者為甚。

"Can't see clearly, need to call family to help"
"看不清，要叫家人幫忙"

3.

Reading Difficulties
難以閱讀資訊

Helplessness and fear would be intensified by the paradoxical situation of having to read information about their visual impairments.

眼疾長者面對的困境就是要閱讀眼疾相關的資訊，加劇他們的無助感及恐懼。

"Can't see eye drop's label for expiry date"
"看不到眼藥水的有效期限標籤"

"Can't read the appointment slips clearly
"看不清門診預約細節"

"Can't find hotline to call for eye appointment"
"不清楚相關查詢熱線"

4.

Inaccessibility of Services
觸及不到的眼科護理服務

Participants could not find walk-in eye health services. The need for referrals to visit an eye clinic delayed diagnoses and treatments.

參加者指往往找不到或很難找到眼科門診服務，而轉介也延遲了診斷及治療。

"Go to random doctor clinic to get referral"
"去隨機的醫生診所獲得轉診"

5.

Long Waiting Time
等待時間長

The long waiting time for check-ups extended discomfort and worsened their eye conditions.

漫長的檢查等候時間使他們的眼疾惡化。

"Wait from weeks to 3 months for specialists "
"預約專家需要等待幾周到三個月"

6.

Use of Home Remedies
需轉用非正式療法

In the face of these challenges, some participants turned to home remedies for temporary and short-term relief.

面對這些困難，不少參加者只能先用家中現有藥物或非正式舒緩方法，但這些方法未必適合他們的眼疾。

"Use leftover eye drops at home"
"使用家中用剩的眼藥水"

"Covering eyes with hot towels"
"以熱毛巾敷眼"

"Washing the eyes under water"
"用清水洗眼睛"

"Sit, rest, then see"
"坐下來休息一下，然後看看"

1. Cumbersome Procedures
程序繁瑣

During an appointment, participants still had to walk around the hospital through different rooms on different floors for procedures such as registration, tests, payments, and medication. The navigation was confusing, tiring, difficult, and potentially dangerous, given their impaired vision and limited mobility.

覆診期間，病人往往需要在醫院各部門來回完成不同程序，例如登記、付款及取藥。對於視障或行動不便的長者來說，這無疑令他們感到混亂及疲累，甚至可能為他們帶來危險。

"Walking ups and downs for different rooms"
"不同房間以及上落樓層走動"

"Tiring walking around"
"走動得好累"

"Can't see clearly to walk past"
"看不清走過頭了"

2. Long Waiting Time at Clinic
在醫院/診所等候時間長

Participants revealed that they waited for 1-2 hours for the eye specialist, and often spent a considerable part of their day at the clinic, mainly due to delays and miscommunication for the various procedures.

病人即使準時到了醫院，但等候眼科專科醫生的時間往往因各種延誤，一般需要一至兩個小時。連同乘車等出行時間，診症前後花了差不多一整天，使他們身心俱疲。

"Wait 1-2 hours to see eye specialist"
"等待1-2小時才能見到眼科專家"

"Doctors being late"
"醫生遲到了"

"Spend half day at eye clinic"
"在眼科診所度過半天"

"Wait for up to 1 hour after eye drop"
"滴眼藥後最多等待1小時"

3.

Difficulties Reading Displays and Signs
難以閱讀標示

Participants struggled to read notices and handouts and to follow general directions due to poor vision and sensory overload at the clinics.

部分標示對視障人士不夠清楚，標示上過多的資訊量也使他們難以消化。

"Hard to read queue and room displays when can't see clearly"
"當看不清楚時，很難閱讀隊列和房間顯示"

"Can't see general directions"
"看不到大致方向"

"Can't read handouts and instructions"
"無法閱讀講義和說明"

4.

Information Overload
資訊量過多

Participants also felt bombarded by complex instructions. Rapid explanations from specialists, interactions with multiple staff members, sometimes with bad attitudes, and the sheer volume of information received within a short time, were overwhelming."

長者覺得被複雜的指示轟炸，例如醫生急速的解釋、需要與數名職員溝通、職員的態度、短時間內過多的資訊量，都使他們感到混亂及疲累。

"Specialist talks too quick, hard to follow"
專家講話太快，難以跟上"

"Bad attitude from impatient staff"
"工作人員不耐煩，態度惡劣"

"Not enough time to digest information and
they think you can't see"
"沒有足夠的時間來消化訊息，他們認為你看不到"

5.

Feelings of Being a Burden
自覺是負累

Many participants lived alone or felt guilty asking family members for help. Even when family members accompanied them to the clinic, they would feel like a burden to the family. For example, practical issues such as parking for family members added to their stress.

很多長者都是獨居長者或者不敢向家人求助。即使有家人陪伴長者到診、在醫院等候及泊車等瑣事，也會讓長者覺得自己是家人的負累。

"Lives alone"
"獨自生活"

"Can't see clearly, need to call family to come and help"
"看不清，需要叫家人過來幫忙"

"Feeling like a burden for family"
"感覺自己是家庭的負擔"

6.

Tiring Transportation
舟車勞頓

Travelling alone to the clinic often required early departures and taxi rides which are physically and mentally draining.

覆診時間大多安排在清早，讓他們感到身心疲累。

"Need to take taxi for appointment"
"需要坐的士去預約"

"Leave home earlier to find eye clinic"
"提早出門去找眼科診所"

"Walk slower when can't see"
"看不見的時候走慢一點"

1. Lack of Tangibles to Bring Home
欠缺實體資訊

Many participants found it confusing and anxious leaving the clinic with no tangible records or handouts about their eye condition.

沒有紙本實物的記錄、報告或小冊子，讓他們因「無嘢揸手」而感到不安。

"Not handout to bring home for record"
"沒有帶回家記錄的講義"

"No follow up appointment slip & care instructions, medication use"
"沒有後續預約單和護理說明、藥物使用"

"Can't read & understand medical terms"
"無法閱讀和理解醫學術語"

2. Lack of Discharge Instructions
欠缺清晰的出院指示

Participants reported receiving insufficient instructions on post-appointment care, and difficulties reading instructions with impaired vision.

不少用家指出院指示有欠清晰，對視障人士來說難以閱讀。

"No clear instruction on discharge care before appointment"
"預約前沒有關於出院護理的明確說明"

"No staff ask about discharge difficulties"
沒有工作人員詢問出院困難"

"Can't read discharge instruction with impaired eye sights"
"視力受損無法閱讀出院說明"

3.

Financial Burden
財政壓力

From taxi rides to the unknown expenses in the future related to the eye conditions, the financial burden for the users and their families added to their stress.

健康衰退代表未來或有更多開支，對他們自己及家人造成財政壓力，加強他們覺得自己是負累的想法。

"Financial burden to take taxi"
"搭乘計程車的經濟負擔"

"Caregiver spent lots of time & money for parking"
"看護人花了很多時間及金錢來泊車"

4.

Inconvenience in Life
日常生活不便

The inability to complete simple tasks in daily lives, such as doing housework or picking up things due to impaired vision, added to their frustration, especially for those who live alone.

失去做家務及俯拾物件等簡單動作的能力，令他們出院後倍感沮喪。

"Can't cook or do housework with impaired sights"
"視力受損無法做飯或做家務"

The above pain points highlight that the stress and anxiety for elderly users extend beyond the medical aspect of eye care. A more comprehensive and patient-centric eye care service should be in place to ensure a more supportive and less stressful experience for these elderly patients.

上述痛點顯示長者用家在醫療過程以外感到的壓力。一個全面及以病人為本的眼科保健醫療系統應要顧及這些細節，減輕他們求診時的壓力及不安。

USERS' NEEDS
用家需要

Participants expressed different needs that could enhance their experience and outcomes in their eye health journey for more efficient and supportive eye examination processes. The variety of needs are intertwined and vital, but often overlooked:

為改善他們在眼科保健路上的體驗及成果,此項目的參與者提出了數項用家需要。這些需要對用家而言乃不可或缺,卻常常被忽視:

1. **Clear Explanations**
   清晰的解說

   Participants need clearer and more detailed explanations of the check-ups, the procedures, their diagnoses, the prescriptions, do's and don'ts etc.

   病人需要對驗眼的步驟、診斷及配藥流程有清楚的解釋。

2. **Logistical Assistance:**
   實務協助

   Logistical aspects such as transportation to and from the clinic, and navigation in the clinic during the check-ups should be taken care of, without which the examination process would be tiring, confusing, if not potentially dangerous.

   交通、尋路、出行時的扶持等實質協助,對視障及行動不便的長者都很重要,可減輕他們的疲累及風險。

3. **Psychological Comfort**
   心理慰藉

   Besides explanation of the "hard facts" of the medical procedures and their physical conditions, psychological support for their worries and fears are also important. For example, they might see themselves as a burden or become demotivated towards the treatment process.

   除了醫療程序及健康狀況等「硬性資訊」，心靈慰藉同樣重要，因為他們或會視自己為家人的負擔，而對康復及治療感到沮喪，失去動力。

4. **Companion**
   陪伴

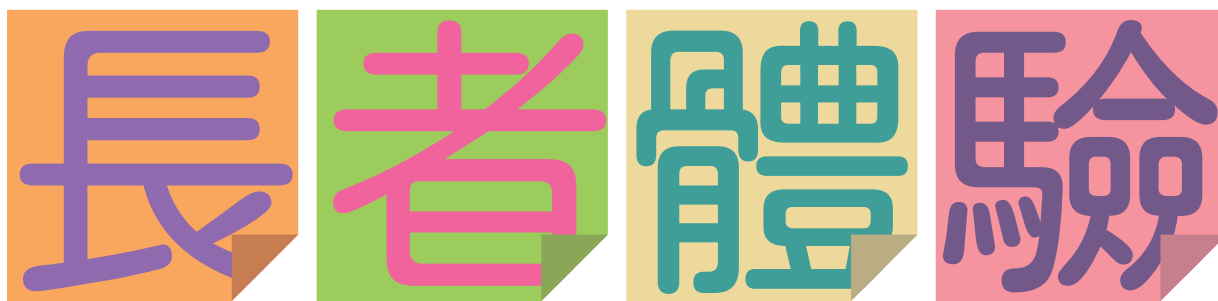   A companion can provide emotional and logistical support throughout the process.

   陪伴可在求診過程提供心理及實在的協助。

5. **Reassurance**
   肯定

   Understandably, patients need constant reassurance of their physical conditions and wellbeing, sometimes regardless of the severity of their conditions.

   病人經常需要醫生及子女等消除他們的疑慮，讓他們感到安定。他們需要的或只是口頭上的肯定，而這種肯定未必與他們的健康狀況相對。

長者體驗

While the above needs should be attended to throughout the eye examination process, the following are needs particular to different stages of the examinations as reflected by participants.

以上需要都是整個求診過程要考慮到的細節。以下則是在某個階段出現的需要：

Needs Before Eye Examinations
眼科檢查前的需要

1. **Direct Access to Suitable Specialists/Service**
   直接方便的醫療服務
   Direct access to the most appropriate specialist or service without the need for referrals would avoid unnecessary delays.
   無需轉介且伸手可及的眼科專科醫療服務，可防止病情惡化及盡快紓緩病人不安的情緒。

2. **Home-Based Teleconsultation**
   在家遙距診斷
   Teleconsultations would allow them to receive professional advice at home without travelling.
   透過電話或視像為病人診症的遠程醫療可避免病人舟車勞頓。

Needs During Eye Examinations
眼科檢查期間的需要

1. **One-Stop Services**
   一站式服務

   One-stop services where all necessary procedures can be performed in one place can avoid multiple visits.
   不少用家希望可以在同一個地方一次過完成所有程序，減少來回醫院的次數。

2. **Timely Consultation**
   準時的診症

   Consultations should start on time to avoid unnecessary waiting for the patients which could take hours from previous experiences.
   診症服務往往延遲開始，增加病人的身心負擔。

3. **Single Point of Contact**
   單一聯絡點

   Having one person to coordinate their clinic visits and to accompany them would simplify the process for the users and avoid unnecessary miscommunication. Meanwhile, a familiar face throughout the overwhelming procedures and environment would provide some degree of comfort for the elderly users.
   若病人可在診斷及求診過程期間只與單一聯絡點溝通，可簡化求診過程及避免誤會。而一張熟悉的臉孔，也可在累人的求診過程中，為長者帶來一點慰藉及安定。

4. Clearer Visual Signage
清楚的指示

Clearer visual signage in the clinics can aid navigation, especially for those with vision impairments.
清楚的標示有助病人在醫院尋路。

5. Physical Assistance Within the Clinic
實質的扶持

Elderly users need physical assistance moving around the clinics which can get crowded and disorienting.
病人在人多混亂的醫院環境中,需要體力上的扶持。

Needs After Eye Examinations
眼科檢查後的需要

1. Accessible Written Report
簡明的醫療報告

A comprehensive yet understandable written report detailing their examination results serves as a tangible record of their eye conditions which they can refer to later.

一份仔細簡明而長者看得懂的醫療報告，可讓他們在日後有需要時作參考，讓他們感到安心。

2. Treatment Options
療程選擇權

Patients need to be informed about the treatment options available to them and be given time for consideration before making decisions.

病人需要知道各種療程的細節，並有足夠時間考慮決定採用哪種療程。

3. Clear Follow-Up Appointment Details
清楚的覆診資訊

Participants stressed the importance of clear follow-up appointments instructions, including time, place, what to do or not do before the next appointments, and what to bring on the day of the appointments.

不少長者提及覆診資訊雜亂。覆診時間、地點、宜忌事項及覆診時需帶備物件等資訊，均需簡明列出。

Addressing these needs can ensure a more supportive and less stressful eye examination experience.

整個眼科療程應顧及這些需要，讓長者感到支持及減輕他們的壓力。

RECOMMENDATIONS AND FUTURE DIRECTIONS
建議及未來導向

RECOMMENDATIONS AND FUTURE DIRECTIONS
建議及未來導向

The pain points and underlying needs gathered from the workshops yielded the following recommendations for improving elderly users' eye health journey before, during, and after the eye check-ups.

是次項目得出了以上痛點及用家需要，並整合出以下改善眼科求診過程的建議。

1. ### Single Point of Contact
   單一聯絡點

   Having one person as the point of contact throughout the eye health journey to coordinate appointments and inquiries would simplify the process for the users and avoid unnecessary miscommunication. Seeing a familiar face throughout the overwhelming procedures and environment would also provide some degree of comfort for the users.

   病人若可在診斷及求診過程期間只與單一聯絡點溝通，可簡化求診過程及避免誤會。而一張熟悉的臉孔，也可在整個累人的求診過程中，為長者用家帶來一點慰藉及安定。

2. One-stop Service
一站式服務

All necessary procedures should be handled in one place in one visit to avoid multiple visits and to minimize movements which are challenging and potentially dangerous for users with visual impairment and limited mobility.

不少用家希望可以在同一個地方一次過完成所有程序，減少來回醫院的次數。

3. Mobile Application With Centralized Information
手機應用程式

Participants suggested the use of an accessible mobile application or a smart device to centralize related information and arrangements such as making appointments, retrieving health information and records, reading discharge instructions, and setting medication reminders.

有長者建議透過手機應用程式或智能裝置，集中眼科資訊如覆診細節、健康資訊、醫療記錄、出院指示及服藥提示等。

4. Personalization of Health Information via AI
人工智能化的個人健康資訊

Participants also proposed the use of Artificial Intelligence to generate personalized health reports, maintain medical histories, and assist with primary diagnoses. Users can be directed to real-person assistance if necessary.

參加者提出以人工智能提供個人化的健康報告、管理醫療紀錄、提供初步診斷，並在有需要的時候直接轉介予有關的人士，獲得協助。

5. User-Friendly Designs on Tangible Materials
簡明的設計

Clearer signage, coloured environments for easier recognition, easily understandable medical reports, and other friendly designs for people with dementia and visual impairments can aid navigation and avoid confusion and potential danger. Printed materials such as health reports and appointment slips with clear fonts and layouts can serve as tangible takeaways to assure and inform users.

清楚的指示、有顏色標記的環境、易於理解的醫療報告及其他友善設計，有助避免混亂及減低危險。而紙本資訊如健康報告及覆診紙則需要有清楚的字體及排版，讓長者易於閱讀及感到安心。

6. Increase or Regularize Local Eye Health Stations
增設或恆常化地區眼科中心

Increase or regularize the provision of local or district-based ophthalmic examination services. Examples include South District's ophthalmic examination service under the Signature Project Scheme from 2018 to 2024, where fundings were allocated to provide free and comprehensive eye examination service and health talks by ophthalmologists and optometrists for residents in the District. Similarly, the scheme included not only detailed eye and body examinations, but also follow-up care, same-day diagnoses, and scientific research. The possibility of increasing or regularizing such eye health stations, or even the possibility of launching mobile eye health trucks, should be further explored.

增設或恆常化地區或以18區劃分的眼科檢查中心,例如南區區議會在2018至2024年的「南區社區重點項目」眼科檢查計劃。計劃撥款為區內居民及長者提供免費全面的眼科檢查,除了提供眼科及身體檢查,也提供跟進檢查、即日診斷及讓大學進行科研。社會應進一步探討增設或恆常化這類地區眼科檢查中心,甚至以流動健康車的形式提供相關服務的可行性。

7. Escort Services
陪診服務

Addressing the stress and strain of coordinating clinic appointments, transportation, and procedures, and the lack of companions and psychological comfort, more escort services should be provided and made more accessible. Ideally, the escort should be the same person through the several appointments of one elderly user to address the need for a single point of contact for users and to provide a familiar face.

陪診服務可減低病人求診過程間的身心壓力。應盡量安排同一名陪診員陪伴,並提供單一聯繫點。

8. **More Active Promotion to Raise Public Awareness**
加強宣傳提高公眾意識
Promotions to raise public awareness of the need for friendly design solutions and policies can facilitate the development and implementation of the above solutions. Promotion strategies include public forums, partnerships with healthcare and design institutions, campaigns, collaborations with influencers and media, and advocacy.
公眾論壇、醫健服務與設計學院的聯乘、與網紅及新聞媒體的協作、團體倡議工作等都有助宣傳及提高公眾對長者眼睛健康及認知障礙症的意識。

The above recommendations reflect the community's needs for a more streamlined, personalized, and accessible eye health services journey, which may adopt manageable technologies suitable for the aged. Implementing these suggestions can significantly improve the experience and outcomes of older persons and even those with Dementia in seeking eye health services in the community.

這些建議活用長者友善的科技，令眼科求診過程更精簡、個人化及易用，提升用家在眼科醫療旅程中的體驗及成果。

Looking ahead, future efforts may involve expanding the use of advanced technologies, building a stronger bonding network of local eye health stations with community Optometrists and NGOs, and collaborating with technology providers and healthcare institutions to ensure broader access and effectiveness. Establishing universal practices and guidelines based on successful models developed from this project could further improve the quality of care.

展望未來，香港應引入更先進的科技、與視光師和非政府組織建立更強大的地區眼科中心網絡，且與科研機構和醫療機構合作。這不但能確保更廣泛及有效的眼科醫療旅程，更能基於本行動項目研發出的成功模型上建立一套通用的實踐指南，進一步提高眼科醫療護理的質素。

Furthermore, the community advantages of these initiatives go beyond individual care, providing opportunities to create age-friendly environments and improve healthcare accessibility for all age groups. By actively spreading the eye health and dementia message in community education programs, promoting awareness campaigns, and forming partnerships with government departments, Hospital Authority and non-profit organizations, we can foster an inclusive and supportive healthcare ecosystem that prioritizes the well-being of the elderly and PwD populations while benefiting the community as a whole. Through these strategic steps, the project does not only transform the eye health journey but also contributes to building healthier, more connected, and sustainable communities.

此外，這些措施所帶來的社會福祉遠超於個人層面，並提供機會創造長者友善的環境，改善所有年齡層獲取醫療服務的能力。透過在公眾間積極傳播眼部健康和認知障礙症的訊息、推動宣傳活動，以及與政府部門、醫院管理局和非政府組織建立夥伴關係，我們可以發展一個具包容性和支援性的醫療系統。通過這些策略性的步驟，本行動項目不僅改變了眼睛健康的旅程，也為建立更健康、更連結和永續發展的社區做出貢獻。

CONCLUSION
總結

CONCLUSION
總結

Informative and accessible eye health talks, open dialogues of co-creation workshops, interactive and reflective journey mapping sessions, simulation of eye health conditions, and comprehensive eye examinations with a diverse group including the elderly users, their caretakers, healthcare professionals, social workers, and optometrists – this project embodies innovation, collaboration, and empathy in healthcare awareness initiatives and has shed new light on the interconnection between eye health and cognitive functions.

富資訊性又易於與理解的眼睛健康講座、共創工作坊的交流與對話、促進互動及反思的「使用者旅程圖」活動、常見眼疾的模擬體驗、全面仔細的眼科檢查，以及匯聚長者、用家、照顧者、醫護專業人員、社工、視光師的多元化群組──是次行動項目體現了健康教育的同理心、創新及跨界別合作，讓社會進一步認識眼睛健康及認知能力之間複雜的關係。

With the double-ageing of built environments and population in Hong Kong, the awareness of and support for dementia-related ocular manifestations in Hong Kong still have room for improvement in terms of public awareness, understanding of related health information, and accessibility of specialized eye health services. This project was ambitious in attempting to tackle these aspects, but the outcomes generated were remarkable and far-reaching.

綜觀香港建築物與人口的「雙老化」對視障與認知障礙症人士的危機及迫切性，現時本港公眾對相關病理資訊的了解、專科服務的可達性及可負擔性、整體的公眾意識及支持都尚有進步空間。本項目冀一併處理此等面向是進取的，但項目的成果卻令人鼓舞，影響深遠。

This project's innovative approach to health education has broken down barriers of understanding. By simplifying complex topics and engaging participants in interactive sessions, the project has effectively clarified the processes and concerns surrounding eye health and cognitive impairments, such as the common misconception that "deterioration in eye health and cognitive impairment are inevitable effects of ageing". The tangible and bodily experiences of the simulation and the actual eye examination process were also good opportunities for users to realize the importance of eye health and to allay their fear of the unknown. This has fostered a proactive attitude towards healthcare, empowering individuals to take control of their health and wellbeing.

項目採用創新的公共衛生教育方法，透過簡化複雜的病理及互動交流，打破了社會不同持份者之間的隔閡，加深了社會對認知障礙症及眼疾的了解。例如，項目為參加者消除了「人老了難免要面對視障及認知能力衰退」這個普遍誤解、模擬眼疾的體驗活動讓長者了解眼疾的體感，舒緩他們對眼疾的不安與恐懼，鼓勵他們主動照顧好自己的安康，有助他們更積極地求診。

This project's approach differs from the conventional one-directional approach of informing the target audience of the elderly users. The co-creation workshops and journey mapping sessions provided an open and empathetic space for the elderly users to engage in mutual dialogues with their caretakers and healthcare professionals. Not only did this yield valuable user-oriented insights, the elderly users also felt respected and cared for, which might in turn motivate them to seek help more actively, as they know they are not alone on this eye health journey. The outcomes and empathetic processes could guide future initiatives and policies aimed at improving eye health and dementia care for the elderly.

與傳統的教育活動不同,這個項目並非單方面向受眾灌輸資訊,而是透過共創工作坊及「使用者旅程圖」等互動活動,提供開放且有同理心的空間,讓長者、照顧者及醫護人員展開雙向的交流與對話。這些開放的交流對話,不單為社會提供了珍貴的用家意見及感受,交流過程也可讓長者感到被尊重及關懷,讓他們知道在這個眼睛健康的旅途上並不孤單,推動他們在有需要的時候及早積極求醫。本項目開創先例,為未來同類型活動及政策制定提供具體參考。

This project signifies the constant quest for innovation in health awareness initiatives, but reminds us of the simple principles that should be kept in mind as we move towards a brighter, healthier future for all: prevention is just as important as cure, and that empathy and understanding should lie at the heart of all health measures.

本行動項目體現了健康教育的持續創新,也同時提醒我們一個簡單而重要的原則:預防與治療同樣重要。而同情及理解,是所有健康醫療政策的核心,這樣我們才可共同締造一個更光明、更健康、更多元的未來。

APPENDIX A
附錄A

Detailed Data Analysis on Comprehensive Eye Examination
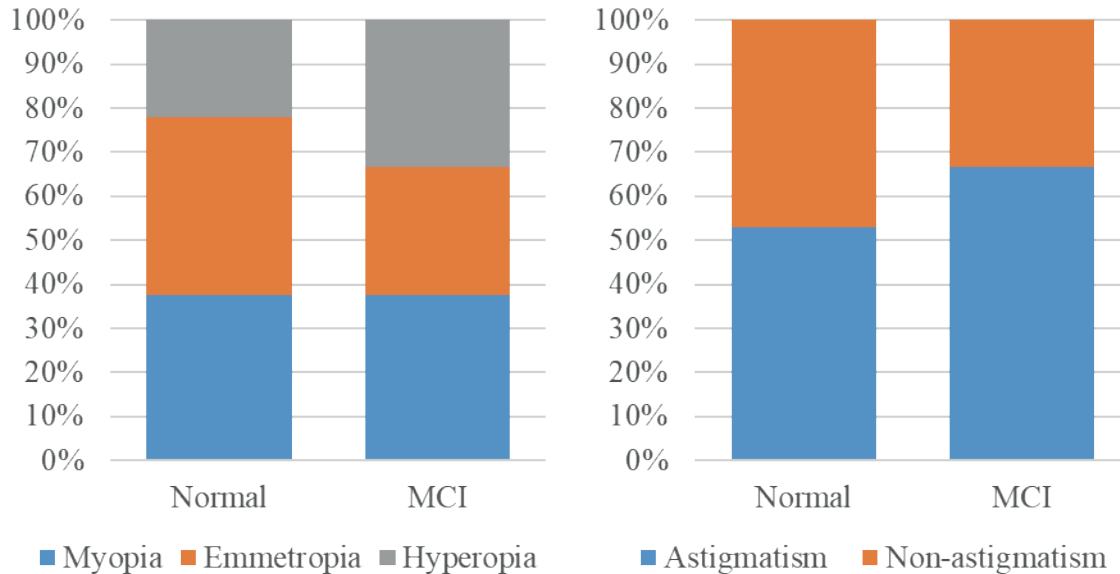**綜合眼科檢查詳細資料分析**

Figure 1. Distribution of refractive error in cognitive normal and MCI participants. The distribution was similar between two groups.
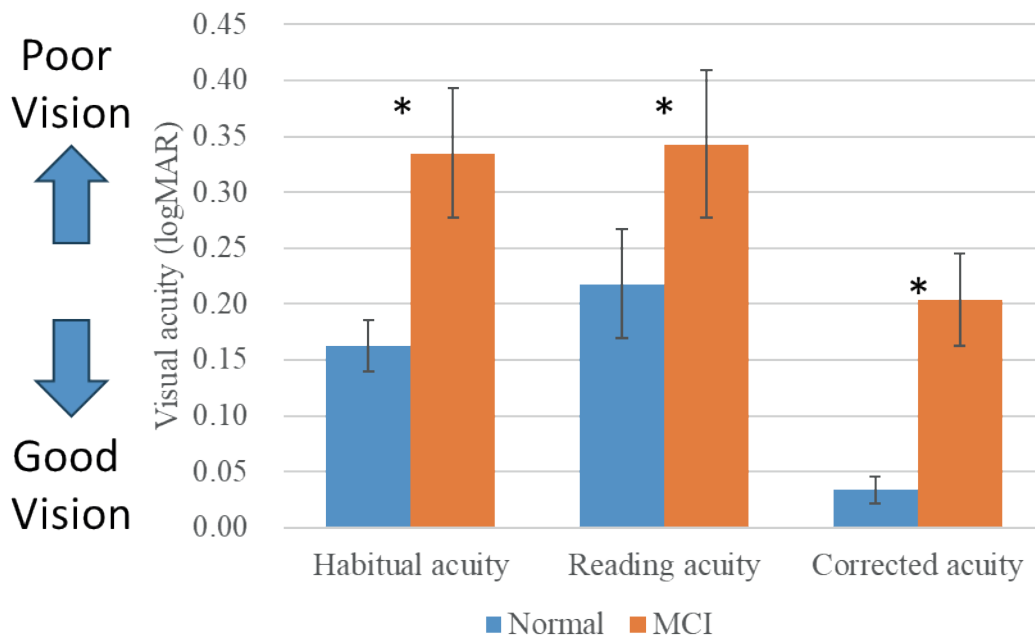
圖 1. 認知正常和 MCI 參與者的屈光不正分佈。
兩組之間的分佈相似。

Figure 2. Visual acuity in cognitive normal and MCI participants. The visual acuity was significantly worse in MCI participants in all habitual, reading, and best-corrected visual acuities than cognitive normal participants.

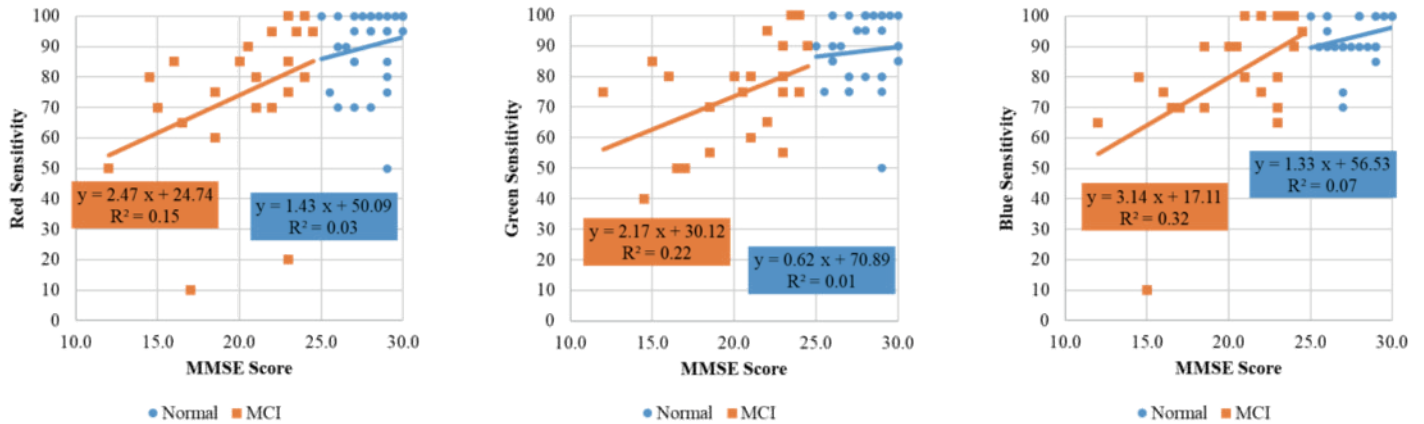圖 2. 認知正常和 MCI 參與者的視敏度。 MCI 參與者的所有習慣視力、閱讀視力和最佳矯正視力均顯著低於認知正常參與者。

Figure 3. Color sensitivities of the participants. Blue symbols indicate cognitively normal participants and orange symbols indicate MCI participants. The color sensitivity declined with cognitive function, especially for blue sensitivity.

圖 3. 參與者的顏色敏感度。 藍色符號表示認知正常的參與者，橙色符號表示MCI 參與者。發現參與者對顏色敏感度會隨着認知功能下降，尤其是藍色敏感度。

ABOUT POLY U JOCKEY CLUB "OPERATION SOINNO"
關於理大賽馬會社創「騷·IN·廬」

POLYU JOCKEY CLUB
OPERATION SOINNO
理大賽馬會社創「騷·In·廬」

Organised by the Jockey Club Design Institute for Social Innovation (J.C.DISI) at The Hong Kong Polytechnic University (PolyU) and funded by The Hong Kong Jockey Club Charities Trust, the 3-year social innovation project commenced in 2018 aims to innovate solutions, in collaboration with a wide spectrum of stakeholders, to respond to social challenges with a view to improving life in Hong Kong. J.C.DISI puts its strategic focus on tackling the combined impact of "Double Ageing" (ageing of people and building) in Hong Kong, the programme would engage the trans-disciplinary forces of academia, non-governmental organisations, professional bodies, members of the public, corporations and the Government to generate innovative ideas and practical actions

由香港理工大學（理大）賽馬會社會創新設計院主辦及香港賽馬會慈善信託基金捐助，於2018年開展，計劃為期三年，以期匯集社會各方，以創新理念和務實可行的社會創新方案，應對多項社會挑戰，共同改善香港的生活。以應對香港「雙老化」（即人口老化及住屋老化）的複合效應為工作的策略焦點，聯合學術界、非政府機構、專業團體、熱心的社會人士、企業和政府，攜手構建創新方案，並按此制訂建議的實際行動。

ONE FROM HUNDRED THOUSAND
「十萬分一」社 創 研 討 會

"One from Hundred Thousand" — to organise a series of participatory symposia and workshops open to the public to collect views on social issues, facilitate discussion and co-create solutions. J.C.DISI names the platform based on the belief that if one person from every 100,000 people (i.e. 70+ persons from the 7 million+ population of Hong Kong) can sit together and contribute their time, passion, knowledge and creativity, they can innovate solutions for a specific problem.

「十萬分一」社創研討會 — J.C.DISI相信，假若每十萬人之中有一人，即香港七 百多萬人口當中的七十多名市民，能貢獻時間、熱誠、知識與創意，攜手合作，定能為特定的社會議題帶來創新的解決方案。透過一系列的參與式研討會及工作坊，收集市民對社會議題的意見、促進討論，並共同設計務實和創新的方案。

ACTION PROJECTS
社創行動項目

"SoInno Action Projects" — to collaborate with non-government organisations, professional bodies and academia for developing innovative ideas generated at "One from Hundred Thousand" into designs or prototypes.

社創行動項目 — 聯合非政府機構、專業團體和學術界,把「十萬分一」社創研討會上衍生出來的創新理念,轉化成可以執行的設計及專案原型。

DESIGN EDUCATION
啟迪創新習作

"SoInno Design Education" — to introduce social innovation and design thinking into the curriculum of secondary school education to nurture students as social innovators. Social innovation workshops will be organised for students and teachers and multi-media interactive teaching kits will be developed in this regard.

啟迪創新習作 — 將社會創新和設計思維引入中學課程，培育青年成為社會創新推動者，內容包括為中學師生開設社會創新工作坊、製作多媒體互動教材等等

KNOWLEDGE PLATFORM
社創知識平台

"SoInno Knowledge Platform" — to document and disseminate for public use the social innovation experience and knowledge generated from the programme through various formats, including academic papers, videos, design and practice guidelines, case study reports, workshops, regional and international conferences and exhibitions.

社創知識平台 — 以不同形式（如學術論文、短片、設計與指引、個案報告、工作坊、地區及國際會議、展覽等），記錄是項計畫的各環節，包括社會創新過程、 創造的方案與知識等等，並公開予公眾參考應用。

Enquiry
查詢

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