URBIS

EVALUATION OF THE EMBEDDING EYE HEALTH PREVENTATIVE CARE INTO PRIMARY CARE PILOT PROJECT

Final Report

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We acknowledge, in each of our offices, the Traditional Owners on whose land we stand.

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CONTENTS

FIGURES

TABLES

ACRONYMS

Acronym	Description
ABS	Australian Bureau of Statistics
ACCHOs	Aboriginal Community Controlled Health Organisations
BEA	Break-Even Analysis
CFEH	Centre for Eye Health
CPD	Continuing Professional Development
DALY	Disability-adjusted-life-years
EMPHN	Eastern Melbourne Primary Health Network
EOI	Expression of Interest
GP	General practitioner
GPMP	General Practitioner Management Plan
Gippsland PHN	Gippsland Primary Health Network
KEQ	Key evaluation question
LGA	Local government area
Murray PHN	Murray Primary Health Network
NWMPHN	North Western Melbourne Primary Health Network
PDSA	Plan-Do-Study-Act cycle of improvement
PPP	US Purchasing Price Parity
PHN	Primary Health Network
QI	Quality improvement
RACGP	Royal Australian College of General Practitioners
SME	Subject Matter Expert
TCA	Team Care Arrangement
The Department	Victorian Department of Health
The Pilot	Embedding Eye Health Preventative Care into Primary Care Pilot Project
Vision 2020	Vision 2020 Australia
WVPHN	Western Victoria Primary Health Network

EXECUTIVE SUMMARY

The Embedding Eye Health Preventative Care into Primary Care Pilot Project (the Pilot) aimed to increase eye screening rates and detection of eye conditions/disease for at-risk groups in Victoria and to reduce the prevalence of avoidable blindness and vision loss. It also aimed to improve communication pathways between general practice and eye care providers. The Pilot involved the design and implementation of quality and systems improvement to embed eye health screening, management, and referral into primary care as well as the development of education modules for health professionals in a range of topics related to eye health.

THE PILOT

The Victorian Department of Health (the Department) engaged Murray Primary Health Network (PHN) in partnership with Eastern Melbourne Primary Health Network (EMPHN) to lead the development and implementation of the Pilot. Vision 2020 Australia was engaged to develop online educational modules and webinars relating to the identification, treatment and diagnosis of eye conditions. These materials were accessible by all Victorian health professionals and were specifically promoted to participating practices.

Forty-eight general practices from five PHNs in Victoria were recruited for the Pilot. This included Murray PHN (lead PHN), EMPHN (lead PHN), Gippsland PHN, North Western Melbourne PHN (NWMPHN) and Western Victoria PHN (WVPHN). Two practices withdrew from the Pilot due to lack of staff capacity to fulfil project requirements. Each participating practice implemented a range of quality improvement (QI) activities tailored to the needs of the practice and patient population. These were largely focused on embedding eye health assessments into standard protocols and documentation.

EVALUATION APPROACH

The goals of the evaluation were to explore and assess the implementation, outcomes, and value for money of the Pilot. The evaluation focused on defining the Pilot's successes, enablers and barriers, changes to systems, outcomes for patients, practices, clinicians, and the sector.

The evaluation included the following data sources:

Table 1 Data sources used in the evaluation

Data Source	Key Insights
Quantitative analysis of Pilot data including administrative data, survey data, usage and engagement data from Vision 2020, and website usage.	▪ Understanding of changes that occurred in practice systems and practitioner understanding as a result of the Pilot. ▪ Rates of referral, common patient outcomes and relationships between primary care and eye health specialists. ▪ Understanding the use of HealthPathways and mechanisms to support effective referrals to eye health practitioners. ▪ Changes in knowledge and capability uplift among clinicians and in the sector.
Qualitative data analysis included thematic and content analysis of responses to the baseline and post-pilot survey questions, case studies and reflective reports from each PHN.	▪ Experiences of Pilot implementation within practices including key barriers and enablers. ▪ Key patient demographics and experiences with participating GPs and practices. ▪ Enablers and barriers to implementation at a PHN level.
Economic analysis including a break-even analysis which considers the value of the types of benefits delivered, and the level to which outcomes would need to be substantiated above a baseline for the program to cover both direct and indirect costs.	▪ Total costs of delivering the Pilot, including the time and resources of participating practices. ▪ Estimation of the value of benefits being delivered, with a weighted average of over $6,000 per early intervention. ▪ Indication of a high likelihood that value-for-money is being delivered. ▪ A demonstration of how the Pilot's efficiency may improve after accounting for set-up costs.

SUMMARY OF KEY FINDINGS

The Pilot was successfully implemented by 46 practices from the five participating PHNs and resulted in 3,599 referrals being made for an eye assessment, with 1,245 referrals (35%) receiving feedback from an optometrist/ophthalmologist. Participating GP practices reported changes to their standard care protocols and documentation to incorporate eye health screening. All the practices reported including eye health screening as a part of some of their health assessment templates and 72% of practices reported included eye health screening as part of all health assessment templates.

Changes to care protocols resulted in increased patient referrals for eye health assessment with 83% of participating practices referring to optometry and 39% referring to ophthalmology more often than before the Pilot.

Education modules developed by Vision 2020 played a key role in improving eye health screening with 100% of practice nurses and 93% of GPs reporting an increase in their capability to provide eye care.

Changes to care protocols and increased capability of GPs and practice nurses improved care for patients presenting for:

1. an eye health related concern. This change was due to increased capability of primary care providers to identify eye health conditions and improved knowledge of appropriate management.
2. management of chronic diseases that may impact their eye health. This was due to changes in frequency of eye screening and increased knowledge of the impact of chronic diseases on eye health.
3. an issue unrelated to eye health and were identified as being at risk due to increased knowledge of key risk factors for eye disease.
4. The economic analysis indicates that future iterations of the Pilot are likely to continue to provide significant benefits due to the high impact outcomes and potential scalability. The Pilot's break-even point of 325 additional early interventions above standard clinical practices is likely to be met based on Pilot outcomes data. Set-up costs including training packages and the establishment of data systems will not continue for any continuation or expansion of the Pilot, and data collection processes are likely to be more efficient over time. To demonstrate the impact on scalability, a sensitivity analysis at a 20% and 50% cost reduction was completed, taking the break even point to 260 and 162 respectively. This indicates that the Pilot is value for money to the state of Victoria and is a scalable model.

KEY OUTCOMES OF THE PILOT

Outcomes for practices	▪ GPs successfully integrated eye health screening into standard care practices. ▪ The Pilot enhanced formal referral pathways and correspondence between GPs and eye health specialists, with GPs referring more to optometry post-pilot. ▪ Some GP practices identified barriers to patients attending further eye care appointments and attempted to address these.
Outcomes for clinicians	▪ GPs and practice staff had good engagement with Vision 2020 education modules and these enabled improvements in clinical practice in identifying and treating eye health conditions.
Outcomes for the sector	▪ Vision 2020 education resources support capability uplift across the sector more broadly, extending the reach and impact of the Pilot.

Outcomes for patients	
	▪ The Pilot supported referrals for at-risk patients with those aged over 40, those with hypertension and/or those with diabetes making up the majority of referrals. ▪ Correspondence was received for 35% of patient referrals. Outcomes of these referrals included diagnoses of cataracts (14%), glaucoma (6%), refractive errors (8%), diabetic retinopathy (5%) and macular degeneration (3%). ▪ Case studies provided by practices indicated that the Pilot had supported successful integration of eye health into standard care practices in three distinct ways: improve identification of the need for eye screening, in-practice assessment, and referral process.

Considerations for future Pilot iterations

The Pilot created value through the development of resources and templates, and these could support QI activities related to eye health being implemented efficiently across a broader range of GP practices. Additionally, the education modules created by Vision 2020 support an efficient scaling-up of the Pilot through being offered to primary care providers across Victoria.

A key challenge for the future and scalability of the Pilot is the manual data collection requirements. A lack of dedicated fields for recording eye health information in general practice management software resulted in data being collected manually. This contributed to significant direct and indirect costs for both PHNs and practices. In addition, the data collected was not able to provide individual level information about outcomes for patients with eye health issues identified through the Pilot. Advocating with general practice management software providers to include dedicated fields for recording eye health information would create significant efficiencies within the Pilot and allow for more sophisticated understanding about outcomes and impacts.

Success of the Pilot was heavily reliant on communication between GPs and optometrists. A stronger emphasis on relationship building between them could help improve any future iterations of the Pilot.

Overall, while the direct and indirect costs of the Pilot were high due to set-up and administrative costs, prevention of and early intervention for eye diseases can avoid significant economic costs. These costs are related to personal health and wellbeing, health system costs, and personal care costs. Given a baseline number of referrals and diagnoses was not possible to construct over the evaluation period, the level to which additional early interventions occurred was not able to be estimated and hence a break-even analysis was conducted. The analysis found that for the Pilot to break-even and cover the economic costs of delivery, a total of 325 early interventions would need to be justified as being delivered in addition to baseline practice outcomes, based on the blend of diagnoses observed during the Pilot. This is a total of 26% of all diagnoses being early interventions, or 9% of all referrals from the trial eventuating in an early diagnosis. The sensitivity analysis has shown that if there was a future iteration of the Pilot this would likely to continue to provide significant benefits due to the high impact nature of outcomes and potential economies for scalability. It is likely that the Pilot met the break-even point. Scalability should only improve due to fixed set-up costs, such as the development of training materials and data collection tools, will no longer be experienced. Furthermore, if the administrative burden of the Pilot can be lowered through improvements, the Pilot will be even more likely to achieve a break-even or create a net-benefit outcome as demonstrated through the sensitivity considerations of a 20% and 50% reduction in costs.

1. INTRODUCTION

Eye health conditions such as refractive errors, cataracts, macular degeneration, glaucoma, diabetic retinopathy, and low vision and blindness, can have a significant impact on a person's quality of life. [1] In Australia, over 13 million people have one or more chronic eye conditions,[2] and in Victoria alone, incidence of vision impairment or blindness is expected to rise to 138,000 by 2030.[3]

Some groups of people experience greater risk of poor eye health, with Aboriginal and Torres Strait Islander people suffering vision impairment and blindness at three times the rate of other Australians.[4] Generally, risk increases where people have family history of eye disease, smoke, have diabetes, or experience additional barriers to accessing services.[5]

Some eye conditions are preventable if detected and treated early. Many eye diseases, such as glaucoma, diabetic retinopathy, and age-related macular degeneration, may not present noticeable symptoms until irreversible damage has occurred. Early detection allows for prompt treatment, which can help prevent or delay vision loss. Improving access to preventative care and early intervention is key in reducing these high prevalence rates. Primary care services, particularly general practitioners (GPs), can play a key role in prevention. GPs have contact with patients who experience risk factors for eye disease, such as diabetes, meaning they are well placed for preventative screening and referral.[6] Increased coordination between GPs and eye specialists has been identified as key in enabling a preventative health response.[7] Accessing treatment as early as possible through a preventative/ early intervention response can limit or slow the rate of vision loss due to eye disease.[8]

EMBEDDING EYE HEALTH PREVENTATIVE CARE INTO PRIMARY CARE PILOT

The Victorian Department of Health funded Murray PHN in partnership with EMPHN to lead the development and implementation of a quality and systems improvement project that aimed to embed eye health screening, risk management and referral into general practice. Key elements of the Pilot included the development of specific education and training modules (by Vision 2020), development and implementation of a quality improvement Pilot, data collection, and engagement with eye health specialists to improve continuity of care for patients.[9]

The 'Embedding Eye Health Preventative Care into Primary Care Pilot Project' (the Pilot) recruited 48 general practices from five Victorian Primary Health Networks. This included the Murray Primary Health Network (Murray PHN), EMPHN, Gippsland Primary Health Network (Gippsland PHN), North Western Melbourne PHN (NWMPHN), and Western Victoria Primary Health Network (WVPHN).

The Pilot aimed to increase eye screening rates and detection of eye conditions/disease for at-risk groups across Victoria, to reduce the prevalence of avoidable blindness and vision loss, as well as improve communication pathways between general practice and eye care providers. The Pilot began in February 2023 and concluded in December 2023, including an eight-month quality improvement phase (March to October 2023) followed by an evaluation phase.[10]

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1 Australian Institute of Health and Welfare (AIHW). (2023). *Eye health*. Retrieved from https://www.aihw.gov.au/reports-data/health-conditions-disability-deaths/eye-health/overview

2 Department of Health and Aged Care. (2022). *Eye Health and Vision*. Retrieved from https://www.health.gov.au/topics/eye-health-and-vision

3 Vision Australia. (2014). *Vision Australia Submission to the inquiry into social inclusion and Victorians with a disability*. Retrieved from https://www.parliament.vic.gov.au/images/stories/committees/fcdc/inquiries/57th/Disability/Submissions/112_Vision_Australia.pdf

4 Department of Health and Aged Care. (2022). *Eye Health and Vision*. Retrieved from https://www.health.gov.au/topics/eye-health-and-Vision

5 Vision 2020 Australia. (2020). *About eye health*. Retrieved from https://www.visioninitiative.org.au/health-professionals/about-eye-health

6 Watson et al. (2021). 'Barriers and facilitators to diabetic retinopathy screening within Australian primary care', *BMC Family Practice* 22(239): doi.org/10.1186/s12875-021-01586-7.

7 The Royal Australian and New Zealand College of Ophthalmologists (RANZCO). (2022). *RANZCO's Vision for Australia's Eye Healthcare to 2030 and beyond*. Retrieved from https://ranzco.edu/wp-content/uploads/2023/01/RANZCO-Vision-2030-and-beyond-Final.pdf

8 Department of Health. (2019). *A better view: National Strategic Action Plan for Macular Disease*. Retrieved from https://www.health.gov.au/sites/default/files/documents/2019/09/national-strategic-action-plan-for-macular-disease_1.pdf

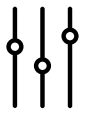
9 Murray Primary Health Network. (2024). *Embedding Eye Health into Primary Care Pilot Project Final Report*. Pp.12-13.

10 Ibid.

Each participating PHN engaged up to 10 general practices via an open or targeted expression of interest process with a total of 48 practices recruited to participate in the Pilot. Two practices withdrew from the Pilot due to a lack of staff capacity to fulfil the project requirements. The remaining 46 practices fulfilled all requirements of the Pilot (outlined in Table 2).[11]

The Pilot was implemented across three key stages.[12] PHN staff supported practice staff throughout all phases of the Pilot through regular meetings (at least monthly) and ongoing phone and email support.

Table 2 The Pilot's implementation phases

Implementation phase	Description
 **Eye health training**	Practice project staff were required to complete the Vision 2020 Australia online training modules relevant to their health profession. Practices were also encouraged to attend or watch the recording of the webinars hosted by Vision 2020 Australia throughout the course of the Pilot.
 **Quality improvement activities**	Practice project staff implemented systems or made changes that would help to identify, refer and manage patients at-risk of eye disease. Quality improvement activity examples were provided in the induction package; however, practices could develop and implement their own activities based on their individual practice needs and patient cohort. These activities can be grouped into six categories: ▪ Questionnaires to collect information about the patient's lifestyle and medical history. ▪ Incorporating screening questions to existing eye health assessments. ▪ Incorporating templates for referrals to optometrists. ▪ Updating clinical software such as including a function or feature to prompt eye health reminders. ▪ Relationship building such as hosting seminars or information sessions with optometrists and patients. ▪ Updating disease care or management plans to include eye health assessments and screening questions. ▪ Promotional material such as social media posts, flyers and posters and newsletters to educate patients and practices on eye health.
 **Data tracking/collection**	Each participating practice was required to track the number of referrals made to optometry and ophthalmology providers from commencement of the project to 31 October 2023. A patient tracking template was provided for internal practice use. Some practices tracked the referrals for a single GP (i.e. the GP participating in the project) or for multiple GPs, depending on who was in their project team and their internal process set up to track referrals. Practices submitted aggregated referral data and aggregated outcome data to the PHN monthly using a data collection template supplied by the PHN. PHNs then combined all practice-level data.

Vision 2020 Australia was engaged to develop online educational modules and webinars that could be accessed by all Victorian health professionals and in particular, support practices and health professionals participating in this Pilot.

Murray PHN developed a data summary report upon completion of the Pilot (see Appendix B). The purpose of the report was to provide a summary of the data collected, the feedback received, and the experiences of

[11] Ibid.

[12] Ibid.

PHNs, practices, and subject matter experts involved. This report is referenced as a data source throughout this report and is referred to in-text as the 'Pilot final report'.

THIS DOCUMENT

This is the evaluation report for the Embedding Eye Health Preventative Care into Primary Care Pilot Project. The remainder of this document is structured as follows:

- Section 2 outlines the evaluation approach, key evaluation questions, and the methodology used. It also outlines the limitations
- Section 3 highlights how the Pilot is being implemented in the relevant PHN areas.
- Section 4 presents findings on the enablers and barriers to implementation.
- Section 5 outlines the service level outcomes from the Pilot. This includes outcomes for practices, clinicians and the sector.
- Section 6 demonstrates the outcomes that have occurred for patients as a result of the Pilot.
- Section 7 outlines an economic and social impact assessment of the Pilot, including a break-even analysis.
- Section 8 highlights key opportunities to improve the Pilot.

2. EVALUATION APPROACH

Urbis has been contracted by the Department to evaluate the Pilot. This evaluation focuses on the implementation process undertaken and outcomes generated when embedding eye health preventative care into primary care. The evaluation highlights key lessons, enablers and barriers in the design and implementation of the Pilot, and opportunities for further improvement to support the implementation of the Pilot beyond the pilot phase.

The purpose of the evaluation is to assess:

- effectiveness of the Pilot
- extent to which it is achieving Pilot outcomes
- extent to which it is reaching at-risk target groups
- efficiency of the Pilot (including the extent to which it has provided value for money).

2.1. KEY EVALUATION QUESTIONS

This evaluation is guided by six key evaluation questions (KEQ) and sub-KEQs as outlined below.

KEQ 1 How is this initiative to embed eye health prevention in primary health care being implemented in the relevant PHN areas?	1.1. How have the relevant systems and processes been established to successfully support and embed in primary care the systematic delivery of care to preserve and maintain eye health? 1.2. What systems and processes have been established to make the delivery of eye health prevention in Victoria sustainable? 1.3. How has the initiative been tailored in its delivery to meet the specific needs of target at risk groups? 1.4. How has the initiative improved communications/processes between primary health practices and local optometrists to strengthen access to eye care?
KEQ 2 What are the key enablers and barriers to implementing eye health preventative care in primary care?	2.1. Have there been any positive consequences, including unintended consequences? 2.2. Have there been any negative consequences, including unintended consequences?

KEQ 3

What changes are happening as a result of this initiative to systems (health professional awareness, knowledge, practice, processes, pathways)?

3.1. How has access to eye health training through this initiative impacted care provided by primary healthcare professionals?

3.2. How has the initiative led to improvement in identifying at risk patients and/or diagnoses of eye health problems by primary health service providers?

3.3. How have general practices changed their General Practice Management Plans (GPMPs) in order to incorporate eye health and improve the subsequent provision of care?

3.4. How have Health Pathways been used to diagnose or manage eye conditions and/or refer at risk patients for specialist care?

3.5. What quality improvement activities were undertaken by the general practice through this initiative? Are they sustainable?

3.6. Did the initiative achieve any other benefits?

KEQ 4

What outcomes are happening as a result of this initiative?

4.1. How has the initiative led to eye examinations for target at risk groups being detected/treated at the practice level?

4.2. How has the initiative resulted in referrals for eye tests by primary healthcare professionals?

4.3. How has the initiative resulted in target at risk groups attending eye examinations they were referred to?

4.4. How has the initiative led to the complete cycles of care to manage the eye conditions/disease?

KEQ 5

What else is needed to improve systems to preserve and maintain eye health and improve eye health outcomes for patients in these PHN areas?

5.1. How could the initiative achieve better outcomes?

5.2. Which parts of the initiative design and model were the most feasible at achieving the outcomes?

5.3. What changes are needed to the initiative design and model to support the sustainable delivery of eye health preventative care in general practice?

KEQ 6

To what extent has the initiative delivered value for money?

6.1. Has the initiative operated and delivered activities in line with its original scope, budget and expected timeframes?

6.2. What were the major categories of expenditure and cost drivers?

6.3. What is the unit cost of initiative delivery?

6.4. Were the initiative outcomes achieved proportionate to the investment?

6.5. What efficiencies could be recognised in potential future delivery of the activities?

2.2. METHODOLOGY

This evaluation was informed by Pilot documentation and data collected from practices and PHNs, provided by the Department. This included:

- baseline data reports
- administrative data (through PowerBI and data reports)
- case studies
- post-pilot surveys
- Vision 2020 training and education reports
- PHN reflective practice reports
- Pilot final report
- HealthPathways data.

Urbis did not undertake any primary data collection for this evaluation.

A summary of the data provided by the Department is provided overleaf. Table 3 outlines each data collection tool and the methodology of data collection.

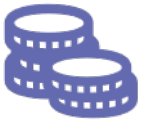
Table 3 Data collection summary provided by the Department

Data Source	Pre-pilot survey	Pre-pilot data sheet on "at risk groups" and use of HealthPathways	Referral and outcome data	Post- Pilot Practice Survey (quantitative)	Post-pilot Practice Focus questions (qualitative)	PHN Reflection	Case Study	Post-pilot data sheet on "at risk groups" and use of HealthPathways
Collection tool	Microsoft FORMS	Excel	Excel template	Microsoft FORMS & WORD document	Microsoft FORMS & WORD document	Microsoft FORMS	Microsoft WORD	Excel template
Process for data collection	Lead PHN created the pre-Pilot survey in Microsoft Forms and set a link to each PHN for duplication. Each PHN created their own duplicate pre-pilot survey and distributed this to their participating practices for completion. Each PHN submitted excel data file of deidentified responses to Lead PHN. Lead PHN aggregated data to master excel data file.	Lead PHN created excel templates. Each PHN collected data via POLAR or PENCAT for "at risk" groups. Each PHN collected HealthPathways usage data. Each PHN sent aggregated data to lead PHN.	Lead PHN created excel templates (one for practices and one for PHNs). Each PHN sent the practice template to each participating GP practice. Each PHN sent aggregated practice data to Lead PHN monthly throughout the Pilot.	Lead PHN created the post-pilot survey in Microsoft Forms and a copy in Microsoft Word and distributed these to all PHNs. Each PHN sent the Microsoft Word version of the survey to each practice for completion prior to wrap up meeting. Each PHN reviewed the completed survey from each participating practice to determine if any clarification is required. This information was also used to help guide the discussion with each practice around the focus questions. PHNs asked each participating practice the focus questions and recorded their responses. PHNs then entered responses from completed survey and focus questions into corresponding online Microsoft Form for each practice.		Lead PHN created a template in Microsoft Forms and sent link to each PHN for completion.	Lead PHN created a template and sent to each PHN. PHNs distributed the template to each practice for completion. PHNs collated all case studies (removing practice identifiers) and sent via email to Lead PHN.	Lead PHN created excel templates. PHNs collected data via POLAR or PENCAT for "at risk" groups. Each PHN collected HealthPathways usage data. Each PHN sent aggregated data to lead PHN.

Once data was received, Urbis undertook a structured process to review the data that was available for analysis. Each data source was mapped against the sub-KEQs to determine which variables would align with each question. This matrix was completed in Excel in January 2024 and was shared with the evaluation team and discussed prior to any analysis taking place. This enabled the identification of any gaps within the existing dataset and prompted early discussion regarding analysis and reporting methods that would best suit the nature of the data.

A mixed-methods approach to analysis was undertaken, as summarised below in Table 4. Analysis was guided by the KEQs and aimed to understand the implementation and effectiveness of different Pilot interventions. All analysis was conducted concurrently between January 2024 and February 2024.

Table 4 Summary of the methodology used in this evaluation

	**Quantitative data analysis** included: ▪ closed-ended and numerical input questions of the baseline and post-pilot survey. Analysis was focused on understanding changes that occurred in practice systems and practitioner understanding as a result of the Pilot. ▪ administrative data (including referrals and patient outcomes). This data was used to understand rates of referral, common patient outcomes and relationships between primary care and eye health specialists. ▪ page view data and practice usefulness ratings of ophthalmology and optometry HealthPathways. Analysis was focused on understanding the mechanisms that enabled stronger referrals to eye health specialists, and the Pilot's impact on these pathways. ▪ a training and education report prepared by Vision 2020 Australia. Engagement and completion rates were extracted from this source and informed findings on knowledge and capability uplift amongst clinicians and in the sector. Data was analysed using descriptive statistics (e.g. percentages) in Excel. Where possible, pre- and post- Pilot results were compared.
	**Qualitative data analysis** included thematic and content analysis of: ▪ qualitative responses to the baseline and post-pilot survey questions and the PHN reflection files. Analysis was focused on experiences of Pilot implementation within practices including key barriers and enablers. ▪ case studies. Patient journeys were coded based on the case study template and analysed to ascertain key points of Pilot intervention. The case studies were also used to understand key patient demographics and experiences with participating GPs and practices. ▪ reflective reports prepared by each PHN. PHN feedback informed understanding of enablers and barriers in implementation, and verified practice-level qualitative data. A coding framework was developed for this qualitative analysis, ensuring key insights related to each evaluation question were captured as well as any unexpected or unintended findings.
	**Economic and social impact analysis** included measurement of the pilot's value-for-money to the community, health system and Victoria. Data available for the evaluation was not able to determine what the baseline, or non-intervention, outcomes would have been over the evaluation period, meaning a cost-benefit analysis could not be conducted. In line with DTF guidelines, a break-even analysis (BEA) was instead conducted, which determines if the benefits of the Pilot are likely to cover the economic costs of delivery. Benefit values have been based on a review of literature relating to preventative eye health Pilots as well as a synthesis of the qualitative and quantitative data analysis described above. This analysis gives a clear indication the likelihood that the Pilot is currently providing a net-benefit to Victoria, and how this may change if the Pilot scales across Victoria.

2.3. EVALUATION LIMITATIONS

There are some limitations to the evaluation that should be noted when reading this report:

- **Pilot maturity**: The Pilot has only completed the Pilot stage over a short timeframe. This has limited our ability to assess longer-term outcomes including the sustainability of Pilot interventions and ongoing outcomes for clinicians, patients and the sector. Where relevant, these limitations have been noted throughout the report.
- **Data sources**: The Pilot data in scope for the evaluation may only capture certain aspects of the Pilot. As no primary research was undertaken by Urbis, the depth and breadth of evaluation findings is inherently limited by the templates set by the Department. Some data may represent key components of Pilot design but may not be able to be attributed directly to the Pilot (e.g. HealthPathways usage data), whereas robust analysis of other data relies on a pre-Pilot baseline which was unavailable for this evaluation (e.g. analysis of increased referrals and correspondence). Such data limitations have been included throughout the report. Suggestions for future data collection have also been included.

3. PILOT IMPLEMENTATION

This section presents findings on how the Pilot to embed eye health prevention in primary health care is being implemented in the relevant PHN areas (KEQ.1). It outlines how relevant systems and processes have been established to support the project, including ensuring the ongoing sustainability of the delivery of eye heath prevention in Victoria and tailoring delivery to meet the specific needs of at-risk groups.

Table 5 provides a summary of key findings aligned with the sub-KEQs that informed this section. A detailed analysis of findings in provided thereafter.

Table 5 Summary of findings against sub-KEQs 1.1-1.4

Sub-KEQ	Key findings
1.1 How have the relevant systems and processes been established to successfully support and embed in primary care the systematic delivery of care to preserve and maintain eye health?	▪ Murray PHN and EMPHN successfully led the development of key systems and processes to support implementation of the Pilot. ▪ Key systems and processes included developing a range of QI activities, an orientation package to support delivery of the QI activities and coordinating a Subject Matter Expert (SME) Committee. ▪ The comprehensive orientation package and relevant recruitment and implementation resources supported Pilot implementation within PHNs and practices. ▪ Vision 2020 training and education resources targeted the raising of knowledge and awareness of eye health, and supported successful implementation of care related to eye health.
1.2 What systems and processes have been established to make the delivery of eye health prevention in Victoria sustainable?	▪ All practices reported implementing changes to systems and templates to embed eye health screening and preventative care into standard care practices.
1.3 How has the initiative been tailored in its delivery to meet the specific needs of target at risk groups?	▪ One of the Vision 2020 education modules was specifically focused on eye health for people with diabetes (an at-risk patient group). ▪ All PHNs involved in the project attempted to target the recruitment of practices from LGAs with a high proportion of at risk community members within their catchment, however this proved challenging using standard recruitment practices. One PHN successfully adapted their recruitment approach through using direct approaches to practices and were able to recruit significantly more practices from at-risk areas.
1.4 How has the initiative improved communications/processes between primary health practices and local optometrists to strengthen access to eye care?	▪ 54% of participating practices reported they received more correspondence from optometry at the end of the project compared to before the project. ▪ Practices commonly reported improved relationships and links with local optometrists, with some also identifying that they had developed rapid-access pathways to care for their patients. ▪ QI activities focused on relationship building were not a mandatory component of the Pilot and some practices did not report specific information about relationships with local optometrists.

The Pilot was successfully coordinated and managed by Murray PHN and EMPHN

The Pilot was implemented by five out of the six PHNs within Victoria, including EMPHN, Gippsland PHN, Murray PHN, NWMPHN, and WVPHN. South Eastern Melbourne PHN opted to not participate in the Pilot.[13] The Department provided funding to Murray PHN to lead and manage the Pilot's QI activities, in partnership with EMPHN. Overall, evidence suggests the Pilot was successfully coordinated by Murray PHN and EMPHN through providing a significant number of resources and support and guidance for all five PHNs. Key components included developing a range of QI activities, an orientation package to support delivery of the QI activities and coordinating a Subject Matter Expert (SME) Committee.[14]

The purpose of the SME Committee was to provide strategic advice and identify risks and opportunities to Pilot implementation and share stakeholder knowledge and information to further support implementation. The Committee was composed of one general practitioner and staff from:

- Murray PHN and EMPHN (the two lead PHNs)
- Vision 2020
- Australian Department of Health
- Australian College of Optometry
- Victorian Aboriginal Community Controlled Health Organisations (VACCHO)
- The Royal Australian and New Zealand College of Ophthalmologists
- Royal Victorian Eye and Ear Hospital
- Optometry Victoria South Australia
- Carers Victoria.

An analysis of SME Committee Terms of Reference indicates project coordinators from Murray PHN and EMPHN were involved in the Committee. However, it is unclear what the positions were of the staff from the rest of the participating organisations. It is also unclear what specific role they played in the Committee, other than providing subject area expertise, and whether the roles were paid or voluntary.

All five PHNs utilised a similar multi-stage process to recruit and select practices within each of the PHNs to participate in the Pilot. This process is outlined below:

- Identifying key risk areas and cohorts for eye diseases through researching and analysing population level data from the Australian Bureau of Statistics (ABS) and the Victorian Population Health Survey.
- Distributing an Expression of Interest (EOI) to individual practices within the key risk areas through email correspondence, social media and newsletters.
- Evaluating the EOIs against an eligibility and selection criteria.

The QI activities varied significantly between PHNs and practices as the activities could be tailored to suit different needs. Most focused on embedding eye health assessments into standard practice and documentation (including GP management plans). The types of activities can be grouped into six categories:

- Questionnaires to collect information about the patient's lifestyle and medical history.
- Incorporating screening questions to existing eye health assessments.
- Incorporating templates for referrals to optometrists.
- Updating clinical software such as including a function or feature to prompt eye health reminders.
- Relationship building such as hosting seminars or information sessions with optometrists and patients.
- Updating disease care or management plans to include eye health assessments and screening questions.
- Promotional material such as social media posts, flyers and posters and newsletters to educate patients and practices on eye health.

[13] Murray Primary Health Network. (2024). *Embedding Eye Health into Primary Care Pilot Project Final Report*. Pp.12-13.

[14] Ibid.

Murray and EMPHN dedicated a significant amount of time and effort to developing a comprehensive orientation package and supporting resources to support implementation through each PHN. QI activity examples were comprehensively outlined in the orientation package to support practices. However, there was flexibility for practices to develop or adapt based on individual needs. Some of these included a range of templates for data collection and reporting, referrals, eye health questionnaires and assessments, and key resources to guide embedding eye health assessments for practices such as screening and referral flowcharts and data collection and activity plans. The additional resources to support PHNs to implement the Pilot included:

- EOI and project agreement templates for the procurement process
- Orientation/induction package checklist to help guide PHNs with their initial discussions and meetings with practices
- PHN data reporting templates
- A detailed overview of all reportable project KPIs
- End of project reporting templates for PHNs to collect post-pilot data and survey response from practices.

Two PHNs provided specific feedback about the support their organisation had received during the Pilot and praised Murray PHN and EMPHN's effective support and responsive communication.

> *Murray were a fantastic lead. I have worked on a few QI projects this year and this team were the most supportive in what was also the most challenging out of the other QI projects. Thank you very much! – PHN reflection file.*

> *The Lead PHN's were very supportive and provided significant resources (induction kit, templates) to deliver the project. Communication from the leads was a huge strength of the project with regular check-ins, team page etc. – PHN reflection file.*

While it is unclear from the data available for the evaluation whether PHNs and practices incorporated the templates or used them as a basis for activities, data from the PHN feedback files suggests the induction package provided significant guidance to activity implementation. Furthermore, 98% of the survey respondents in the post-pilot survey reported they found the induction package somewhat or very effective, suggesting the induction package played a key role in successful implementation.

> *The following resources proved to be exceptionally valuable: the orientation pack and templates created by Murray PHN, orientations slide deck developed by NWMPHN, the PDSA cycle template included outside of the induction pack, monthly check-in slides. – PHN reflection file.*

Collectively, evidence from the PHN reflection file and the post-pilot survey suggests the development and distribution of communication and promotional material for PHNs and practices was also a significant enabler to implementation. Data from the post-pilot survey, indicates approximately a third of practices (n=16) found the promotional material useful. However, 30% of survey respondents reported they did not use the communication resources – this may be due to practices being able to select which QI activities to implement based on the needs of the particular GP practice. Although it is not possible to determine why some practices did and did not use the resources with the available data, there may be opportunities to improve the usefulness and relevancy of the resources and take a more tailored approach to the development of future resources.

Vision 2020 training and education resources played a key role in successful implementation

Successful implementation was driven by Vision 2020's creation of online education modules and webinars for Victorian health professionals. These modules covered eye health, common eye conditions, care for specific cohorts, and emergency eye care. Tailored to different audiences, including practice nurses, allied health professionals, and GPs, these modules enhanced knowledge and skills (see Table 6). Survey feedback and outcomes are detailed in Section 5.2.

Table 6 Vision 2020 training modules

Module	Target audience
Introduction to eye health and vision care	Practice nurses Allied health professionals Aboriginal Health Workers and Practitioners
Advanced eye care Training for Primary and Allied Health	Practice nurses Allied health professionals Aboriginal Health Workers and Practitioners
Diabetes and eye health	Credentialled diabetes educators and other health professionals involved in diabetes management
Common eye conditions	GPs
Ocular emergencies	GPs
Children's vision	GPs

The webinars were live recorded sessions and focused on providing a more detailed overview of relevant health and eye conditions such as glaucoma, diabetes, cataracts and eye care for children. Details of the webinars are included in Table 7. Unlike the training modules, the webinars had a more generalised approach to the target audience with a focus on a range of healthcare role types. This is likely because webinars are shorter forms of training that focus on a broader overview of topics and discussion of these topics with attendees.

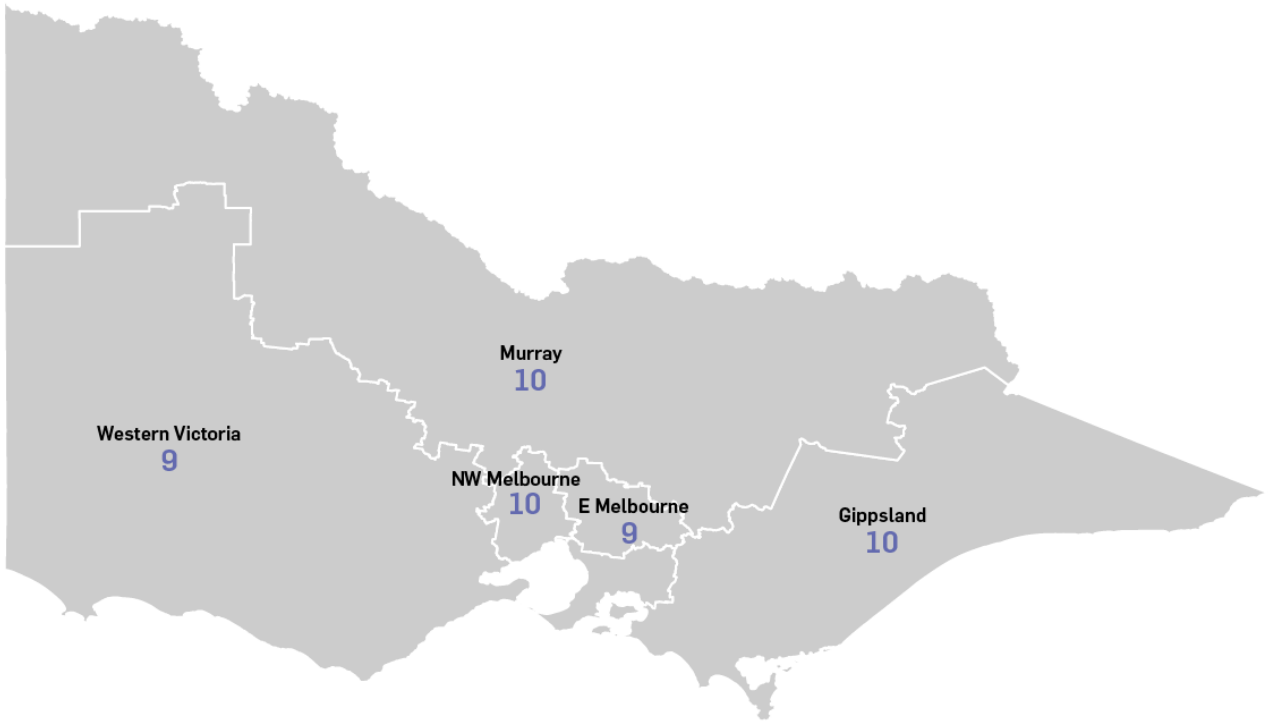
Table 7 Vision 2020 webinars

Webinar	Target audience
Glaucoma deep-dive	The target audience for all webinars included GPs, practices nurses, allied health, and Aboriginal Health Workers and Practitioners
Macular degeneration	
Diabetes and eye health	
Children's vision	

PHNs attempted to target practices within at-risk areas but faced recruitment challenges

48 general practices commenced participation in the Pilot with two withdrawing due to a lack of staff capacity. The number of general practices recruited by each PHN is outlined below in Figure 1.

Figure 1 Number of practices recruited by each PHN



All five PHNs targeted general practices within higher risk local government areas (LGAs) as part of the recruitment and selection process. Four out of the five used a similar approach to determining higher risk LGAs through using a range of publicly available population and health data for indicated risk factors such as LGAs with higher rates of diabetes, smoking, hypertension, at risk ages, and Aboriginal and Torres Strait Islanders.

Some PHNs were more successful at recruiting general practices within higher risk LGAs than others. For example, Murray PHN and EMPHN reported facing challenges of low levels of engagement and interest from practices, with Murray PHN only able to recruit two practices from the higher risk LGAs. The Pilot final report indicates Murray PHN area were undergoing a significant number of challenges due to flooding, which impacted their recruitment of practices in at-risk areas.

EMPHN adapted their recruitment approach and directly contacted and spoke with practice staff from several other practices within higher risk LGAs. This reportedly contributed to successfully recruiting nine practices. While a direct approach to recruiting practices may have been more effective for particular PHNs, this would have likely been more resource intensive than EOIs.

4. ENABLERS AND BARRIERS TO IMPLEMENTATION OF THE PILOT

This section outlines the key enablers and barriers to implementing eye health preventative care in primary care (KEQ. 2). It presents findings on both positive and negative consequences, including any unintended consequences of the Pilot's implementation.

Table 8 provides a summary of key findings aligned with the sub-KEQs that informed this section. A detailed analysis of findings in provided thereafter.

Table 8 Summary of findings against sub-KEQs 2.1 and 2.2

Sub-KEQ	Key findings
2.1 Have there been any positive consequences, including unintended consequences?	▪ Relationships between primary health and optometry supported access to care for patients. ▪ Resources developed for the Pilot were of high quality and could be used to support a broader rollout of QI activities related to eye health.
2.2 Have there been any negative consequences, including unintended consequences?	▪ Manual data collection processes were a significant barrier to efficient delivery of the Pilot for both practices and PHNs. ▪ Due to data collection demands, PHNs reported that some practices only collected data from a select number of their participating GPs. Practice-level data and subsequent aggregation of data across the Pilot therefore may not show the full reach and outcomes of the Pilot.

4.1. ENABLERS

Pilot design enablers

Resources and educational modules were standardised and are sustainable beyond the life of the Pilot

As reported in Section 4, the lead PHNs supported other PHNs and practices with a comprehensive and standardised orientation package. This contained guidance on how to best deliver quality improvement activities at the practice level and provided instructions on accessing patient-level data from clinical software and data reporting templates. The data reporting templates themselves were standardised across all PHNs, enabling consistency in recording and reporting referrals and outcomes. These templates and resources can be used by practices beyond Pilot implementation or scaled up by PHNs and amended for future iterations of the Pilot (see Section 8).

In a similar way, training modules and webinars developed by Vision 2020 were consistently delivered for all health practitioners across Victoria. As explored further in Section 5.2, these modules have contributed to broad improvements in workforce knowledge. The broad coverage of these modules enabled consistency in the knowledge being generated, ultimately benefiting patients across the state. These training activities are likely to support scale-up beyond the Pilot and are sustainable (see Section 8).

Implementation enablers

Relationships between GPs and optometrists enabled more seamless patient care and improved referral pathways and collaboration between providers

Implementation of the Pilot in part relied on communication with eye health specialists, both to refer to them and in receiving correspondence back after a referral. In the post-pilot survey and case studies, some (n=6) practices identified relationships with optometrists as a key enabler in efficient and effective patient care. This was important when an urgent referral was required or when receiving correspondence from optometrists regarding the outcomes of a patient's appointment. Feedback from Optometry Australia collected as part of Pilot governance aligns with these findings. The peak body noted that greater emphasis on relationships between GPs and local optometrists could enable more sustained embedding of eye care into primary care.

Case Study Example - NWMPHN

A case study provided by NWMPHN highlights one way that relationships between optometry and GPs improved patient care within the Pilot. The case study patient presented to the clinic with onset ocular symptoms which the GP diagnosed as probable anterior uveitis. As part of quality improvement practices to improve eye care, the practice and local optometrist had agreed to a rapid access pathway between the two services. This enabled a prompt referral for this patient via phone call and letter, leading to an urgent appointment and confirmation of the GP's diagnosis. The patient received treatment from the optometrist, and written feedback was sent via fax to the GP. Identified patient barriers to attending this appointment including lack of transport and lack of access to Medicare were overcome through targeted referral to this local optometrist who was funded through other means. This process was enabled by good communication between services.

4.2. BARRIERS

Pilot design barriers

PHNs faced challenges in recruitment of practices due to the timing of the recruitment campaign and amount of the initial financial reimbursement

The timing of the Pilot recruitment period meant practices were limited in their capacity to commit to the project, with the PHN final report outlining two external factors generating challenges for recruitment of practices due to:

- flooding in Victoria in October 2022 which directly affected several practices in the Murray PHN region. These practices were unable to physically operate from their clinical site and had reduced staff. They were subsequently placing a larger priority on day-to-day operations compared to practice improvement.
- the promotion of the EOI occurring in the lead up to the December holiday season in 2022, which is a busy time for individuals and practices.

Feedback received from PHNs also highlighted funding as a key barrier to participation in the Pilot. In the PHN reflection file, two PHNs noted they experienced lower interest from practices in this quality improvement project compared to others offered during the same period. These PHNs specifically cited two competing quality improvement projects related to cancer screening and heart failure which were perceived by practices as more aligned with practice business as usual and better funded. PHNs also highlighted feedback from practices that suggested the initial funding amount for the Pilot was not commensurate with the scope of data collection required. While the Pilot funding was increased in response to this feedback, the initial offering had a negative impact on the first wave of recruitment. This may have continued to impact engagement with some practices in the project.

Funding was also identified as an issue in the post-pilot survey. Five practices replied that there was insufficient funding for the amount of workload and effort required. These participants noted that some activities were particularly time-consuming activities including manual data collection and completing webinars and training modules. One participant wrote that:

> *The funding was insufficient for the workload. It would have been easier to have the whole practice to participate in the project rather than a small team as this would have led to greater impact and potential sustainability due to knowledge increase. The data collection had no relevance to ongoing practice and took away from care delivery. Free resources for patients were available to increase knowledge and awareness. Although online education can be good and at time convenient but in person is better. – Post-pilot survey respondent.*

The identified need for a culturally specific EOI process for Aboriginal Community Controlled Health Organisations limited the Pilot's reach to First Nations cohorts who use these service providers

Eye disease and vision problems are the most common long-term health conditions reported by Indigenous Australians.[15] This is a key issue for Aboriginal and Torres Strait Islander people over the age of 40, who have three times the rate of vision loss of non-Indigenous Australians.[16] These disparities are also present in and influenced by experiences accessing eye care in Australia, with more than one third of Indigenous Australian adults reporting that they had never had an eye examination.[17] Key barriers to access included a lack of specialist services in rural and remote areas, the complexity of the patient journey, a lack of coordination within and between services, uncertainty about service providers and the cost of treatment.[18] The Pilot design acknowledges these inequalities, introducing the need to target Aboriginal and Torres Strait Islander populations in introductory text in the induction package, and defining this population as a key at-risk group in Pilot implementation and data collection.

ACCHOs were invited and encouraged to participate in the EOI process, which resulted in two ACCHOs being recruited. Feedback identified that some ACCHOs would have preferred a separate more culturally relevant EOI process. The project stage and time limitations for delivery meant that an additional EOI process could not be done. It was noted in the final PHN project summary report that future phases of the project could consider an EOI specific to ACCHOs to encourage a higher level of participation. The eye health training resources for Aboriginal health workers were promoted to the ACCHOs to support staff with their understanding of eye health and administering eye health screening.

Referral data shows that one in twenty (5%) patient referrals were for an Aboriginal or Torres Strait Islander patient. While this figure highlights only a small group of patient referrals within the target cohort, it is proportionally larger than the representation of Aboriginal and Torres Strait Islander peoples within the state population (1%) and is hence appropriate for the scope of Pilot.[19]

Future iterations of this project or other quality improvement projects could specifically consider how to effectively work with ACCHOs to ensure full and ongoing participation by Aboriginal and Torres Strait Islander people and organisations in decision-making affecting their health needs.[20]

A substantial component of Pilot design was data collection which created significant burdens for both practices and PHNs

Manual data collection was widely regarded by practices and PHNs as one of the key barriers in Pilot design. This was due to practice software not having the capability to record data required by the Pilot in a systematic way that could be extracted and reported on. At the practice level, many practices reported experiencing heavy administrative burden in reporting patient referrals, correspondence, and outcomes to the lead PHN. The majority of practices reported either using manual entries in clinical software (e.g. Medical Director) or notes in patients' files to record this information. A small number of practices used other methods including an Excel spreadsheet or a questionnaire. While practices found ways to record information about eye health for the purposes of the Pilot, many reported the lack of a standardised data field in software and case notes prevented efficient systems of patient recall and data extraction. Practices highlighted that validated fields similar to those used in other preventative health areas such as 'date of last screening' would have lessened the data collection and reporting burden significantly. Some practices also reported particular challenges in following up and recording the receipt of feedback from eye health specialists.

> *Data collection requirements were manual and required practices to extract and record data from individual patient records and follow-up with eye health professionals to track referral outcomes. Participants noted that this was time consuming with one practice estimating up to 5 hours per week to collect data. – PHN reflection file.*

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[15] Australian Institute of Health and Welfare. (2023). *Eye health measures for Aboriginal and Torres Strait Islander people 2022*: in brief. Retrieved from https://www.aihw.gov.au/getmedia/4040d0ba-dd03-49aa-8582-9ddeffe49eb4/aihw-ihw-270.pdf?v=20230605181853&inline=true

[16] Ibid.

[17] Australian Institute of Health and Welfare. (2023). *Aboriginal and Torres Strait Islander Health Performance Framework. 1. 16 Eye health*. Retrieved from https://www.indigenoushpf.gov.au/measures/1-16-eye-health

[18] Ibid.

[19] Australian Bureau of Statistics. (2022, July 1). *Victoria: Aboriginal and Torres Strait Islander population summary*. Retrieved from https://www.abs.gov.au/articles/victoria-aboriginal-and-torres-strait-islander-population-summary.

[20] Department of Health and Aged Care. (2016). *Primary Health Networks (PHN) and Aboriginal Community Controlled Health Organisations guiding principles*. Retrieved from https://www.health.gov.au/sites/default/files/documents/2021/04/primary-health-networks-phn-and-aboriginal-community-controlled-health-organisations-guiding-principles.pdf

The tracking of referrals took considerable amount of time each week. As a result, we worked with medical director to develop the search query. However, the incoming referrals were almost impossible to track. There was minimal feedback from optometry providers. The project seemed to be about data collection rather than completing the QI activities. – Post-pilot survey respondent.

PHNs also experienced challenges with the data requirements. General practices would only participate in the Pilot if the data was deidentified and aggregated to withhold their identity and any patient-level information. The Pilot final report highlighted that receiving data from each individual practice was time-consuming, with specific challenges noted in aggregating the data for reporting, which relied on skills and knowledge of data management, privacy, and storage of data.

Some GPs at participating practices may have engaged in QI activities and increased patient referrals without being captured in data collection

PHNs involved in the Pilot noted that the manual data collection requirements within practices affected how many GPs formally participated in the Pilot. They highlighted there were some instances where there were multiple GPs in practices were actively involved in the QI and recorded as participating in the Pilot, but only one GP participated in the Pilot to the full extent of data collection and reporting. Within this scenario, the GPs who were involved in QI activities only, such as using updated templates or receiving additional training on eye conditions, may have subsequently facilitated a number of patient referrals to eye health specialists that were not captured practice-level data. This is an unintended consequence of the data collection design that suggests the Pilot may have had more reach and generated more outcomes that captured in the data.

Data was reported at the PHN-level, limiting insights into different patient journeys

A lack of patient-level data limited understanding of different patient journeys as part of the Pilot. Practices submitted summary data to the PHN on key metrics including the baseline number of patients for each at-risk group, referrals made to optometry and ophthalmology, diagnoses made and ongoing action for patients. PHNs combined data from the practices, which was further combined by the lead PHN and provided for this evaluation to demonstrate the high-level impact of the Pilot. While this aggregated data is useful in identifying trends across all participating practices, it is not possible to understand the result of a particular referral or diagnosis at a patient level. For example, while the overall number of cataract diagnoses assists in understanding the most common patient diagnoses and contributes to economic analysis of the Pilot, it is unclear how each of these patients was identified as appropriate for referral, screening and diagnosis. Having this information would have supported greater understanding of early intervention and complete cycles of care under the Pilot.

Similarly, we are not able to understand the contribution of specific QI activities to patient outcomes. Because practices would select which QI activities they implemented as part of the Pilot, there was variability across practices, but no information was systemically collected about this. This means that, for example, from the aggregate data, it is unclear how many of the 177 total cataract diagnoses were a result of patients presenting with specific ocular symptoms, or a result of QI prompts to conduct regular eye screening for at-risk patients in the practice. Therefore, it is not possible to provide insights into the efficacy of different QI activities in creating patient outcomes across all Pilots. It also means the conclusions that can be made regarding which activities should be prioritised for implementation in future iterations of the Pilot are limited.

For the purposes of this evaluation, a lack of aggregate data showing patient journeys was supplemented by best-practice case studies provided by practices (see Section 6 and 7). This was appropriate for the scope of the Pilot and data collection. For future iterations of the Pilot to show patient journeys at a whole-of-Pilot level, standardised patient-level data that captures every screening intervention, referral made, and outcome would be needed.

Implementation barriers

Inability to record usable data about eye health in practice software limits practices' ability to implement programs to improve eye health screening rates in their own patient population

Many QI activities implemented by GP practices follow the Plan-Do-Study-Act (PDSA) cycle where the model of improvement is based around practices reviewing initial/baseline data, implementing changes, recording and analysing data and reflecting on outcomes and how changes that can be used or altered in the future.[21] The Pilot orientation package outlined this PDSA cycle and fundamental questions for practices to reflect on.

While some participating practices reported the PDSA cycle structure as useful in implementing the Pilot, data limitations inhibited their ability to conduct useful analysis on QI activities. As reported above, the lack of baseline data and segmented practice-level referral and outcomes metrics meant that practices had limited capacity to assess change and review which QI activities were most effective in generating change. This was reported as a barrier to continuous improvement at the practice level.

Successful implementation was hindered by practices capacity and capability to adopt new systems and processes

Several practices within Gippsland PHN, NWMPHN and EMPHN reported challenges to implementing and adopting the systems and processes.[22] Specifically, these PHNs reported GPs and practice nurses were unfamiliar with clinical software processes such as uploading templates and forms, prompt functions, and changing desktop backgrounds. These challenges were mostly linked to practice staff's limited capability and knowledge of the new systems and relevant functionalities. Although this may suggest there are opportunities to develop more tailored training for the systems and functions, it's important to note system familiarity plays a key role in digital change management and changes to systems take time.

Lack of integration of optometry into primary care creates challenges for communication and continuity of care

Australia does not have a coordinated eye healthcare system or standard of care,[23] and there are a range of barriers to a model of care that includes both primary care and optometry. While Optometry Australia has clinical practice guides and standards, some reported barriers often include lack of interprofessional links between GPs and optometry, a lack of appropriate referrals from GP to optometry due to a lack of understanding of the scope of practice of optometrists and distrust of the clinical abilities of optometrists.[24] In addition, the Pilot found that current patient management systems do not allow the efficient transfer of reports to and from the referrer, with a large administrative burden placed on all stakeholders involved in the referral process. This is supported by data from the post-pilot surveys. Almost half of all participating practices (n=19) reported there were challenges to receiving correspondence and results from optometrists. Survey participants explained that limited access to patient information and correspondence impacted on patient oversight and a holistic approach to managing patient health and eye health. Eight participants noted correspondence challenges were contributing to increased administrative burden due to staff directly contacting optometrists and ophthalmologists for results. Therefore, this suggests a lack of system integration between practices and optometrists not only contributes to implementation barriers but also reduces opportunities for continuity of care and patient outcomes.

> *Further work [needs] to be done on improving the feedback received by GPs from optometry. There seems to be a disconnect between the clinical best practice and what happens in real life. – PHN reflection file.*

[21] Deming, W. E. (1986). *Out of the crisis*. Cambridge, MA: Center for Advanced Engineering Study, Massachusetts Institute of Technology.

[22] The Register of QI activities document has outlined Melbourne PHN under the list of PHNs. We have assumed that NWMPHN and EMPHN have combined specific feedback into Melbourne PHN as one.

[23] National Framework Implementation Plan. (n.d.). *Vision 2020 Australia*. Retrieved from https://www.vision2020australia.org.au/national-framework-implementation-plan/

[24] Jamous, K. F., Kalloniatis, M., Boon, M. Y., Jalbert, I., & Zangerl, B. (2014). 'The short-sighted perspective of long-term eye health-care', Clinical and Experimental Optometry 97(6), 565–567. https://doi.org/10.1111/cxo.12194; Kalloniatis, M., & Ly, C. (2016). 'The role of optometry in collaborative eye care', *Clinical and Experimental Optometry 99*(3), 201–203. https://doi.org/10.1111/cxo.12403

5. SERVICE LEVEL OUTCOMES

This section highlights any changes to practice systems and outcomes that are occurring as a result of the Pilot (KEQ. 3). This includes impacts to health professionals' awareness of eye health as well as new practices and processes introduced through the Pilot.

Table 9 provides a summary of key findings aligned with the sub-KEQs that informed this section. A detailed analysis of findings in provided thereafter.

Table 9 Summary of findings against sub-KEQs 3.1 to 3.6

Sub-KEQ	Key findings
3.1 How has access to eye health training through this initiative impacted care provided by primary healthcare professionals?	▪ There was good engagement with the education modules created by Vision 2020, with 131 unique users completing at least one module. Feedback on the education modules was positive.
3.2 How has the initiative led to improvement in identifying at risk patients and/or diagnoses of eye health problems by primary health service providers?	▪ Healthcare staff who completed the Vision 2020 education modules reported an increase in: – knowledge of the main eye conditions that cause vision loss – ability to identify the main eye conditions that cause vision loss – knowledge on when to refer a patient to an eye health professional – knowledge of the risk factors for vision loss – asking patients about their vision and eye health – incorporating information about vision and eye health into daily practice
3.3 How have general practices changed their GPMPs in order to incorporate eye health and improve the subsequent provision of care?	▪ All practices included in the Pilot reported changing the templates of their GPMPs to include questions on eye health.
3.4 How have HealthPathways been used to diagnose or manage eye conditions and/or refer at risk patients for specialist care?	▪ HealthPathways is an online health information portal for GPs that provides information about assessment and management of health conditions including specific details about local referral pathways. ▪ Anecdotally, some practices mentioned increasing their use of eye care HealthPathways but this was not reflected in the click rate data which shows a small decrease in overall use. ▪ Some practices suggested that utilisation of HealthPathways may be lower due to staff having existing knowledge of appropriate eye care and referral pathways.
3.5 What QI activities were undertaken by the general practice through this initiative? Are they sustainable?	▪ Practices undertook a range of QI activities including updating patient questionnaires, incorporating eye health into templates, updating clinical software, seminars or information sessions, updating disease care or management plans and disseminating promotional materials. Some practices also built relationships with local optometrists. ▪ Updates to standard templates and processes are scalable, sustainable and easy to implement and were a key factor in the identification of eye health conditions in some patients.
3.6 Did the initiative achieve any other benefits?	▪ Vision 2020 modules are available for all healthcare professionals working in primary care in Victoria, supporting reach beyond the Pilot and impact on the sector more broadly.

The Pilot's QI activities contributed to three key outcomes; improvements to practice systems (Section 5.1), improved knowledge and awareness of GPs and increased knowledge and awareness of practice nurses (Section 5.2) and improvements in the sector (Section 5.3).

5.1. OUTCOMES FOR PRACTICES

Use of standardised templates supported embedding eye health screening into business as usual for GP practices

A large component of the Pilot implementation in practices was updates to practice systems. The majority of practices (89%) reported they implemented a new system and/or made changes to their current systems or workflows that supported the identification and/or referral of patients at risk of eye disease. This typically consisted of including eye screening as part of chronic disease management plans including the GPMP and Team Care Arrangement (TCA) and routinely asking patients when their last eye check was completed.

Eye health screening was integrated into existing practice tools and templates, supporting consistency and broad uptake of the process across the practice. Practices largely reported the system for recording eye checks was built into software, including clinical software and patient files/notes. A few practices recorded this information into recall functionality, further enabling follow-up of patients. Inclusion of screening in health assessment was done in a similar way, with fields added to practice templates.

Figure 2 and Figure 3 show positive changes to practice systems occurred during Pilot delivery. There was an increase in the number of practices routinely asking new patients about their last eye check (+54%) and an increase in practices including eye health screening in all health assessment templates (+23%).

Figure 2 Changes in practices routinely asking new patients when their last eye check was completed[25]

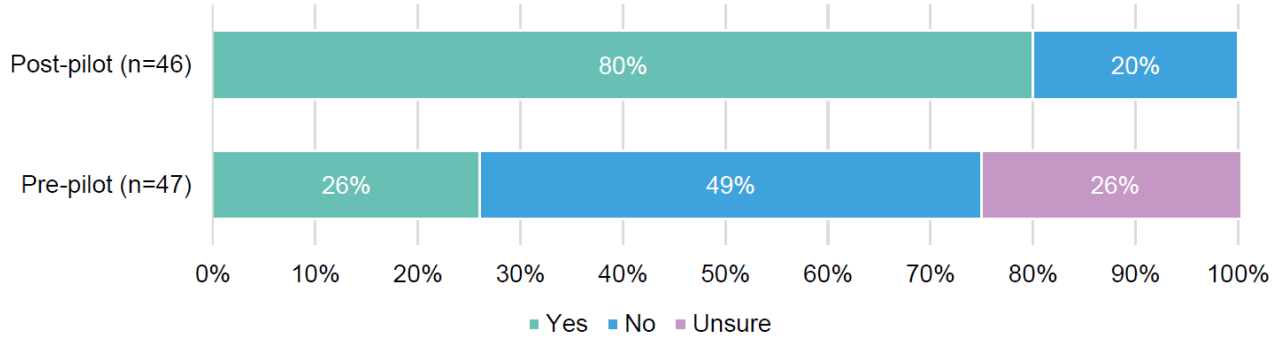
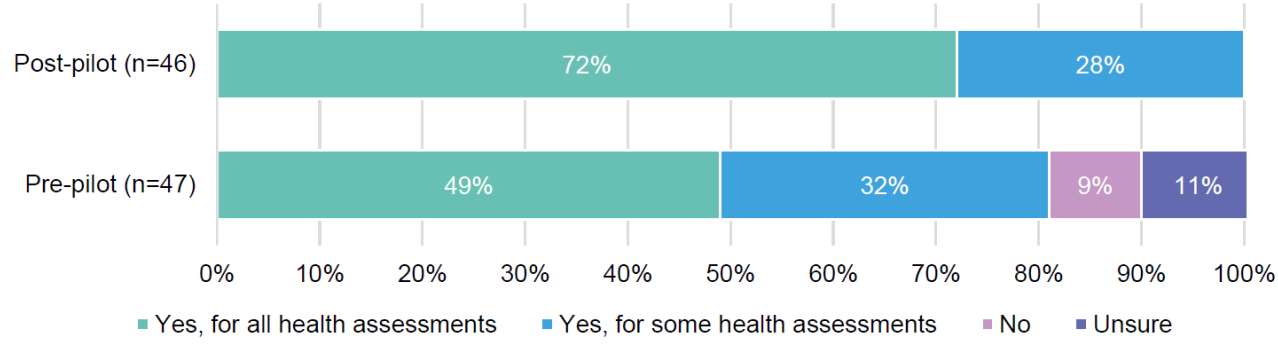


Figure 3 Changes in practices including eye health screening as part of health assessment templates[26]



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[25] Proportions may not add to 100% due to rounding.

[26] Ibid.

It is important to note that some practices already had systems in place pre-Pilot. Two in five (39%) respondents to the post-pilot survey reported that while their practice had a system in place for recording an eye check, this system was already in place before their involvement in the Pilot.[27] A similar trend can be observed in the inclusion of eye health screening in health assessment templates where almost half (49%) of all practices pre-Pilot already included the component in all health assessments.

This limits the extent of screening rate increases in practices but does not negate the impact of the Pilot in generating improvements for practices who did not initially have these processes in place. In particular, increases in the rates of eye health screening as part of all health assessment templates, relative to decreases in screening in only some health assessment templates, shows that screening is likely to reach broader populations as a result of Pilot implementation at the practice-level.

The Pilot enhanced formal referral pathways and correspondence between GPs and eye health specialists

Data collected from the 46 participating practices shows the Pilot generated 3,599 referrals to eyecare providers. Of these referrals, the majority were made to optometrists (78% of total), with approximately one quarter of referrals made to ophthalmologists (22%). Only three referrals were reported as being to both optometry and ophthalmology providers. Case study data differs slightly from these findings, with a referral to optometry reported in 68% of cases provided and referral to ophthalmology in 50% of cases. There was a slightly higher proportion of cases who reported referrals to both optometry and ophthalmology as part of patient treatment (27%). Some of these cases represent patients who were initially referred to optometry and subsequently referred to ophthalmology, which may not have been captured in the overall aggregate data for the Pilot. The case studies also represent the best practice examples of identified impacts from the Pilot, hence may differ slightly from other data collected. Nonetheless, this data shows that referrals from primary healthcare professionals were most commonly made to optometrists.

GPs referred more frequently to optometry post-pilot. Each practice on average referred 11 patients per month to either an optometrist or ophthalmology. Findings from the post-pilot survey show that more than three quarters (83%) of participating practices refer to optometry more often than before the Pilot. The proportion of practices referring more often to ophthalmology as a result of the Pilot was considerably lower (39%). This may be influenced by referral pathways into ophthalmology typically coming from optometrists rather than general practitioners, but there is limited data available to understand this process in the context of the Pilot.

Table 10 shows that referrals sent to eye care providers were mostly sent via mail or fax or delivered informally through the patient.[28] This differed based on whether the provider was an optometrist or ophthalmologist, with ophthalmology referrals more likely to be formal (i.e. manually or electronically sent directly to the provider). This reflects the broader functioning of the eye care system, wherein ophthalmology is a more specialised discipline.

Table 10 Referral type by eye care provider

	Referral type	% of total	Optometry referrals	% of total	Ophthalmology referrals	% of total
Total	**3,602**		**2,810**		**792**	
Manually sent to provider (mail or fax)	1,781	49%	1,319	47%	462	58%
Electronically sent to provider (secure messaging)	370	10%	120	4%	250	32%
Informal either verbally and/or written referral communicated to patient but not sent to provider	1,451	40%	1,371	49%	80	10%

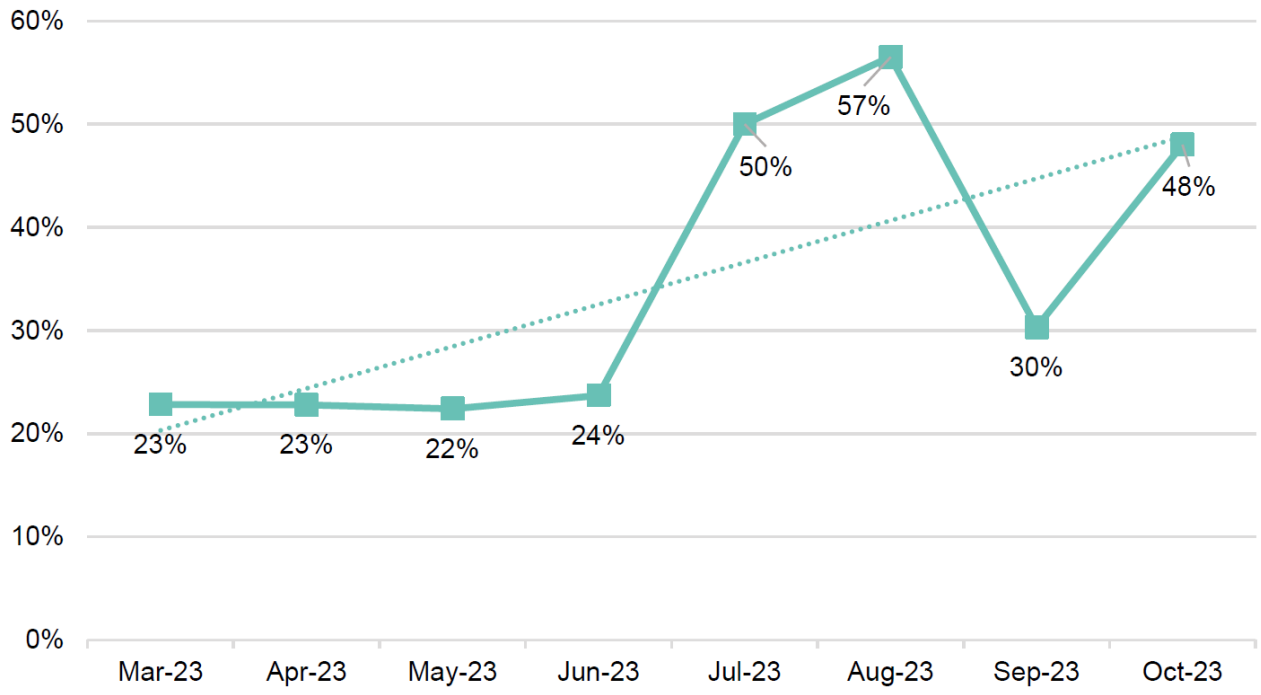
[27] These proportions differ slightly from those reported in Table 4 due to the pre-pilot survey not capturing all participating practices.

[28] Proportions may not add to 100% due to rounding.

There were differences between the number of referrals made and the correspondence received from eye health specialists. The number of correspondences received during the Pilot only make up 35% of all referrals made.[29] The most common methods of receiving feedback from optometrists were fax, email and hardcopy. Some practices reported information delays in receiving feedback or results from optometrists and ophthalmologists due to information sharing systems or system barriers to communication (see Section 4.2).

There have been moderate increases in frequency of correspondence over the duration of the Pilot, as seen in Figure 4. While data from the initial months of the Pilot does not capture all practices, these results align with post-pilot survey data wherein approximately half (54%) of the participating practices reported they received more correspondence from optometry at the end of the project compared to before the project. Only 37% of practices reported receiving more clinical feedback from ophthalmology at the end of the project.

Figure 4 Percentage of referrals made compared to received correspondence over time



The most common referral outcome received was 'none' (i.e. no clinically significant finding). While this may seem unfavourable, it aligns with findings from the survey of general practices that found three quarters (72%) of GPs would prefer to receive correspondence for all patients, regardless of clinically significant findings. Additionally, it reflects that the Pilot was designed as a broadly implemented screening program targeted at early detection. Patient outcomes are further explored in Section 6.

[29] Referrals made were unable to be matched with an exact correspondence received. This proportion reflects a general finding across all data.

Some practices actively identified barriers to patients attending further eye care appointments and sought to address these

Findings from the post-pilot focus questions demonstrate five commonly reported barriers to patients attending appointments with optometrists and ophthalmologists following a referral from their GP. These were:

- cost of the appointment and/or treatment (n=21)
- long waiting lists, especially for ophthalmologists (n=10)
- availability of an appropriate service provider in the local area (n=9)
- patient transport (n=4)
- low patient motivation to attend the appointment, particularly when there was no acute health concern (n=3).

Case studies provided by participating practices highlight some instances where individual practices actively identified and help alleviate these barriers for patients.

BARRIER		PRACTICE ACTIVITY
Cost of the appointment	▶	**Referral to a provider that is bulk-billed or provides reduced rates for certain groups (e.g. pensioners)**
Transport to the appointment	▶	**Referral to local providers**
Low patient motivation to attend the appointment	▶	**Patient education about the importance of eye screening and prompting appointment attendance**

This data only represents a small number of cases and not all barriers accounted for in other evaluation data sources, but nonetheless shows a willingness by some practices to assist patients to attend eye examinations beyond assessment and referral. This ultimately supports patient outcomes and continuity of care.

5.2. OUTCOMES FOR CLINICIANS

Vision 2020 modules had good engagement and were highly regarded by GPs and practice staff

As part of the Pilot, Vision 2020 was engaged to develop a range of online eye health learning activities, including self-paced online learning modules and live webinars. The topics covered in modules and webinars, as well as target audiences for each are outlined in Section 3.

Vision 2020 reporting uses postcodes as a proxy to represent individual practices participating in the Pilot. Due to this method of reporting, it is not possible to definitively identify whether data represents individuals from a participating practice or individuals from a non-participating practice located in the same postcode. Despite this, the majority of users (82%) enrolled in the LMS system via a unique link created for PHNs were in postcodes participating in the Pilot project. Similar trends are seen in registrations of the four online modules, with 77-91% of users having a postcode within the parameters of participating practices. This suggests that, in line with expected outcomes, modules are primarily being accessed and completed by those participating in the Pilot.

Table 11 shows a substantial number of health practitioners including GPs, practice nurses and those in administrative roles engaged with the modules. Vision 2020 data reports that 131 unique users completed at least one module. While this data does not capture how many participants completed multiple modules, post-pilot survey data shows that most GPs and nurses completed more than one module. This suggests these individuals found the activities useful to some extent.

Completion of online modules differed per course and by practice role. The 'Introduction to Eye Health and Vision Care' module received the highest number of completes, followed by 'Common Eye Conditions'. Higher numbers of completion for these courses likely reflect the fact that they had no participation pre-requisite conditions, compared to the other two modules which required participants to have already completed the 'Introduction to Eye Health and Vision Care' module. The 'Diabetes and Eye Health' module had the lowest number of completes, with only 10 completes, primarily made up of GPs. Lower completes of this module are likely impacted by numerous factors, including pre-requisite conditions, a relatively late release date in June 2023, and a narrow target cohort (credentialled diabetes educators and other health professionals involved in the management of people living with diabetes).

GPs were more likely than nurses to have completed the 'Common Eye Conditions' module, which aligns with this cohort being the target audience for the content. The other modules were targeted more broadly at practice nurses, allied health professionals, Aboriginal Health Workers and practitioners, which is reflected in nurses made up approximately half of the total completes of 'Introduction to Eye Health and Vision Care' and 'Advanced Eye Care Training for Primary and Allied Health'.

Table 11 Module completion by practice role

Module title	Total completes	GP - % of total	Nurses - % of total	Administrative role - % of total
Introduction to Eye Health and Vision Care	**90**	36%	56%	9%
Advanced Eye Care Training for Primary and Allied Health	**68**	38%	57%	4%
Common Eye Conditions	**69**	64%	33%	3%
Diabetes and Eye Health	**10**	70%	30%	0%

Similar trends were seen in engagement with the webinars, with GPs and Nurses making up relatively equal proportions of overall attendance and likely to attend multiple webinars. On average, there were 21 attendees at each live webinar. There were more views of the webinar once the recordings were accessible via YouTube, with the 'Age-related macular degeneration' webinar receiving the most views (83 views). The 'Glaucoma deep-dive' webinar was also relatively popular, with 64 reported views on YouTube.

Practices rated both the online modules and webinars as effective. Three quarters of practices (74%) considered the online modules to be very effective in supporting their practice to achieve project objectives. A further 24% considered the modules to be somewhat effective. In contrast, half (50%) of all participating practices rated the webinars as very effective, with two in five practices (41%) finding the webinars to be somewhat effective in helping them meet project objectives.

Differences in ratings of effectiveness between modules and webinars as well as attendance of live webinars and views of the recording suggests asynchronous learning activities may be better suited to the target cohorts. This was reflected in some open response feedback in the post-pilot survey and should be considered in future learning and development opportunities.

> *We found the training and webinars significantly beneficial over the course of the project. They were informative and concise along with being accessible as they were online and could be viewed out of business hours which was beneficial. We have embedded multiple processes over time and this will continue to be expanded. – post-pilot survey respondent*

Vision 2020 learning activities enabled improvements in clinical practice in identifying and treating eye health conditions

There have been increases in self-reported knowledge following completion/participation in Vision 2020 learning activities. Participants were asks to rate their knowledge and clinical practice prior to and at completion of each activity. Results recorded by Vision 2020 indicate an increase in self-reported learnings across all modules. This includes reported increases across four modules in:

- knowledge of the main eye conditions that cause vision loss
- ability to identify the main eye conditions that cause vision loss
- knowledge on when to refer a patient to an eye health professional
- knowledge of the risk factors for vision loss
- asking patients about their vision and eye health

incorporating information about vision and eye health into daily practice

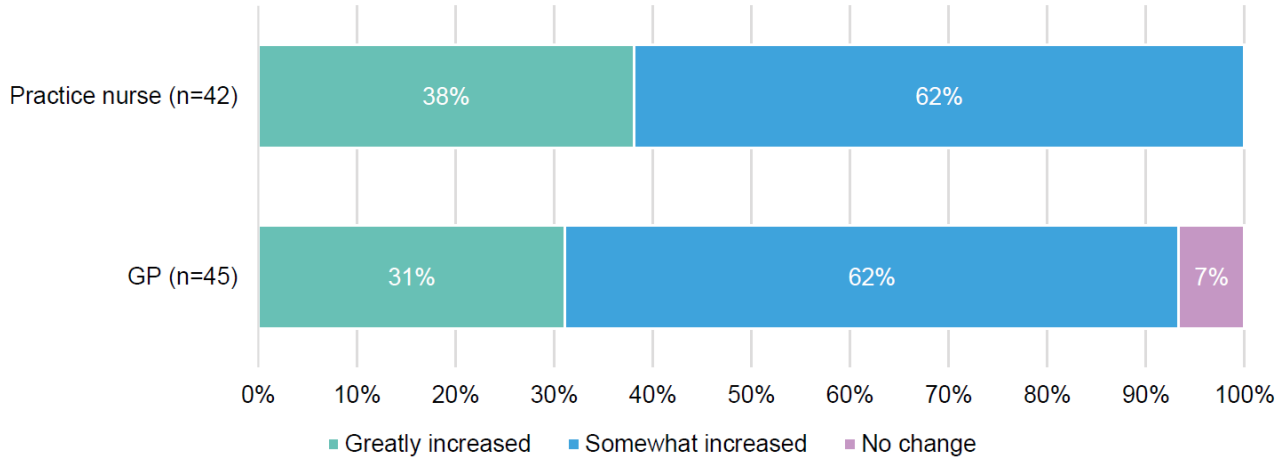
Similarly, there were reported increases in knowledge across all live webinars. Respondents to the post-webinar survey also largely agreed they were likely to change something in their practice as a result of the learning activity. This data is limited as it does not capture long-term knowledge uplift and actual changes to practice amongst clinicians and administrative staff.

As the data does not accurately capture how many participants completed multiple modules, the compounding effects of participating in multiple learning activities are also not able to be determined. To measure this in the future, post-completion surveys should ask participants which other modules/webinars they may have completed.

Increases in self-rated knowledge differ based on the module completed. Increases in self-rated knowledge and clinical practice were lower for participants who completed the ‘Advanced Eye Care Training for Primary and Allied Health’ module compared to those who completed other modules. This is due to these participants having slightly higher baseline knowledge and understanding, hence impacting the extent to which such knowledge could increase. The highest reported increase was observed amongst those who completed the ‘Common Eye Conditions’ module. Vision 2020 reported a 73% increase in this group’s incorporation of information about vision and eye health into their daily practice.

Figure 5 shows that most respondents noted GPs and nurses have some degree of positive change in their clinical capability. The post-pilot survey asked respondents to report how GPs and/or nurses in their practice would rate changes to their ability to identify, assess, manage and refer patients with or at risk of eye disease as a result of completion/participation in the online training and webinars. Only a small proportion (7% of GPs) reported no change as a result of Pilot learning activities. This points to an observed change in GP and nurse capability as a result of Vision 2020 training. The impact of this training on patient referrals and outcomes is further explored in Section 6.

Figure 5 Reported increases in practitioner capability as a result of completion/participation in online training and webinars



5.3. OUTCOMES FOR THE SECTOR

Vision 2020 learning activities has reach extending beyond the Pilot, supporting sector impact

Vision 2020 modules developed for the Pilot are available free-of-charge for all healthcare professionals working across the primary care sector in Victoria, regardless of their involvement in the project. Further, Vision 2020 reported the 'Common Eye Condition' module became a Royal Australian College of General Practitioners (RACGP)-approved Continuing Professional Development (CPD) activity under the RACGP CPD Program in October 2023. While data provided for the evaluation is focused only on engagement by those participating in the Pilot, it can be inferred that the provision of these resources more broadly would support capacity uplift in the sector similar to that reported in Section 5.2.

Reach extending beyond participating practices may have been captured in uptake data for the online modules and webinars. As reported in Section 5.2, Vision 2020 reporting uses postcodes as a proxy to represent individual practices participating in the Pilot, and modules are primarily being accessed and completed by those participating in the Pilot. A small proportion of participants in each module and attendees to each live webinar were not from participating postcodes and may demonstrate this broader sector reach.

Further, the majority of participating practices intend to rollout Vision 2020 training more broadly. Almost three quarters (70%) of practices indicated in the post-pilot survey they intend to make Vision 2020 training available to all staff members in order to adopt and maintain practice improvements at the whole-of-practice level. If implemented, this would support impact beyond direct participants in the Pilot, benefiting both patients and the sector.

Ophthalmology and eye disease HealthPathways are utilised by some practices, but data limitations mean it is not possible to discern the impact of the Pilot

HealthPathways is an online health information portal for GPs that provides information about assessment and management of health conditions including specific details about local referral pathways. There were varying levels of awareness and use of HealthPathways prior to the Pilot. Approximately half (53%) of all respondents to the baseline survey reported that GPs in their practices were aware of the ophthalmology and eye disease HealthPathways. Two in five respondents to this question were unsure of the use of HealthPathways. While this may be influenced by a lack of knowledge by those completing the survey of GP individual practice, it nonetheless indicates a baseline level of uncertainty of the use of HealthPathways to diagnose of manage eye conditions and/or refer risk patients for specialist care.

Most practices (83%) reported using ophthalmology and eye disease HealthPathways as a resource under the Pilot. Of the group that used the resource, 92% found it effective to some extent in supporting project deliverables. The strength of this rating was evenly distributed between practices who saw HealthPathways as somewhat effective (47%) and very effective (45%). This suggests there are opportunities to further improve practices' use and understanding of the tool, or the utility of the platform.

Table 12 shows there has been some small changes in the number of ophthalmology pathways in the HealthPathways system across the duration of the Pilot, and a modest decrease in the number of views of ophthalmology. This cannot be attributed to the Pilot but shows the maintenance of the HealthPathways system during Pilot implementation. It does not show any increases in HealthPathways use, and may reflect GPs becoming more comfortable using other referral pathways information as a result of the Pilot.

Table 12 Number of ophthalmology HealthPathways and number of views

HealthPathways	Baseline March to October 2022	Post-pilot March to October 2023
Number of ophthalmology	139	147
Number of localised ophthalmology	91	94
Number of views of ophthalmology	9,998	9,365

Some practices reflected on the use of HealthPathways, drawing attention to varying use. One practice suggested HealthPathways is most helpful for practice staff who may not have previously been involved in making referrals in the local area.

> *HealthPathways is especially useful for early career GPs, GPs new to the area, and for nurses to use. – Post-pilot focus questions.*

This aligns with feedback from another practice who highlighted that utilisation of HealthPathways was lower than intended as staff were able to find information from other sources.

6. OUTCOMES FOR PATIENTS

This section highlights outcomes for patients that have occurred as a result of the Pilot (KEQ. 4). This includes outcomes related to eye examinations, referrals for eye tests, attendance at eye examinations and complete cycles of care.

Table 13 provides a summary of key findings aligned with the sub-KEQs that informed this section. A detailed analysis of findings in provided thereafter.

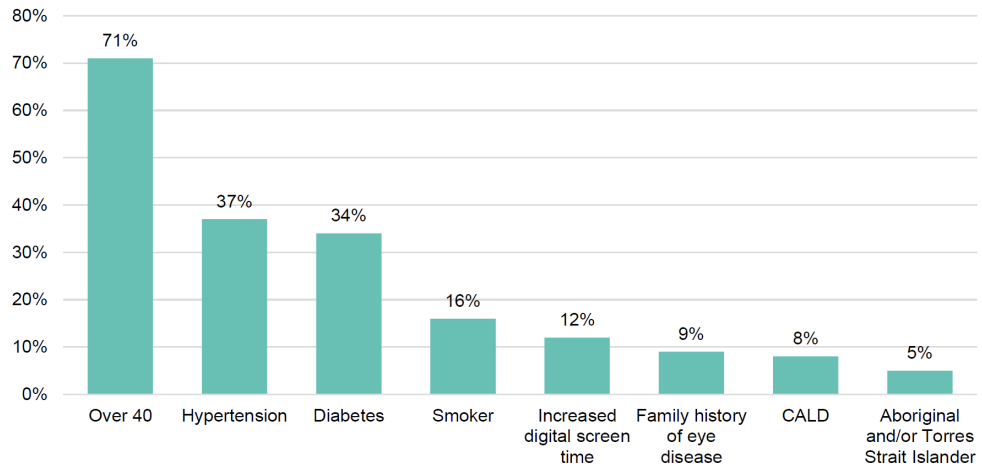
Table 13 Summary of findings against sub-KEQs 4.1 to 4.4

Sub-KEQ	Key findings
4.1 How has the initiative led to eye examinations for target at risk groups being detected/treated at the practice level?	▪ Building the capacity of clinicians and inclusion of eye health screening on standard practice templates enabled more frequent flagging of the need for patient eye health screening
4.2 How has the initiative resulted in referrals for eye tests by primary healthcare professionals?	▪ Systems to record a patient's last eye check and increased knowledge of common eye conditions and treatment has led to increased referrals to optometry and ophthalmology by GPs
4.3 How has the initiative resulted in targeted at risk groups attending eye examinations they were referred to?	▪ Identified at-risk groups are well represented in Pilot referrals, but there is no data on whether these patients attended subsequent eye examinations.
4.4 How has the initiative led to the complete cycles of care to manage the eye conditions/disease?	▪ Outcomes data shows some evidence of ongoing management of the eye condition/disease by either eye care specialists (34%) or the patient's GP (14%).

Identified at-risk groups are well represented in Pilot referrals

Pilot data shows that of the total number of referred patients, almost three quarters were identified as being within the at-risk group of over 40 years of age (71%), and approximately one third had hypertension (37%) or diabetes (34%). shows that a small proportion of referrals were for patients that identified as Aboriginal and/or Torres Strait Islander, which is greater than this population's makeup in the state (see Section 4.2).[30] These findings align with identified risk factors in the case studies.

Figure 6 Risk factors in patient referrals



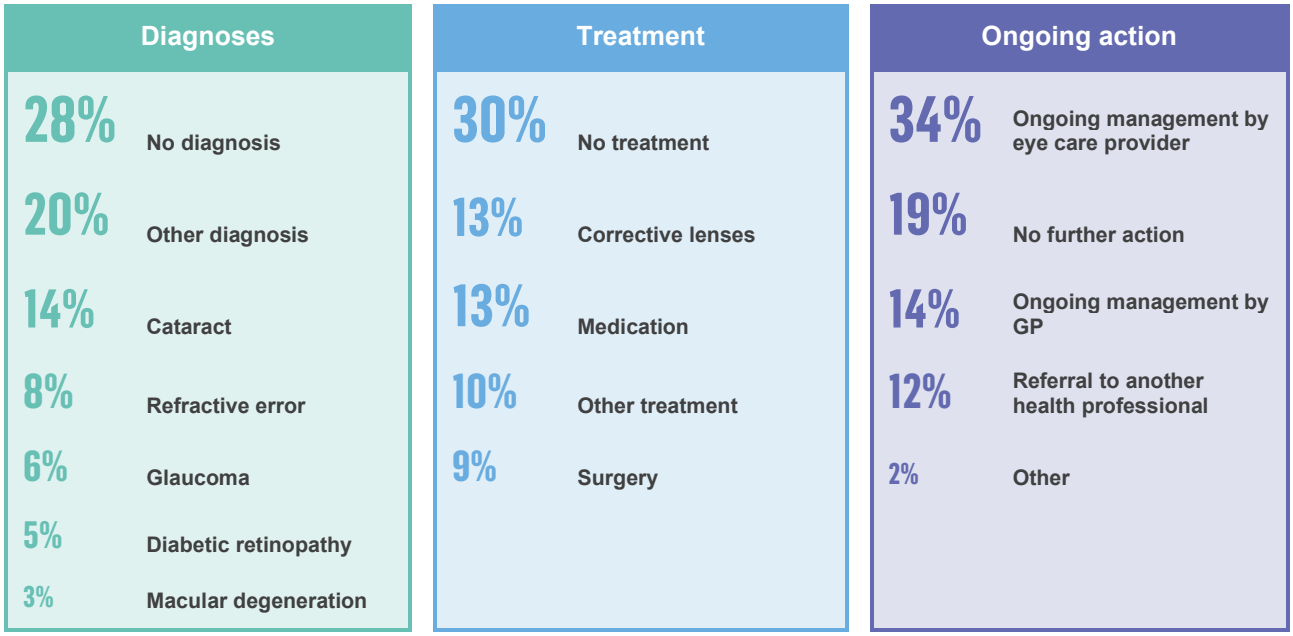
[30] Australian Bureau of Statistics. (2022, July 1). *Victoria: Aboriginal and Torres Strait Islander population summary*. Retrieved from https://www.abs.gov.au/articles/victoria-aboriginal-and-torres-strait-islander-population-summary.

There is limited aggregate data regarding whether these referrals led to attendance at eye examinations for people in these identified high-risk groups. Analysis of the case studies shows that referrals were attended by all patients, but this is likely skewed by such case studies being 'best practice' examples.

Recorded outcomes for patients ranged from diagnosis and treatment to receiving ongoing care and management

Practices who received correspondence from the eye health specialist reported referral outcomes including patient diagnosis, treatment and whether any further action was required. Correspondence was received for 35% of patient referrals. Figure 7 shows that the most common diagnosis outcomes were no diagnosis (28%), 'other' diagnoses (20%) which includes dry eye disease, eye infection and allergic eye disease, and cataract (14%). Almost one third (30%) of patients did not receive treatment, with approximately one in ten (13%) receiving corrective lenses and medication respectively. One third (34%) of all patients required ongoing management from their eye care provider, while one in five (19%) required no further action. These findings are limited in that they only represent one third (35%) of all referrals made, and they do not represent overall patient outcomes from all participating practices as the number of practices submitting outcomes data each month increased over time. Despite this, they show a broad range of patient outcomes under the Pilot. In particular, while they may appear undesirable, 'no diagnosis' and 'no treatment' outcomes are appropriate outcomes for this project that aims to increase both screening and early detection rates.

Figure 7 Patient outcomes



Outcomes for clinicians and practices shaped three distinct patient eye health journeys

Thematic analysis of case studies provided by each participating PHN revealed key themes across patient experiences and outcomes. Each PHN provided seven to ten case study examples that aimed to capture and understand the patient's eye health journey where an assessment and/or referral led to the identification of an eye health condition/disease and a collaborative management plan. The case studies hence reflect examples of the successful integration of eye care into primary care, and may not accurately reflect the experiences of all patients who interacted with the Pilot. Nonetheless, analysis revealed three patient journeys, each differing by:

- initial patient presentation
- the identified impact of the Pilot on patient outcomes
- key pain points in the process.

These three patient journeys are presented below. They show that the Pilot contributed most to GPs' identification of the need for eye screening, in-practice assessment and referral process.

PATIENT JOURNEY: EYE HEALTH ISSUE

Leila is a 52-year-old woman who started experiencing blurred vision two days ago and has booked an urgent appointment with the first available GP at her regular practice. She received treatment for open angle glaucoma two years ago and has diabetes and hypertension. Leila saw her ophthalmologist one year ago for a review and has a good relationship with them.

IMPACT OF THE PILOT

Increased clinician knowledge on eye conditions and their treatment: Access to Vision 2020 Australia training modules and webinars increased GP knowledge and capability in identifying and determining treatment for eye health conditions.

Improved referral pathways: Quality improvement projects to update the practice address book and improve pathways of communication between primary care and optometry led to smooth referrals and good collaboration between practitioners.

Reason for GP visit: Leila presented at the GP for an eye health issue.

Reasons for eye health screening: Leila communicated her eye health issue to her GP who screened for issues.

Primary care contribution: The GP conducted in-practice eye screening and identifies the need for Leila to be referred to a specialist.

Patient referral: Leila's condition was identified as not severe or urgent and hence appropriate for optometrist treatment. Leila was referred to the local optometrist via the practice address book.

The optometrist identified that Leila required more specialist care and referred her to her preferred ophthalmologist.

Patient outcome: Leila received a diagnosis and treatment from the ophthalmologist.

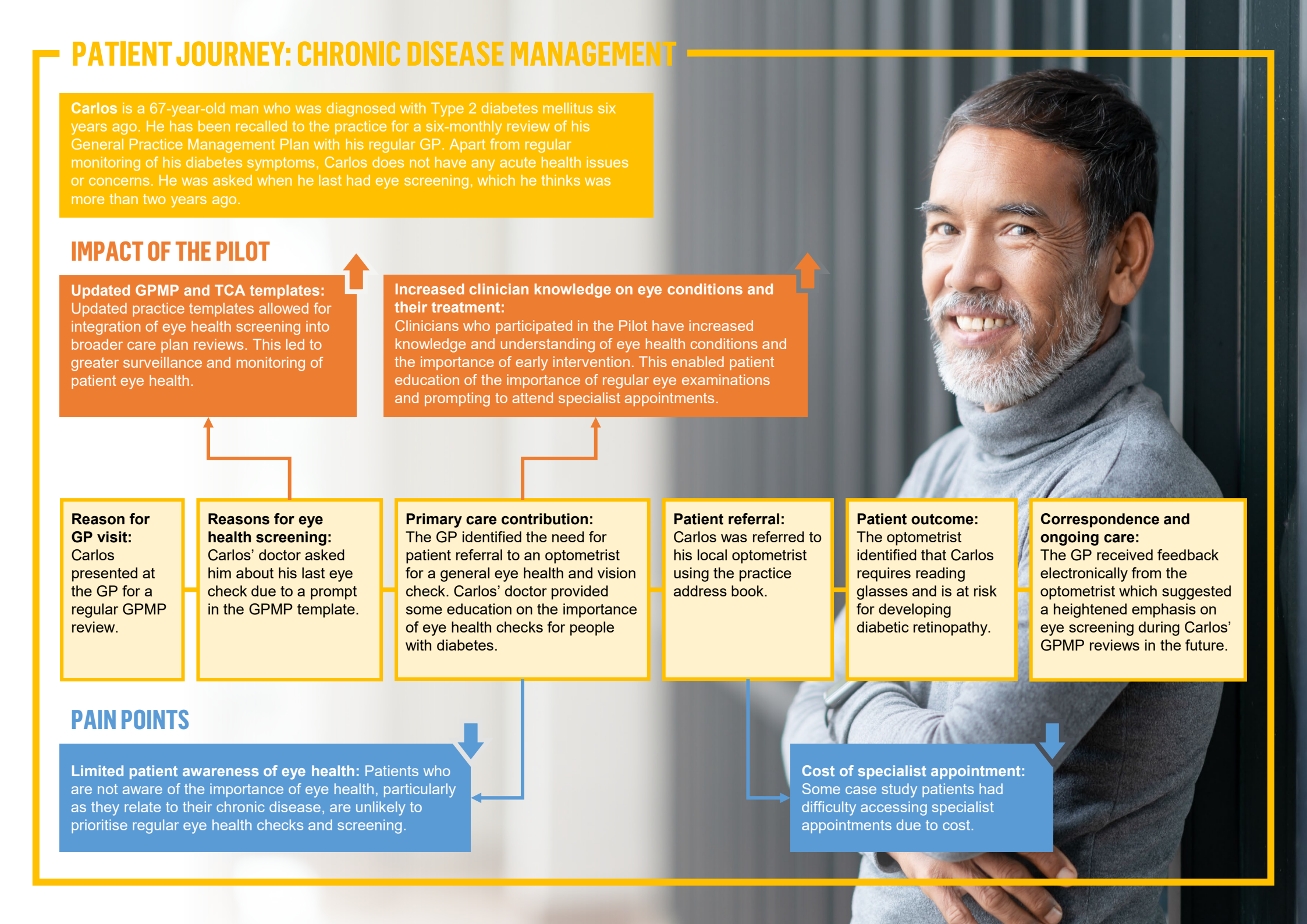
Correspondence and ongoing care: Leila's regular GP received feedback from the ophthalmologist via email and made a note to ask Leila about her vision during the next appointment.

PAIN POINTS

Logistics in accessing treatment: Some case study patients reported difficulty accessing specialist appointments, due to barriers such as cost and transport.

PATIENT JOURNEY: CHRONIC DISEASE MANAGEMENT

Carlos is a 67-year-old man who was diagnosed with Type 2 diabetes mellitus six years ago. He has been recalled to the practice for a six-monthly review of his General Practice Management Plan with his regular GP. Apart from regular monitoring of his diabetes symptoms, Carlos does not have any acute health issues or concerns. He was asked when he last had eye screening, which he thinks was more than two years ago.



IMPACT OF THE PILOT

Updated GPMP and TCA templates: Updated practice templates allowed for integration of eye health screening into broader care plan reviews. This led to greater surveillance and monitoring of patient eye health.

Increased clinician knowledge on eye conditions and their treatment: Clinicians who participated in the Pilot have increased knowledge and understanding of eye health conditions and the importance of early intervention. This enabled patient education of the importance of regular eye examinations and prompting to attend specialist appointments.

Reason for GP visit: Carlos presented at the GP for a regular GPMP review.

Reasons for eye health screening: Carlos' doctor asked him about his last eye check due to a prompt in the GPMP template.

Primary care contribution: The GP identified the need for patient referral to an optometrist for a general eye health and vision check. Carlos' doctor provided some education on the importance of eye health checks for people with diabetes.

Patient referral: Carlos was referred to his local optometrist using the practice address book.

Patient outcome: The optometrist identified that Carlos requires reading glasses and is at risk for developing diabetic retinopathy.

Correspondence and ongoing care: The GP received feedback electronically from the optometrist which suggested a heightened emphasis on eye screening during Carlos' GPMP reviews in the future.

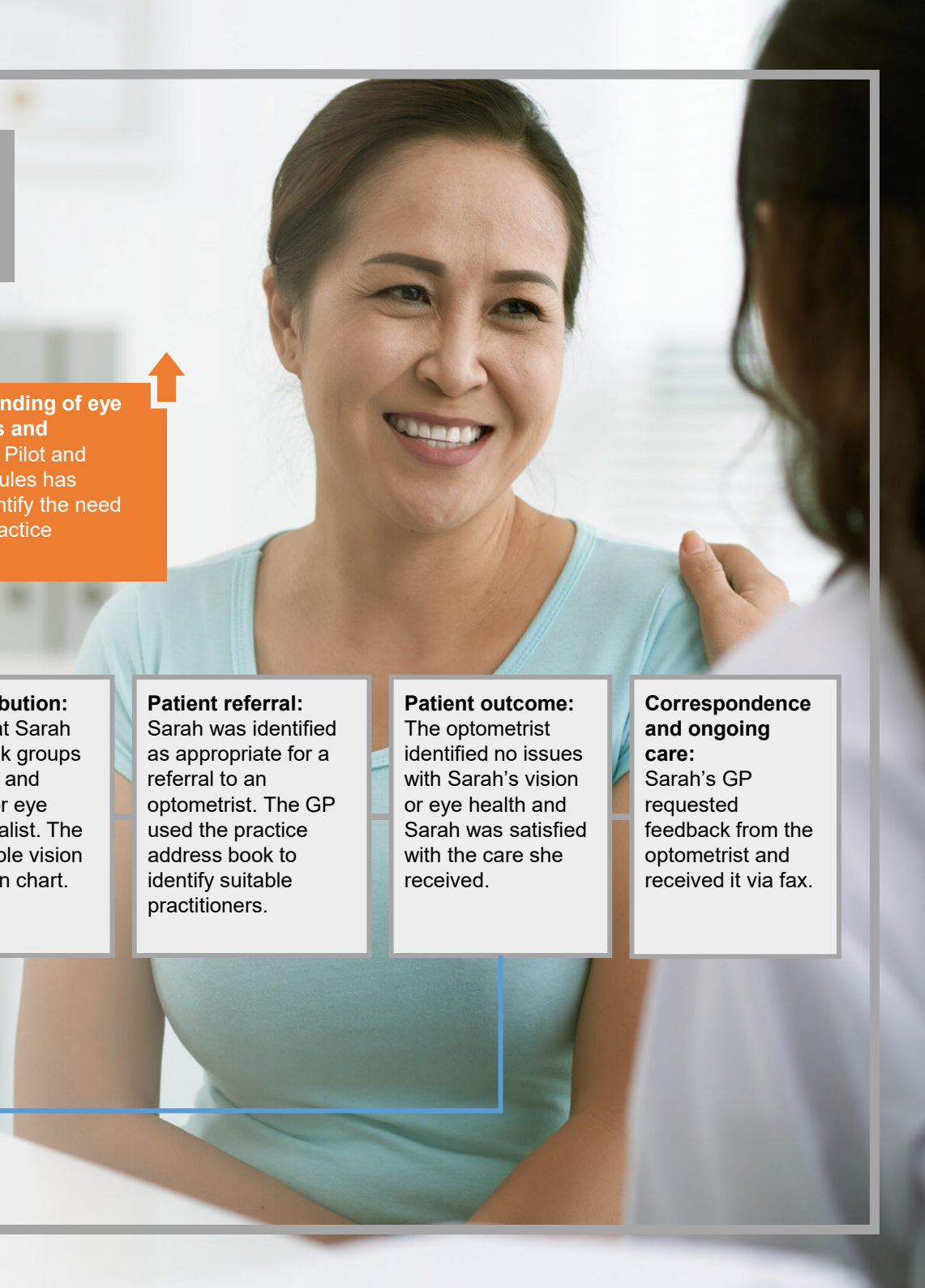
PAIN POINTS

Limited patient awareness of eye health: Patients who are not aware of the importance of eye health, particularly as they relate to their chronic disease, are unlikely to prioritise regular eye health checks and screening.

Cost of specialist appointment: Some case study patients had difficulty accessing specialist appointments due to cost.

PATIENT JOURNEY: GENERAL HEALTH ISSUE

Sarah is a 49-year-old woman who has booked a general appointment with her regular GP. She needs to receive a Vitamin B12 injection from the practice nurse and has been recalled to discuss the results of her latest blood test. Sarah's doctor asked her about her most recent eye check, but she could not remember the last time she went to the optometrist.



IMPACT OF THE PILOT

Increased clinician awareness of eye health risk factors: Clinician training through the Vision 2020 Australia modules and health promotion of risk factors at the practice level increased GP identification of at-risk individuals who would benefit from eye health screening.

Increased clinician understanding of eye health symptoms, diagnoses and treatment: Participation in the Pilot and engagement with training modules has increased GP capability to identify the need for early intervention and in-practice assessment where relevant.

Reason for GP visit:
Sarah visited the practice for an injection and to review the results of her latest blood test with her GP.

Reasons for eye health screening:
During the appointment, Sarah's GP reviewed her file and noticed a family history of macular degeneration. Opportunistic questioning about Sarah's lifestyle also highlighted increased screen time due to her new job in consulting, and an unclear timeframe for her last eye health check.

Primary care contribution:
The GP identified that Sarah was part of two at-risk groups for eye health issues and identified the need for eye screening by a specialist. The GP conducted a simple vision check using a Snellen chart.

Patient referral:
Sarah was identified as appropriate for a referral to an optometrist. The GP used the practice address book to identify suitable practitioners.

Patient outcome:
The optometrist identified no issues with Sarah's vision or eye health and Sarah was satisfied with the care she received.

Correspondence and ongoing care:
Sarah's GP requested feedback from the optometrist and received it via fax.

PAIN POINTS

Receiving feedback from eye care specialists: Some practices reported challenges in receiving feedback from optometrists without prompting them, particularly when there was no clinically significant outcome for the patient. This impacts their ability to provide ongoing patient care.

7. ECONOMIC AND SOCIAL IMPACT ANALYSIS

This section demonstrates the extent to which the Pilot has delivered value for money (KEQ. 6). This includes findings on whether the Pilot has delivered activities in line with the original scope, budget and timeframes, as well as an economic and social impact analysis. The economic and social impact analysis has been conducted in line with Department of Treasury and Finance (DTF) guidelines, with costs and benefits reported in real, discounted, FY2023 dollar terms using the central 4% discount rate[31] in line with social and health programs in Victoria.

Table 14 provides a summary of key findings aligned with the sub-KEQs that informed this section. A detailed analysis of findings in provided thereafter.

Table 14 Summary of findings against sub-KEQs 6.1 to 6.5

Sub-KEQ	Key findings
6.1 Has the initiative operated and delivered activities in line with its original scope, budget and expected timeframes?	The Pilot operated at under the original budget, however, also did not deliver across the expected 60 practices and did not operate in the South Eastern Melbourne PHN. Furthermore, the delivery of the eReferral Portal did not eventuate. At a total funding cost of $1,620,831, significant set-up costs have been experienced including the development and accreditation of training materials and coordination of staff across PHNs to establish how best for coordinators and practices to deliver on the Pilot's objectives. The financial acquittal indicates that the budget was adequate to deliver the full scope of the Pilot, with $198,062 in surplus funds available at its conclusion the likely result of lower reach compared to the pilot's intended reach of 60 practices.
6.2 What were the major categories of expenditure and cost drivers?	At a total economic cost of $2,018,936, including the opportunity cost of practices' time, expenditure and cost drivers were: ▪ Commissioned services - $1,220,383 (59.5%). ▪ Staffing/salaries - $250,908 (12.2%). ▪ Client Cost Recovery - $140,046 (6.8%). ▪ Admin - $9,494 (0.5%). ▪ Opportunity cost – QI activities - $431,232 (21.0%). ▪ Opportunity cost – other activities - $84,423 (4.1%). With the bulk of funding to practices and practice improvement activities such as development of materials, the costs of the program are well-aligned to the outcomes being sought. It has been estimated that over one quarter of economic costs have resulted from the time cost of activities required by practices in the Pilot. Feedback from stakeholders indicate that there are opportunities for these costs to reduce via more streamlined reporting.
6.3 What is the unit cost of initiative delivery?	The total discounted economic cost of the Pilot from FY2022 to the end of the Pilot was $2,018,936. This is equivalent to approximately $47,950 per practice, $1,622 per verified outcome or $561 per referral from a general practice.

[31] A discount rate can be defined as follows:
"In order to compare costs and benefits over time, the values attached to costs and benefits need to be converted and expressed in today's dollar value. This is referred to as 'discounting' future values. The discount rate is the percentage rate at which future values are reduced to bring them into line with today's values." - Department of Jobs, Skills, Industry and Regions, 2022, Guidance on discount rates.

Sub-KEQ	Key findings
6.4 Were the initiative outcomes achieved proportionate to the investment?	A break-even analysis (BEA) was conducted to understand the number of early diagnoses estimated to be required to cover the economic costs of delivering the Pilot. The BEA indicates Pilot outcomes were proportionate to the investment, estimated to be valued at a weighted average benefit of $6,218 per early diagnosis. This yields a break-even point of 325 early diagnoses that would need to be attributed to the Pilot for it to cover its costs, or break even, which is equivalent to 9% of all referrals from the Pilot and 26% of verified outcomes resulting in an early diagnosis of a preventable eye disease. Based on the program data and additional stakeholder insights, it is therefore highly likely that the outcomes achieved were at least proportional to the investment, and are likely to be delivering a net-benefit to Victoria.
6.5 What efficiencies could be recognised in potential future delivery of the activities?	A sensitivity analysis of the BEA shows that scalability of the model would be vastly improved if cost-savings can be delivered. In modelling a 20% and 50% reduction in the program costs summarised in 6.2, and the relative changes in the break-even point, the impact of a reduction of the administrative burden of the Pilot and lower ongoing cost following set-up of collection and education material is shown. This indicates that as the project expands, there are likely to be economies of scale on a per-practice and per-patient basis.

The Pilot was delivered slightly below the original budget, driven by lower-than-anticipated reach

With an original budget of $1.71 million, the Pilot was delivered at a total cost of $1.62 million between the 2022 financial year (FY2022) and 2024 financial year (FY2023). Analysis of the audited financial summary of the Pilot shows that most costs accrued to ‘commissioned services’ ($1.2 million) and PHN staffing/salaries ($250,000). This indicates that a significant proportion of the costs of the Pilot relate to the coordination and support functions that PHNs are performing, which is labour-intensive.

These costs supported delivery across 48 practices, of which 46 were still part of the Pilot at completion. This equates to 80% of the anticipated reach relating to the number of practices initially budgeted for (60 practices). As a pilot, there were fixed set-up costs related to the development of training materials, data sharing structures and other administrative systems experienced over the evaluation period. Future costs will be somewhat lower on a per-practice basis without these set-up costs. With 11% ($198,062) of budgeted funding remaining at the end of the Pilot, total costs of the program were relative to the number of practices when accounting for set-up costs. Furthermore, the Pilot has demonstrated scalability with ongoing costs likely to be lower on a per-practice level now that these systems are established.

Substantial opportunity costs were placed on practices, which can be reduced over future years

Opportunity costs reflect the value of time, effort or investment that could be alternatively delivered without resources being allocated to activities that deliver the Pilot. The structure of the Pilot required administrative and training effort from practice managers, administrators and GPs, the value of which is not captured within financial acquittals. To estimate the total economic cost of the Pilot, the value of this time has calculated based on the estimated effort within the induction package, and the weighted average salary of staff who take part in those activities. These estimated values are captured in Table 15. It is assumed training that is counted towards GP professional development is not an opportunity cost of the Pilot, given these hours are part of the standard workload of a GP. Further details of the methodology are contained in the Appendix A.

Table 15 Estimated value of effort taken for Pilot processes

Process	Time Taken (hours)	Frequency	Staff Involved	Estimated Cost (nearest $100)
Initial data collection and pre-/post-survey	1.5	1	Administrative Staff (47)	$2,900
Induction meeting	2	1	All Pilot participants (205)	$30,500
Professional Development Webinar	1	1	Attendees (32)	$2,700
QI Activities	2	8	All Pilot participants (205)	$431,200
Ongoing Data Collection Activities	0.5	8	Administrative Staff	$5,800
Meeting with PHN – program leads	0.5	6	Heath Practice Managers (47)	$10,000
Meeting with PHN – all participants	1	2	All Pilot participants (205)	$15,200
Case Studies	1	44	Health Practice Manager	$2,100
November Wrap-up	1	1	All Pilot participants (205)	$15,200
Total				**$515,700**

Sources: Murray PHN (n.d). Embedding Eye Health Preventative Care Into Primary Care Pilot: Orientation and activities package for general practice (client supplied document); ABS (2021). NCP Total Personal Income (weekly) by 6-digit level OCCP Occupation by STATE (POW) and 4-digit level INDP Industry of Employment [Census TableBuilder]. Data retrieved from https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/income-and-work; Urbis Calculations.

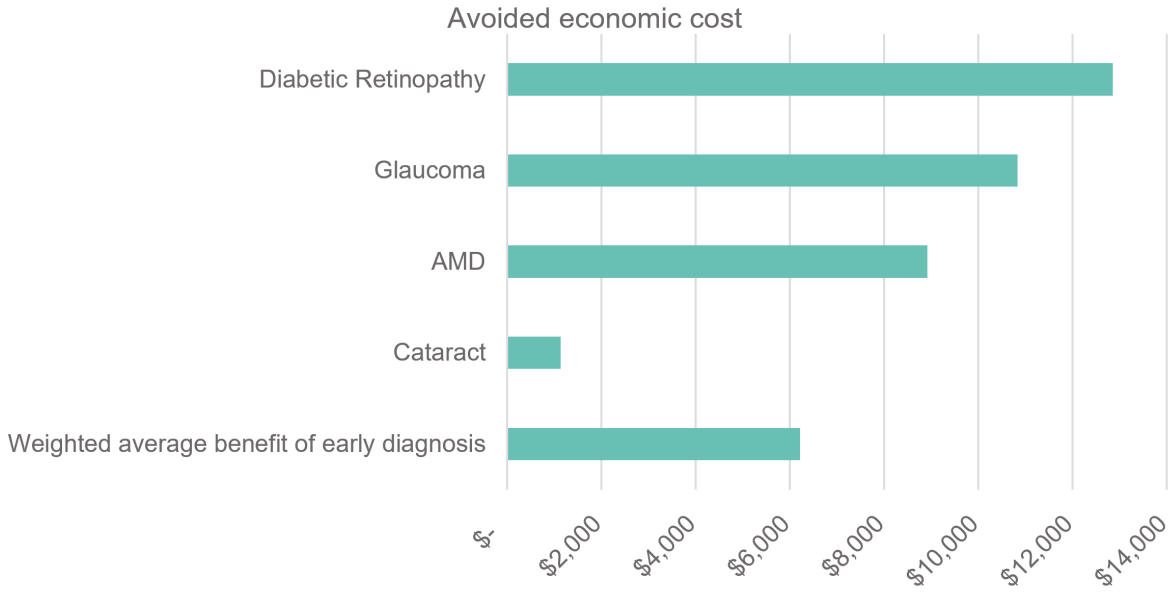
Table 15 demonstrates that there are significant costs across the general practices within the Pilot, with an estimated total opportunity cost of over $500,000. Over 80% of these costs relate to QI activities, which are assumed to be completed by GPs. This concurs with findings from Pilot data which gave a clear indication that the manual nature of the programs' administration was a key barrier to success. Future iterations of the Pilot should look to streamlining these processes to deliver preventative screening more efficiently in Victoria.

The outcomes are of value to individuals and the economy

General practices in Australia play a core role in the early identification of risk factors and poor health that are vital to high quality preventative healthcare practices in Australia. The Pilot appropriately empowered GPs in Victoria to better target eye health concerns and comorbidities, as demonstrated in findings related to (Section 5.2). Pilot data indicates that this is having a material impact on the proactive identification and referral of patients to specialists in participating practices (see Section 6). However, without a control group or dataset, the level to which this is being delivered above a baseline could not be determined for this evaluation.

To measure the potential impact of the program, a detailed literature and data review has been conducted, as summarised in Appendix A. Economic costs of the key eye diseases diagnosed in the Pilot have been adopted as a proxy value of the benefit of early intervention, ranging from $1,268 per cataract case to $14,283 for diabetic retinopathy. The weighted average impact of diagnosis through the Pilot has been calculated at $6,218 per early diagnosis and intervention (see Appendix A). It is assumed that early diagnosis will have a 90% chance of avoiding the costs of each eye disease, in line with the Australian estimate that 90% of eye health diseases are preventable if detected early.[32] Figure 8 presents the estimated value of avoided costs to individuals, the economy and the health system as result of early diagnosis.

Figure 8 Value of early diagnosis by disease type



Source: Marcques et al (2022); Urbis calculations

As shown in Figure 8, there are significant differences in the benefit profile based on each disease type, with the long-term impact of more serious and irreversible diseases such as diabetic retinopathy and glaucoma having a much more severe impact, and hence avoided cost benefit. Given only 35% of referrals have verified outcomes data, an estimate of the total level of benefit delivered by the program was not estimated. Further to this, without a comparable baseline dataset of non-participating practices, the net difference in diagnoses rates cannot be calculated for the evaluation. Nonetheless, the benefits of the clinical outcomes being delivered in the Pilot are of high value.

Outcomes that may be delivered but have not been able to be quantified are any spill-over effects of practice improvement to other health outcomes of patients, confidence within practices and the community in general practice deliver, and upskilling of non-medical staff which may lead to more cost-effective general practices in Victoria.

Overall, the Pilot was good value for money

In line with Australian Department of Treasury and Finance Economic Evaluation Guidelines (2016),[33] the economic evaluation of this program has been based on the best possible analysis using program and publicly available data and research at the time of this evaluation. As described above, the net difference in outcomes that have been delivered by participating practices compared to general practices in Victoria more generally over the 8-month Pilot cannot be calculated. Hence, the net difference in diagnoses and early interventions cannot be substantiated. This means that a 'counterfactual' scenario cannot be constructed as part of this evaluation and hence a Cost-Benefit Analysis (CBA) cannot be undertaken.

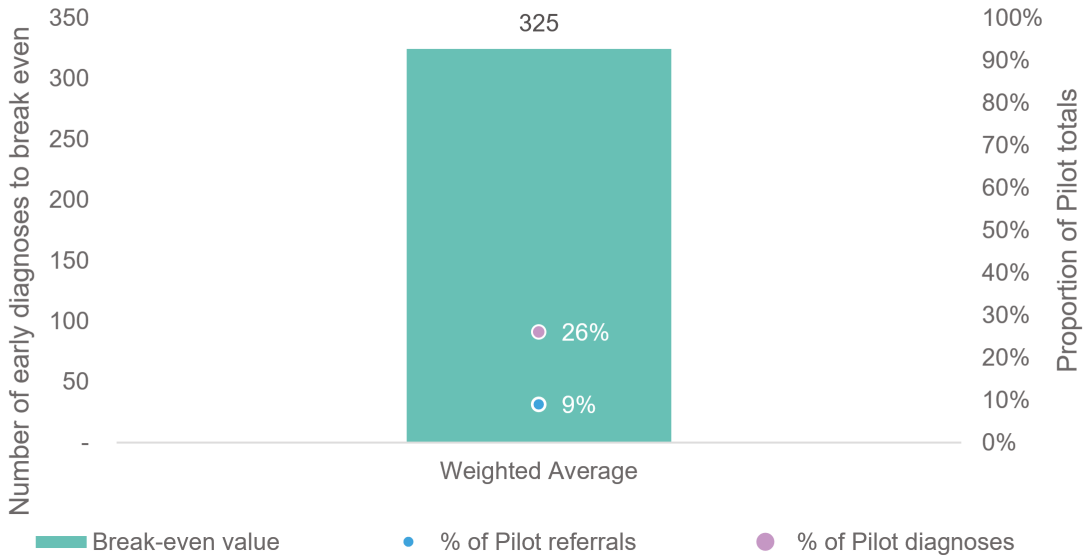
[32] Australian Institute of Health and Welfare (2016) in Vision 2020Australia. (2022). *2022-23 Pre-Budget Submission January 2022*. Retrieved from https://treasury.gov.au/sites/default/files/2022-03/258735_Vision_2020_australia.pdf

[33] Department of Economic Development, Jobs, Transport and Resources. (n.d.) *Guidance on undertaking economic assessment*. Retrieved from https://djpr.vic.gov.au/__data/assets/word_doc/0008/1492604/Guidance-on-how-to-undertake-economic-assessment-internet1.docx.

With a strong understanding of the net economic costs of the program, and a clear indication of the types of outcomes that are being targeted, a Break-Even Analysis (BEA) analysis was used to understand the likely value for money as indicated as the best option where most costs can be valued, however the level of benefits cannot be quantified, but their value is known.[34] A BEA estimates the level of benefit that needs to be achieved through the Pilot for it to cover the costs of delivery, known as the break-even point. With an estimated real economic cost of $2,018,900 from FY2022 to the end of the Pilot, the break-even points for each preventable eye disease, as well as the weighted average diagnosis benefit, is detailed in Appendix B.

Figure 9 details the result of the break-even analysis for the Pilot, showing the estimated break-even point which weights the economic benefit estimate by the mix of diagnoses from Pilot outcomes data.

Figure 9 Break-even analysis – result for weighted average diagnosis value



The outcomes of the BEA demonstrate that there is a high likelihood that the Pilot is delivering a net economic benefit to the state of Victoria. As demonstrated in Figure 9, which considers the blend of diagnoses based on the total pool of verified diagnoses (see Methodology Appendix A for more detail), the Pilot requires a total of 325 early diagnoses to be delivered for the costs of the Pilot to be equal to the benefits of early intervention. This is equivalent to 9% of all referrals leading to an early diagnosis, or 26% of verified diagnoses resulting in an earlier intervention than would have occurred without the Pilot.

Due to a lack of baseline or comparison data related to the Pilot, the level to which diagnoses resulting from the Pilot are earlier than they otherwise would have been through standard clinical practice cannot be estimated. Similarly, the net-difference in identification of diseases by vulnerable group and by disease type because of the Pilot could not be estimated. Given only 35% of referrals resulted in a confirmed outcome, and there was a significant weighting towards cataract in this data, the weighted benefit may be different if a greater proportion of the higher-impact diseases were being diagnosed earlier than before the Pilot. Nonetheless, given the significant number of practices reporting a change in their standard practice to elevate the detection of eye diseases and refer patients at higher rates, it is likely that the Pilot is breaking even due to improved preventative practices.

Data partnerships would support future efforts to determine the full benefits of the Pilot

Limitations of data collected for the evaluation has meant that the total net economic benefit to Victoria of the Pilot could not be determined through a CBA. The key limitation in data is the inability to determine if referrals and diagnoses reported represent an increased rate of early intervention or are a result of other factors such as the types of practices that are participating or the cohort of patients attending the practice over the trial period. For future research, two key additional data sources could be collected to ensure the net economic benefit of this Pilot could be assessed. These are presented in the Table 16 overleaf.

[34] Department of Treasury and Finance in Department of Development, Jobs, Transport and Resources. (n.d.) *Guidance on undertaking economic assessment*, p.16. Retrieved from https://djpr.vic.gov.au/__data/assets/word_doc/0008/1492604/Guidance-on-how-to-undertake-economic-assessment-internet1.docx.

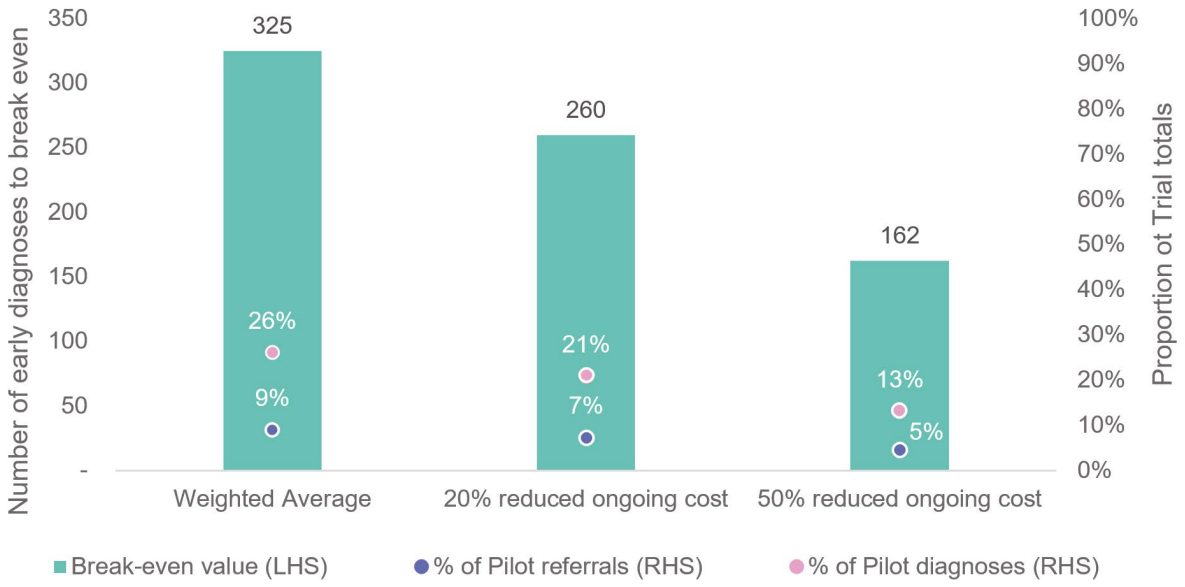
Table 16 Potential data partnerships to assist future research

Data Description	Key Data Stakeholders	Potential Additional Insights
Longitudinal diagnosis data	Victorian Department of Health, other State health data owners, Australian Department of Health, Australian Bureau of Statistics	The anticipated rate of diagnosis for eye disease in Victoria, and the age at which this occurs. This could be compared to program participants to determine changed rates of intervention at early stages and the net-difference in clinical outcomes. This would require significant additional data sharing, collation and analysis.
Data sharing systems with optometry and ophthalmology	Optometrists, ophthalmologists, Victorian Department of Health	Better tracking of diagnosis outcomes from referrals to determine any practice-by-practice differences in outcomes delivered.

The Pilot is scalable particularly with reductions in set-up and administrative costs

To demonstrate the potential scalability of the Pilot, a sensitivity analysis has been conducted on the break-even analysis of the Pilot. The sensitivity analysis considers two scenarios where costs have been reduced by 20% and by 50%. These options captured different levels to which cost-efficiency of the Pilot is realised due to no further set up costs existing and the potential for the administrative burden to reduce following changes to the Pilot and data sharing arrangements. The results of the analysis are contained in Figure 10 and demonstrate that a strong reduction in the cost base of the Pilot may lower the break-even point to 162 diagnoses over an 8 month period, This would reduce the total proportion of diagnoses that would need to demonstrate they are earlier interventions to 5% of the verified diagnoses provided. This shows that if the Pilot were to scale up, it is likely that the proportion of additional early interventions delivered a per-practice would reduce to meet the break-even point and deliver value-for-money to Victoria.

Figure 10 Sensitivity analysis of break-even analysis



8. CONCLUSIONS AND CONSIDERATIONS FOR CONTINUATION AND SCALING

This section highlights key opportunities to improve systems to preserve and maintain eye health and improve eye health outcomes for patients in the PHN areas (KEQ. 5). It identifies which parts of the Pilot design were the most useful in achieving outcomes and how the initiative could be changed to better support outcomes and sustainable delivery.

Table 17 provides a summary of key findings aligned with the sub-KEQs that informed this section. A detailed analysis of findings in provided thereafter.

Table 17 Summary of findings against sub-KEQs 5.1 to 5.3

Sub-KEQ	Key findings
5.1 How could the initiative achieve better outcomes?	▪ The most significant barriers to effective implementation were noted as manual data collection, time constraints, receiving correspondence back from optometry and software limitations for tracking eye health. ▪ Improving data collection practices would improve Pilot efficiency and minimise increasing administrative burden for practices and PHNs in the case of a broader rollout. ▪ The Pilot could include further collaboration with Optometry Australia, eye health specialists and mandatory QI activities that strengthen the relationships between GPs and local optometry practices
5.2 Which parts of the initiative design and model were the most feasible at achieving the outcomes?	▪ The resources created to support changes to processes and templates at a practice level were high quality and enabled practices to improve preventative eye care for their patients.
5.3 What changes are needed to the initiative design and model to support the sustainable delivery of eye health preventative care in general practice?	▪ The Pilot could be extended as a standard QI activity with more limited data collection. ▪ When updates are available to practice management software that support efficient reporting of data on eye health screening, additional data could be required to review the impact of these activities.

Overall, the Pilot was successful in raising awareness of eye health and building the knowledge and capacity of primary health staff to manage eye health conditions. However, there were mixed views from participating practices about whether the Pilot was effective: 67% of practices rated the Pilot as effective while 27% rated it as ineffective (6% provided a neutral rating). The most significant barriers to effective implementation were noted as manual data collection, time constraints, receiving correspondence back from optometry and software limitations for tracking eye health (see Section 4.2)

Addressing these barriers would support the continuation of this work in a more sustainable format.

Key Pilot Successes

The comprehensive orientation package was an efficient use of resources and facilitates opportunities for scaling of the Pilot

As reported in Section 3, the resources developed by the lead PHNs provided significant guidance to activity implementation. This includes induction materials, instructions on accessing patient-level data from clinical software and data reporting templates. While there is limited data on the extent to which these templates were used and adapted at the PHN or practice level, post-pilot survey data shows that these Pilot resources were considered effective as a foundation for QI activities.

> *"The outcome referral tracking template was useful and we also developed the patient referral tracking template which was similar but with less info." – Post-pilot survey respondent.*

The time and effort expended into designing and developing the comprehensive resources and templates and value they provided to PHNs and practices needs to be acknowledged. While development of the induction package was a high-effort aspect of the Pilot, the templates and resources provide a strong foundation and basis implementing eye health QI activities at other practices in the future. This supports consistency when delivering QI activities and reduces the overall administrative burden of implementation, which can provide incentives for practices to participate. The templates and resources also are flexible and can be tailored to meeting specific needs of practices, further supporting the value of them and opportunities for scalability.

FUTURE CONSIDERATIONS

- **Resources created during the Pilot have immense value and can be used to support QI activities for a broader range of GP practices to support scaling of eye health preventative care practice improvements.**

Vision 2020 training modules are a high quality, sustainable resource to support capability uplift across the sector

Participating practices identified the Vision 2020 training modules as one of the most effective tools/resources provided as part of the Pilot that supported capability uplift in those who completed it.

Vision 2020 provided a unique PHN link that was set up for health professionals to self-register with the learning management system and access the learning activities at no cost. This link was originally provided only to participation practices but later went on to sharing the link more broadly via their distribution channels as part of their wider promotion of the modules and webinars. This broader sharing expanded the reach of the Pilot activities across the primary care sector.

Two additional modules (Ocular Emergencies and Children's Vision) were scheduled for release in December 2023 and will further contribute to the upskilling of the primary care sector. Continuing to promote both the original and the newly developed modules will continue to an increasing awareness of eye health in general practice and support capability building among practice staff.

FUTURE CONSIDERATIONS

- **Extend the roll out and promotion of Vision 2020 materials across the state to build knowledge and capability of primary care staff**

Supporting better outcomes and improved sustainability

Improving data collection practices would improve Pilot efficiency and reduce the increased administrative burden of a broader rollout of the Pilot

The most common challenges identified by practices during the Pilot was the need to manually collect and record data about patient's eye screening. The two most used GP practice management software currently do not contain dedicated fields to allow GPs to record eye health screening information in a systematic way. This information can be recorded manually in patient records and notes, but this limits the ability of practices to review and report on this information as they would in other standard QI activities. This dramatically increases the administrative burden of engaging in eye health QI activities. Practices who participated in the Pilot identified changes to the clinical software that would improve management of eye health for patients. The most identified potential improvement (almost half of the recommended improvements were focused on this topic) was the ability to systematically record dates of patients most recent eye health checks.

Software had impacts on the Pilot beyond data collection and recording within practices. A lack of software systems to support general practice and allied health to electronically transfer patient information easily and safely also contributed to challenges in the Pilot that are reflective of system level challenges. Poor software integration between GPs and allied health impacts referrals, lack of communication between health providers and ultimately, continuity of care for patients. Further work is needed in the electronical referral space at a statewide level, to advance capability for communication between general practice and optometry.

FUTURE CONSIDERATIONS

- **Advocating with general practice patient management software providers to include dedicated fields for recording eye health information would support a more sustainable approach to collecting data about eye health screening rates.**
- **If future iterations of the Pilot are rolled out before practice management software can support systematic data collection, priority could be placed on practices' reporting of QI activities implemented and providing case studies to demonstrate impact. This would reduce the burden on practices to produce aggregate data that has limited utility in assessing the success of the Pilot.**

Deeper engagement with optometry is required to develop and support a shared model of care

There is no standard model of care for preventative eye health in Australia. Some jurisdictions have developed disease specific models of care for eye diseases. For example, the Centre for Eye Health (CFEH) established a collaborative model in Sydney, operating on the principles of the national glaucoma guidelines and the collaborative frameworks from relevant professional communities (e.g. Royal Australian and New Zealand Colleague of Ophthalmologists). Under this model, qualified optometrists performed advanced testing and managed the care for patients with glaucoma and could consult with ophthalmologists where required. The assessment and care recommendations were then shared back to the optometrist who had the responsibility of informing the patient.[35] A study on the referrals from this model showed an improvement over time in appropriate referrals to CFEH for glaucoma patients. There was also a high degree of agreement between the diagnosis from the CFEH and the referring optometrists.[36]

[35] Jamous, K. F., Kalloniatis, M., Hennessy, M. P., Agar, A., Hayen, A., & Zangerl, B. (2015). 'Clinical model assisting with the collaborative care of glaucoma patients and suspects', *Clinical & Experimental Ophthalmology, 43*(4), 308–319. https://doi.org/10.1111/ceo.12466; Kalloniatis, M., & Ly, C. (2016). 'The role of optometry in collaborative eye care', Clinical and Experimental Optometry, 99(3), 201–203. https://doi.org/10.1111/cxo.12403

[36] Jamous, K. F., Kalloniatis, M., Hennessy, M. P., Agar, A., Hayen, A., & Zangerl, B. (2015). 'Clinical model assisting with the collaborative care of glaucoma patients and suspects', *Clinical & Experimental Ophthalmology, 43*(4), 308–319. https://doi.org/10.1111/ceo.12466

Specific models for eye disease typically focus on shared care and collaboration between optometry and ophthalmology in the treatment and management of an established disease rather than screening and preventive care. GPs are well placed within the health system to play a significant role in a model of care focused on screening and prevention of eye health conditions rather than management of disease.

A major part of the evaluation component of the Pilot relied heavily on optometry reports back to GPs and the lack of these reports was consistently identified by practices as a key challenge. However, during consultation, Optometry Australia advised that while optometry reports to GPs were useful when eye health conditions were identified, it was their view that reporting to GPs after every eye examination was ineffective and a waste of resources, particularly noting the administrative cost of this process.[37]

Funding models for optometry also impact the willingness of optometrists to fully engage in a shared care arrangement. Optometry Australia also noted that incentives were provided to GP practices to participate in this Pilot, but no reimbursements were offered to optometrists who were involved. Providing incentives for optometrists to engage in the additional work required in the Pilot may have increased their willingness to participate.

Successfully integrating the care of different health professionals requires a high level of engagement and trust between these practitioners. While some practices reported that they had built new relationships or strengthened existing relationships with optometrists as a result of the Pilot, this relationship building was not a mandatory element of the Pilot. Optometry Australia identified that a focus on GP engagement with local optometrists to strengthen relationships should have been a higher priority for all practices in the Pilot.

FUTURE CONSIDERATIONS

- **Further collaboration with Optometry Australia may improve future iterations of the Pilot through engagement and commitment to develop an integrated model of care for eye health.**
- **Provide financial incentives for optometrists who engage in the Pilot to support the additional work required.**
- **Consider including mandatory QI activities that strengthen the relationships between GPs and local optometry practices to support clear pathways to care for patients.**

Future iterations of the Pilot are likely to continue to provide significant benefits due to the high impact nature of outcomes and potential economies for scalability

The BEA demonstrates that the Pilot delivers high-value outcomes in the avoided costs of eye disease to individuals' health, the health system and the broader economy. Based on the proportion of diagnoses within the outcomes data, the weighted average benefit from early intervention had an estimated value of $6,218 per early diagnosis. This yields a break-even point of 325 early diagnoses across The Pilot that would need to be substantiated as a direct result of changes to clinical practice and QI activities. This represents 9% of all referrals through participating practices, or 26% of all verified diagnoses that would need to be justified as early interventions resulting from the Pilot. Given the level of self-reported practice changes through the Pilot, it is likely that the Pilot is breaking even in its current format. This also indicates that the Pilot in its current format is scalable and will deliver impact to Victoria, especially considering the considerable up-front costs and room for administrative streamlining identified through the evaluation. A sensitivity analysis of results demonstrates the level to which cost reductions will improve scalability and the level of value delivered to Victoria, reducing the break-even point to 21% and 13% of total trial diagnoses under a 20% and 50% cost reduction scenario, respectively.

Overall, this evaluation has found that the Pilot was largely successful as a quality improvement project to embed eye health preventative care into primary care. Future rollout of the Pilot should consider the identified enablers, barriers and key considerations to optimise existing processes and maximise impact on patients, clinicians and the sector.

[37] Murray Primary Health Network. (2024). *Embedding Eye Health into Primary Care Pilot Project Final Report*. Pp.12-13.

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APPENDIX A ECONOMIC AND SOCIAL IMPACT METHODOLOGY

ECONOMIC AND SOCIAL IMPACT METHODOLOGY

Review of key literature

The *National Eye Health Survey*[38] estimates that 90% of vision loss is preventable or treatable if detected at an early enough stage. Nonetheless, approximately two-thirds of Australians live with a long-term disease of the eye and adnexa, of which up to 12.7% relate to preventable diseases targeted through the Pilot.[39] The annual rate of new diagnoses of the eye diseases targeted through the Pilot in Victoria is not currently reported, however is estimated to be above 25,000 in 2023, or less than 1% of the population, annually. The Pilot should see the rate of diagnoses increase over the short-term as earlier interventions combine with the current 'standard' intervention timeframes, however the rate of long-term diagnoses is likely to remain the same, albeit moved to a younger average age cohort.

To value the impact of early intervention and prevention, literature on the economic and health impact of eye disease on the health system, economy and individuals was investigated. It is widely accepted that vision impairment and eye disease have a statistically significant and causal relationship to long-term lower quality of life and increased health system costs for treatment.[40] The most recent systematic review of the economics of vision impairment delivers a global review of the estimated impacts of eye disease on individuals, health systems and the economy, and includes a variety of reviewed Australian and international cost estimates.[41] These have been adopted as the key benefit measure of early intervention as outlined below.

Outcomes-weighted value of early diagnosis

To estimate the value of avoided eye disease, the cost of each disease has been collated from the best available research and weighted to give an average benefit per early diagnosis during the Pilot. Marques et al. (2022) undertook a systematic review of eye disease costs including the quality of research informing the economic estimates, and a breakdown of costs to the health system, the cost of care, productivity and quality of life differences.[42] All values have been reported in 2018 US Purchasing Price Parity (PPP) terms, and the relevant populations for global totals were reported. The cost of each disease was not consistently available using Australian research values. To determine the costs to Victoria, the following prioritisation was followed:

1. Australian, whole-of-population findings
2. Australian, per-person findings
3. Global average costs
4. Costs contained in EU studies
5. Costs contained in US studies

All values were converted to Australian 2018 dollars, and inflated to FY2023 terms based on Australian inflation. Where disability-adjusted life years (DALYs) were reported, the value of a statistical life year was adopted per DALY reduced, in line with Australian government guidance, and inflated to FY2023 values based on inflation – arriving at a value of $239,705.22 per DALY.[43]

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[38] Foreman, J., Keel, S., Xie, J., van Wijngaarden, P., Crowston, J., Taylor, H., and Dirani, M. (2016). *National Eye Health Survey 2016*. Centre for Eye Research Australia and Vision 2020Australia. Retrieved from https://www.Vision2020australia.org.au/wp-content/uploads/2019/06/National-Eye-Health-Survey_Full-Report_FINAL.pdf

[39] Australian Bureau of Statistics. (2022). *National Health Survey*. Retrieved from https://www.abs.gov.au/statistics/health/health-conditions-and-risks/national-health-survey/latest-release

[40] Assi, L., F, Chamseddine., Ibrahim, P., Sabbagh, H., Rosman, L., Congdon, N., Evans, J., Ramke, J., Kuper, H.,Burton, M., Ehrlich, J., and Bonnielin, K. (2021). 'A Global Assessment of Eye Health and Quality of Life: A Systematic Review of Systematic Reviews', JAMA Ophthalmology 139(5): 526-541: doi:10.1001/jamaophthalmol.2021.0146.;
Frick, K., Kymes, S., Lee, P., Matchar, D., Pezzullo, L., Rein, D. and Taylor, H. (2009). 'The Cost of Visual Impairment: Purposes, Perspectives, and Guidance', *Investigative Ophthalmology & Visual Science 51*(4): doi: 10.1167/iovs.09-4469.;
Koberlein, J., Beifus, K., Schaffert, C. and Finger, R. (2013). The economic burden of visual impairment and blindness: a systematic review', *BMJ Open 3*: doi: 10.1136/bmjopen-2013-003471.; Marques, AP., Ramke, J., Cairns, J., Butt, T., Zhang, JH., Jones, I. et al. (2022). 'The economics of vision impairment and its leading causes: A systematic review', *eClinical Medicine 46*: doi.org/10.1016/j.eclinm.2022.101354.

[41] Marques, AP., Ramke, J., Cairns, J., Butt, T., Zhang, JH., Jones, I. et al. (2022). 'The economics of vision impairment and its leading causes: A systematic review', *eClinical Medicine 46*: doi.org/10.1016/j.eclinm.2022.101354

[42] Ibid.

[43] Department of Prime Minister and Cabinet. (2022). *Best Practice Regulation Guidance Note Value of statistical life*. Retrieved from https://oia.pmc.gov.au/sites/default/files/2022-09/value-statistical-life-guidance-note.pdf

Table 18 summarises the estimated value of an avoided instance of each eye disease based on this process. Only studies with a research rating of 8 and above were used, meaning that not all diseases had a value for each aspect. Consequently, these benefit values are conservative and may be refined in future research should better estimates of the cost burden of eye diseases be available.

Table 18 Breakdown of the estimated benefit of an avoided instance of each eye disease – per person, in FY2023 Australian Dollar terms

Disease type	Direct Costs	Productivity Loses	Informal Care Costs	DALY burden	Total Per-Person
Glaucoma	$2,832.20	$416.50	$833.0	$7,958.2	$12,039.91
AMD	$4,348.76	$1,717.81	$3,844.96	-	$9,911.53
Diabetic Retinopathy	$14,283.03	-	-	-	$14,283.03
Cataract	$1,268.24	-	-	-	$1,268.24

Source: Marques et al. (2022); World Bank US PPP Converter, ABS CPI (2024); OIA (2022), Urbis Calculations

The estimated value of each avoided disease was subsequently multiplied by 90%, reflecting that an estimated 90% of eye diseases are treatable or avoidable if found early enough.[44] These values were the weighted to reflect the disease frequency observed in the Pilot using the verified outcomes data of the Pilot. This weighted cost calculation is captured in Table 19.

Table 19 Weighted-average early diagnosis calculation

Disease type	Value (90% of Total)	Relative Weight in Pilot Outcomes of Preventable Diseases
Glaucoma	$10,836	21%
AMD	$8,920	11%
Diabetic Retinopathy	$12,855	19%
Cataract	$1,141	49%
Weighted Average		

Source: Murray PHN (2024) Eye Health Referral and Outcome Data Dashboard Murray PHN (Client supplied data); Urbis Calculations

Value of practice staff time by role description

Practice staff had significant responsibilities and time invested through the Pilot, as demonstrated in the Induction Pack provided by Department of Health. To calculate the opportunity cost of this time, the salaries of each role was estimated using ABS 2021 Census – employment, income and education data through ABS Table Builder. Data was filtered by place of work located in Victoria. The mid-point of each weekly income band was taken as the estimate of income within that bracket, with the exception of the $3,500 or more band, which was heavily weighted to practicing general practitioners. The annual salary adopted in this band was $350,000 a year (pre-tax), which is the upper-bound of the potential GP salary range in Australia (REF) to ensure a conservative economic analysis of the Pilot.[45] Table 19 presents the results of the average salaries of each position, hours worked, and the imputed hourly income of each role, as well the calculated weighted average salary, which was applied where role descriptions of participants were not clear (63 of 205 of project team members).

[44] Vision 2020Australia. (2022). *2022-23 Pre-Budget Submission January 2022*. Retrieved from https://treasury.gov.au/sites/default/files/2022-03/258735_Vision_2020_australia.pdf

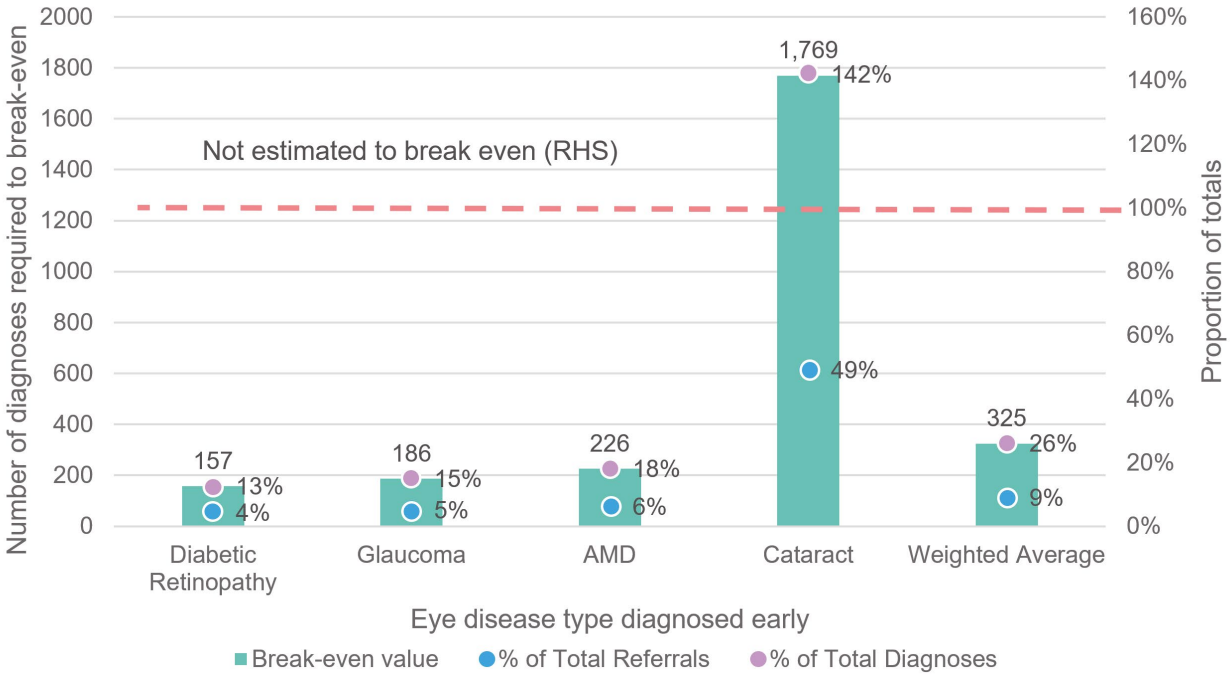
[45] Medical Recruitment. (n.d.). *GP Salary Guide Australia*. Retrieved from https://www.medicalrecruitment.com.au/doctors/gp-salary-guide-australia?source=google.com

Table 20 Practice staff costs

Role	Average annual income	Average Hours Worked (per week)	Imputed Hourly Income	Number in the Pilot
General Practitioner	$233,817	37.05	$131.47	44
Health Practice Manager	$79,614	35.22	$47.09	35
Nurse Practitioner	$104,439.16	36.30	$59.94	2
Registered Nurse (Medical Practice)	$56,826	28.45	$41.61	43
Medical Receptionist	$37,585	25.18	$31.09	18
Weighted Average	$128,322	31.64	$84.49	63

Source: ABS (2021) Census of Population and Housing [TableBuilder]; Urbis Calculation; Pilot Data

Figure 11 Break-even analysis of the Pilot – all disease types



Break-even points, where the level of outcomes delivered is equal in value to the estimated costs, vary from 157 for diabetic retinopathy prevention to 1,769 for cataract prevention. In the case of diabetic retinopathy, if 4% of all referrals, or 13% of all verified diagnoses, were to conclude in an early diagnosis of the disease, the whole of the trial's costs would be covered by this alone. Conversely, it is highly unlikely that the Pilot would break-even based on the diagnoses of cataracts, with a break-even point of 49% of all referrals, or over 100% of verified diagnoses, needed to cover the costs of the Pilot on this alone. This shows that the benefit profile of the Pilot may change significantly if future data can determine if certain high-impact diseases, such as diabetic retinopathy, are disproportionately being diagnosed at early stages compared to standard practices without the embedded preventative care model.

APPENDIX B PILOT FINAL REPORT

Vision 20/20 Australia

VICTORIA State Government

EMBEDDING EYE HEALTH PREVENTATIVE CARE INTO PRIMARY CARE

Final report- January 2024

phn EASTERN MELBOURNE
An Australian Government Initiative

phn GIPPSLAND
An Australian Government Initiative

phn MURRAY
An Australian Government Initiative

phn NORTH WESTERN MELBOURNE
An Australian Government Initiative

phn WESTERN VICTORIA
An Australian Government Initiative

Contents

Acronyms

Acronym		Description
ACCHO	Aboriginal Community Controlled Health Organisation	
BP	Best Practice	Proprietary clinical records system
GPMP	General Practitioner Management Plan	A treatment and management plan developed by the GP and patient for the management of a chronic or terminal medical condition. GPs can claim a specific MBS item for this service.
MBS	Medicare Benefits Schedule	A list of medical services that the Australian Government subsidises. The MBS sets the fees (called 'schedule fees') for each service ('item') and the amount Medicare will cover for the service. Medicare usually covers 100 per cent of the schedule fee for GP services.
MD	Medical Director	Proprietary clinical records system
Pen CAT	Clinical Audit Tool	Proprietary software for data extraction and visualisation. Uses data extracted from clinical and billing software.
POLAR	Population Level Analysis and Reporting	Proprietary software for data extraction and visualisation. Uses data extracted from clinical and billing software.
POWER BI	Power Business Intelligence	Proprietary software for data visualisation.
TCA	Team Care Arrangement	A plan coordinated by the eligible patient's GP to include at least two other health or care providers in the patient's care. The patient must have a chronic medical condition to be eligible.

Executive summary

The Victorian Department of Health (DOH) funded Murray Primary Health Network (Murray PHN) to partner with Eastern Melbourne Primary Health Network (EMPHN), to lead the development and implementation of a quality and systems improvement pilot project. The project aimed to increase eye screening rates and detection of eye conditions/disease for at-risk groups across Victoria, to reduce the prevalence of avoidable blindness and vision loss, as well as improve communication pathways between general practice and eye care providers.

The project was implemented by Murray PHN, EMPHN, Gippsland Primary Health Network (GPHN), North Western Melbourne Primary Health Network (NWMPHN) and Western Victoria Primary Health Network (WVPHN), in general practice settings. South Eastern Melbourne Primary Health Network opted not to sign on to the project.

Practices were recruited by primary health networks through an expression of interest process and were funded to participate in eye health training, implement quality improvement systems and changes, track patient referrals to eye care providers, and provide feedback.

Vision 2020 Australia was engaged to develop a range of online educational modules and webinars that could be accessed by all Victorian health professionals and in particular, support practices and health professionals participating in the project.

The project began in June 2022 and concluded in December 2023. It applied a multi-dimensional integrated approach to support a systems response to embedding eye health assessment, risk management and referral into general practice. Important elements included development of specific education and training modules, data capture and cleansing to identify need, development and implementation of a quality improvement program, and engagement with eye health specialists as the next point of care for the patient. This approach ensured that all key points of care for the patient were identified, capacity built and connected to support continuity of care, and early identification and management of eye health disease and/or risk in the general practice setting.

The Department of Health has engaged an independent evaluator for the purposes of providing a full analysis of the results and evaluation of the outcomes of this project. This report provides a summary of the data collected, the feedback received, and the experiences of the practices, PHNs, and subject matter experts involved in the project.

Background information

Many eye conditions are preventable if detected or treated early. Regular eye examinations are an effective measure for identifying common eye problems and can prevent avoidable blindness and vision loss. While eye disease can occur at any age, risk factors include:

- being over 40 years of age
- smoking
- hypertension
- diabetes
- having a family history of eye disease.

Some groups experience greater barriers to accessing eye healthcare. For example, Aboriginal and Torres Strait Islander Peoples and people from culturally and linguistically diverse backgrounds.

In addition, emerging evidence suggests that increased digital screen time and limited outdoor time is associated with vision problems in children[1]. It is recommended that children have a full eye examination with an optometrist prior to starting school and then regular visits as they progress through primary and secondary school[2] .

Summary of results

- A total of 3599 referrals were made to eyecare providers by the 46 participating practices
- Correspondence was received from the eye care provider for 1255 of the referrals (35%)
- 44 participating general practices completed a case study detailing a patient's journey and how the project impacted on the care received. Detailed analysis of the case studies is being undertaken by the independent evaluator, however an initial review supports that a multidimensional approach to embedding eye care into primary care can lead to early detection and intervention of eye health conditions and disease, with positive outcomes for the patient
- 78 per cent of the total referrals made were to optometry services, 22 per cent to ophthalmology (three referrals were made to both optometry and ophthalmology)
- Referral to optometry was most likely to be completed via informal methods (verbal and written referrals that were handed to the patient) and electronic referral (i.e. via secure messaging) was more likely to be used for ophthalmology
- The most common risk factors for patients being referred to an eye care provider were being over 40, having hypertension or diabetes
- The most commonly reported referral outcome was "none" (i.e. no significant finding)
- Where a treatment was started or recommended by the eye care provider, medication and glasses were most commonly prescribed
- 67 per cent of practices rated the project as very or somewhat effective
- 114 health professionals and practice staff from participating practices completed at least one of the Vision 2020 online training modules
- 93 per cent of GPs and 100 per cent of practice nurses rated their ability to identify, assess, manage and refer patients with or at-risk of eye disease as somewhat or greatly increased as a result of their participation in the online training and webinars
- 89 per cent of practices reported that they implemented a new system and/or made changes to their current systems or workflows that supported the identification and/or referral of patients at-risk of eye disease
- 72 per cent of practices now include eye screening as part of **all** health assessment templates and the remaining 28 per cent for some health assessment templates
- 94 per cent of practices now include eye screening as part of their chronic disease management plans
- 81 per cent now refer more to optometry (19 per cent reported no change)
- 58 per cent now receive correspondence back from optometry more often.

Primary health networks

There are 31 Primary Health Networks (PHNs) in Australia, with six in Victoria. PHNs are responsible for improving the efficiency and effectiveness of health services for people, particularly those at-risk

[1] Timorkhan, M.A., 2022. Children's vision health during the COVID-pandemic. Middle East Journal of Family Medicine, 20(4). http://www.mejfm.com/April%202022/Child%20vision%20Covid19.pdf
[2] https://goodvisionforlife.com.au/2020/01/30/back-to-school-make-the-first-test-of-the-year-an-eye-exam/

of poor health outcomes, and improving the coordination of health services and increasing access and quality support for people[3].

PHNs are primarily funded by the Australian Government and work closely with health settings, particularly general practice, focusing on addressing and improving the health of the community.

Figure 1. Map of Victorian PHN catchment areas

Commonwealth of Australia | Department of Health and Aged Care: *https://www.health.gov.au/resources/collections/victoria-primary-health-networks-phn-resource-collection*

Participating primary health networks

The following five Victorian primary health networks participated in this pilot project:

- Eastern Melbourne PHN (EMPHN)
- Gippsland PHN (GPHN)
- Murray PHN (Murray PHN)
- North Western Melbourne PHN (NWMPHN)
- Western Victoria PHN (WVPHN).

Each participating PHN engaged up to 10 general practices via an open or targeted expression of interest process.

[3] https://www.health.gov.au/our-work/phn/what-PHNs-are

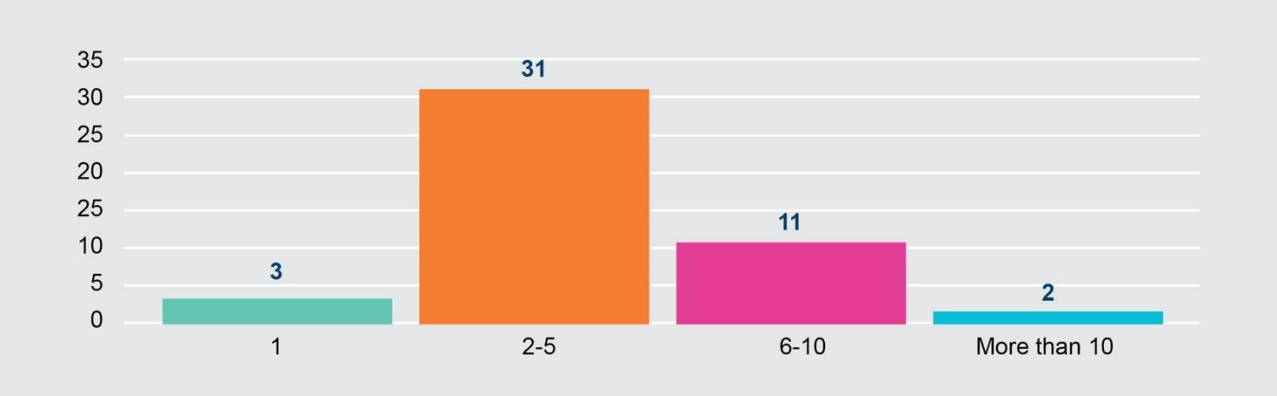
Location and size of participating practices

A total of 48 practices began the project. Two practices withdrew from the project (one in Whittlesea and one in Geelong), due to a lack of staff capacity to fulfil the project requirements. These practices did not complete the post-project evaluation surveys. Practices were predominantly small to medium in size i.e. 2-5 full time equivalent (FTE) GPs delivering care.

Table 1. List of Local Government Areas with the number of participating practices

Local Government Area	PHN	Number of participating practices - baseline	Number of participating practices - end of project
Albury City	Murray PHN	1	1
Alpine Shire	Murray PHN	1	1
Ballarat City	WVPHN	1	1
Baw Baw Shire	GPHN	3	3
City of Greater Bendigo	Murray PHN	2	2
City of Greater Geelong	WVPHN	5	4
City of Greater Shepparton	Murray PHN	2	2
Indigo Shire	Murray PHN	2	2
Knox City	EMPHN	2	2
Latrobe City	GPHN	4	4
Melbourne City	NWMPHN	5	5
Melton City	NWMPHN	3	3
Merri-bek City	NWMPHN	1	1
Pyrenees Shire	WVPHN	1	1
Rural City of Wangaratta	Murray PHN	1	1
South Gippsland Shire	GPHN	1	1
Southern Grampians Shire	WVPHN	1	1
Surf Coast Shire	WVPHN	1	1
Wellington Shire	GPHN	2	2
Whittlesea City	EMPHN	3	2
Wodonga City	Murray PHN	1	1
Wyndham City	NWMPHN	1	1
Yarra Ranges Shire	EMPHN	4	4
Total		**48**	**46**

Figure 2. Number of FTE GPs in the participating practices (data for 47 practices).



Vision 2020 Australia

Established in October 2000, Vision 2020 Australia is the national peak body for the eye health and vision care sector and represent around 50 member organisations. They form part of the World Health Organisation initiative, *VISION 2020: The Right to Sight*, as well as the International Agency for the Prevention of Blindness[4]. Vision 2020 Australia was engaged to develop a range of online educational modules and webinars that could be accessed by all Victorian health professionals and in particular, support practices and health professionals participating in the project. An outline of the available courses and webinars is provided in Tables 2 and 3.

Table 2: Vision 2020 Australia online training modules.

Course title	Audience and description
An Introduction to Eye Health and Vision Care	This two-hour course is for **nurses, allied health professionals, Aboriginal Health Workers and Practitioners** and covers the importance of eye health, anatomy and physiology of the eye, what is an eye examination, the main eye conditions causing vision loss in Australia and who are the professionals working in the eye health sector. It will assist participants to identify people at-risk of developing an eye condition, encourage them to seek an eye health professional and direct them to low vision services, if needed.
Advanced Eye Care	One-hour course for **nurses, allied health professionals and Aboriginal Health Workers and Practitioners** (prerequisite is Intro course). The course includes an overview of how to conduct a basic vision assessment, the vision and eye health requirements for driving in Australia, the risks to eye health associated with chronic disease, and the impact of medium and long-term use of systemic medications on eye health.
Common Eye Conditions	Two-hour course for **general practitioners**. This course covers the main causes of vision loss and blindness in Australia, how to conduct a basic vision assessment, common eye infections and an introduction to ocular emergencies. It also includes details on who is part of the eye care team, your role in eye health preventative care, and the referral process to optometry and ophthalmology services.

[4] https://www.vision2020australia.org.au/about-us/who-we-are/

Diabetes Eye Care	One-hour course for **diabetes educators** and others working with people with diabetes, including **Aboriginal health workers and practitioners.** This course dives into the detail of how diabetes can affect eye health and vision and your role in vision loss prevention, through education and support provided to people living with diabetes. This course was developed in partnership with the Australian Diabetes Educators Association. Pre-requisite: Completion of the course *An Introduction to Eye Health and Vision Care* (2 hours).
Children's Vision	One hour course for **general practitioners**. This course will provide information on common paediatric ocular conditions and acute paediatric ocular presentations, including clinical features, management and referral pathways. It also covers how to carry out key eye tests to assess children's vision and eye health and tips to adapt to children of different ages.
Emergency Eye Care	One-hour course for **general practitioners, practice nurses and Aboriginal health workers and practitioners**. This course will provide information on the types of ocular emergencies that may present to you, how to assess them and refer them appropriately to eye care services to ensure timely management.

Note: Children's Vision and Emergency Eye Care modules were released after the end of the project.

Table 3: Vision 2020 Australia webinars

Webinar release date	Webinar title
Tuesday 14 March 2023	Glaucoma deep-dive
Tuesday 9 May 2023	Macular degeneration
Wednesday 12 July 2023	Diabetes and eye health
Wednesday 30 August 2023	Children's vision
Wednesday 27 September 2023	Ocular emergencies
Thursday 12 October 2023	Cataracts deep-dive

Project outline

Aim

To increase rates of eye screening and early detection of eye disease for at-risk groups in Victoria, to reduce the prevalence of avoidable blindness and vision loss.

Objectives

- Develop a systematic, cost effective and sustainable approach to the delivery of eye health preventative care in Victoria
- Strengthen the capacity to embed eye health preventative care into primary care

Primary outcome measures

- Increased number of referrals for an eye check (measured through practice referral tool)
- Increased number of eye checks resulting from referral/intervention (measured through MBS data and practice referral tool)
- Impact of referral and eye check for cost effectiveness (QALYs/DALYs)

- Impact of training and referral for cost benefit analysis

Secondary outcome measures

- Increased number of practices with systems in place to embed eye health prevention into clinical practice to identify and refer at-risk patients, and effectively treat and manage conditions for improved eye health

Outcomes

- Increased number of health practitioners trained in eye health
- Increased number of primary care practices/practitioners using a value-based health pathway
- Increased number of value-based health pathways used for eye health in primary healthcare
- Sustainable strategies for embedding eye health into primary care identified and actioned

Project methods

Data collection methods and indicators

Table 4 outlines the measurement tools, collection dates, filters and specifications associated with all project performance indicators.

Table 4: Project indicators and data collection methods

Indicators		Survey of current eye health knowledge, systems, processes, training, and use of HealthPathways	Number of patients in each risk group[1] for poor eye health identified in the practice	Number of patients in each risk group[1] with GPMP and TCA completed in last 12 months	Number of patients in each risk group[1] with GPMP review completed in last 12 months	Number of patient referrals for an eye check to optometrist or ophthalmologist	Number of patients that attended eye appointments	Outcome of referral
Baseline	**Measured**	Yes	Yes	Yes	Yes	Not applicable		
	Timeframe	Induction	Induction	Induction	Induction			
	Method	Pre-pilot survey	Baseline data collection form	Baseline data collection form	Baseline data collection form			
Monthly data collection	**Measured**	Not applicable				Yes	Yes	Yes
	Timeframe					7th of the month for prior month	7th of the month for prior month	7th of the month for prior month
	Method					Referral data collection form	Outcome data collection form	Outcome data collection form
End	**Measured**	Yes	Yes	Yes	Yes	Not applicable		
	Timeframe	Evaluation period	Evaluation period	Evaluation period	Evaluation period			
	Method	Post-pilot survey	Post-pilot data collection form	Post-pilot data collection form	Post-pilot data collection form			
How to collect data for reporting		Survey responses required via Microsoft Forms	CAT4 Recipes POLAR	CAT4 Recipes POLAR	CAT4 Recipes POLAR	Manually track patients who are referred using Patient Tracking Sheet. Record referral counts on Referral data collection form.	Manually track outcomes received from Opt/Ophth using Patient Tracking Sheet. Record count of outcomes on Outcome data collection form.	Categorise outcome of referral from reports received from Opt/Ophth.
Data filters and specifications		Not applicable	Active Patients: Active (not inactive or deceased) and RACGP Active (i.e. 3 visits in 2 years). [1]Risk groups for poor eye health: 40 years and older, smokers, diabetes, hypertension, Aboriginal and Torres Strait Islander people			Number of patients referred: Optometrist OR Ophthalmologist Method of referral Patient gender Risk factor(s)	Number of clinical reports received back indicating that the patient attended the eye check	Number of referral outcomes in each category: 1. Diagnosis (7 categories) 2. Treatment (5 categories) 3. Further action (5 categories)
			Number of Active Patients. Number of Active Patients in each risk group[1].	Number of Active Patients in each risk group[1]. Filter MBS item 721 (or 92024) claimed in last 12 months Filter MBS item 723 (or 92025) claimed in last 12 months	Number of Active Patients in each risk group[1]. Filter MBS item 732 (or 92028) claimed in last 12 months			

Challenges and barriers to practice recruitment and retention

- Promotion of the EOI occurred in the lead up to Christmas. During this period, practices may have been too busy to read the promotional information, or not in a position to commit to undertaking a new project
- Feedback received indicated that the procurement process and reporting requirements were not culturally appropriate to recruit Aboriginal Controlled Community Health Organisations (ACCHOs)
- Feedback received from practices indicated that the funding amount was not sufficient to compensate practices for the high level of data collection required
- In October 2022, Victoria was significantly impacted by flood water, including several towns in the Murray PHN region, with several practices directly affected. Practices were unable to physically operate from their clinical site, had reduced staff and were solely focused on dealing with the impact of the flood. This reduced the number of practices that were aware of the project, as well as those that were in a position to take on a new project at the time
- Competing projects meant practices were unlikely to take on multiple projects at once or would choose one project over another
- Due to challenging and high workload demands in general practice settings, practices often encounter issues associated with staff retention. This includes staff changing roles, resigning from positions or prioritising other work commitments, and is quite common and significantly impacts all aspects of project work. These issues were encountered by all PHNs and caused two practices to withdraw from the project.

Project resource development

During the development phase of the project, lead PHNs invested time creating a range of resources to support both PHN and practice project staff. This ensured consistency across the project, minimised risks, supported staff and simplified processes and reporting.

The following resources were developed:

- **EOI and project agreement templates for the procurement process**
  These provided an overview of the project opportunity, eligibility requirements, key deliverables and details about the EOI process, as well as a response form and project agreement
- **Orientation and activities package for general practice**
  A comprehensive document of tools, reporting templates, resources and guidelines to support practice project staff with all aspects of the project requirements
- **Orientation PHN checklist**
  A checklist designed to help guide PHNs with their initial conversations and meetings with practices, as well as ensure that all project components were adequately discussed
- **PHN data reporting templates**
  These templates were designed to collect aggregated practice data from each of the PHNs for reporting back to Murray PHN
- **KPI data matrix**
  A detailed overview of all reportable project KPIs, including measurement and data extraction tools, specifications, timelines, reasons for collection and the responsible key personnel
- **Communication and promotional material**
  A mix of marketing material for promotional use by PHNs and participating practices
- **Best Practice and Medical Director optometry referral templates**
  Templates, along with clinical software importing instructions, were provided to PHNs to share with practices, allowing for practices that use Best Practice or Medical Director to upload referral templates and enable the pre-population of patient details for ease of referring

- **End of project reporting templates**

  Templates and instructions for collection of post-pilot data, including a survey for practices, focus questions for PHNs to ask their practices, a PHN reflection report, and a case study for practices to complete. Additionally, an end of pilot checklist was created for PHNs.

Stakeholder meetings

Lead PHNs held informal monthly catch-up meetings with the individual PHNs and Vision 2020 Australia, formal monthly meetings with the Department of Health, as well as organising and chairing the following meetings:

- **Eye Health Project Steering Committee Meeting (monthly)**
  To provide oversight on the development and implementation of project activities, as well as guidance, tools and resources to ensure the project successfully achieved its objectives. Organisational representatives attended from the Department of Health, Vision 2020 Australia, EMPHN, Murray PHN, GPHN, NWMPHN and WVPHN
- **Eye Health Project Subject Matter Expert Committee (as required)**
  To obtain advice on the development, implementation and evaluation of the project activities, as well as additional matters that arose during the project period. Organisation representatives attended from the Department of Health, Vision 2020 Australia, EMPHN, Murray PHN, Optometry Victoria South Australia, Australian College of Optometry, Carers Victoria, Victorian Aboriginal Community Controlled Health Organisation, Royal Victorian Eye and Ear Hospital, and the Royal Australian and New Zealand College of Ophthalmology
- **Quality Improvement Collaborative Network Meeting**
  Held in May and August to provide practice project staff with the opportunity to discuss and share quality improvement activities and resources being implemented in practices
- **Electronic Referral Committee**
  Discuss options regarding the electronic transfer of referrals to optometrists and ophthalmologists. The committee investigated a number of pathways, as well as opportunities to collaborate with partners. Each pathway presented a number of challenges, and it was quickly identified that pursuing any of these pathways would extend the scope and timeframe of the project. The committee and the Department of Health agreed to reorientate the focus from implementing electronic referral processes to gathering information from practices regarding their electronic referral patterns and needs.

Project implementation phase

The implementation phase focused on PHN staff supporting practice project staff to complete project requirements, including completion of eye health specific training, implementation of quality improvement systems or changes, and referral and outcome data collection and reporting. To support practice and project needs, PHN staff met with practice project staff at least monthly, and provided ongoing phone and email support.

- **Eye health training**
  Practice project staff were required to complete the Vision 2020 Australia online training modules relevant to their health profession. Practices were also encouraged to attend or watch the recording of the webinars hosted by Vision 2020 Australia throughout the course of the project.
- **Quality improvement activities**
  Practice project staff implemented systems or made changes that would help to identify, refer and manage patients at-risk of eye disease. Quality improvement activity examples were provided in the induction package, however practices could develop and implement their own activities based on their individual practice needs and patient cohort

- **Data tracking/collection**
  - Each participating practice was required to track the number of referrals made to optometry and ophthalmology providers during the course of the project i.e. from their project onboarding to 31 October 2023. Some practices tracked the referrals for a single GP (i.e. the GP participating in the project) or for multiple GPs, depending on who was in their project team and their internal process set up to track referrals
  - Tracking of referrals was predominantly performed manually, as there is no field in the clinical software that can be used to track if a referral to a provider has been made
  - A patient tracking template was provided for internal practice use. The practice was required, on a monthly basis, to submit their aggregated referral data and aggregated outcome data via a supplied data collection template.

Evaluation planning

As part of evaluation planning and to ensure that the key performance indicators were adequately measured, the following tools were developed:

- **Pre and post-practice surveys and focus questions**
  Evaluation tools with a focus on the general practice setting, current systems and processes regarding at-risk patient identification and referral pathways including feedback, project staff eye health knowledge, and clinical tests and assessments
- **Case study template**
  Designed to target a patient who has directly benefited from the practice participating in the project. This includes a patient who has either been identified and/or referred for an eye health check and diagnosed with an eye health disorder/condition, that may have potentially been missed had the practice not implemented or improved their internal systems, processes or activities. Ideally, if the patient was referred to an eye care provider, the practice will have received correspondence about this patient including treatment and management recommendations
- **Reflection report**
  The reflection report was designed to capture the experience of individual PHNs working with the leads, including how supported they felt, which tools and resources they found to be beneficial and what could have been done to improve their overall experience or assist them to roll out the project more efficiently or effectively.

General practice key performance indicators and outcomes

Cohorts at-risk of eye disease

General practices maintain clinical information systems that can be interrogated via data extraction tools to obtain deidentified information on the number of patients in a practice that meet specified criteria. The following risk factors for eye disease could be extracted: age 40 years and over; hypertension recorded as a condition, current smoker; diabetes recorded as a condition (Type 1, Type 2, or undefined); and Aboriginal and/or Torres Strait Islander identification. The number of patients meeting these criteria, and the number in each risk category who have a chronic condition being managed by their GP (using MBS items numbers 721, 723, and 732), aggregated across all participating practices are provided in Table 5. Data is provided at baseline and at the end of the project. Data is shown for the 48 practices starting the project and the 46 practices completing the project.

Table 5: Number of patients in each risk category being managed for a chronic disease.

Risk category	Number in cohort	GPMP (MBS item 721) in last 12 months	TCA (MBS item 723) in last 12 months	GPMP review (MBS item 732) in last 12 months
Total number of ACTIVE RACGP patients in practice	197,448	Not applicable	Not applicable	Not applicable
	190,490			
40 years and older	102,685	17,766	15,721	12,203
	95,231	11,089	10,551	7,766
Smoker	23,280	5,912	5,099	2,652
	22,583	1,656	1,501	888
Diabetes (Unknown, Type 1, Type 2)	13,402	8,138	7,419	4,856
	12,768	3,930	3,766	2,874
Hypertension	31,230	11,017	9,857	7,223
	28,168	6,399	5,934	4,544
Aboriginal and Torres Strait Islander	3,075	724	376	202
	3,452	247	215	109

Note: ACTIVE RACGP patients includes those patients who have had 3 or more clinical activities/ encounters in the last 2 years and are not deceased or marked as inactive.

Data provided for baseline (top figure) 48 practices

Data provided for end of project (bottom figure) 46 practices

Figure 3. Number and percentage of total active patients with each risk factor for eye disease (baseline and post project).

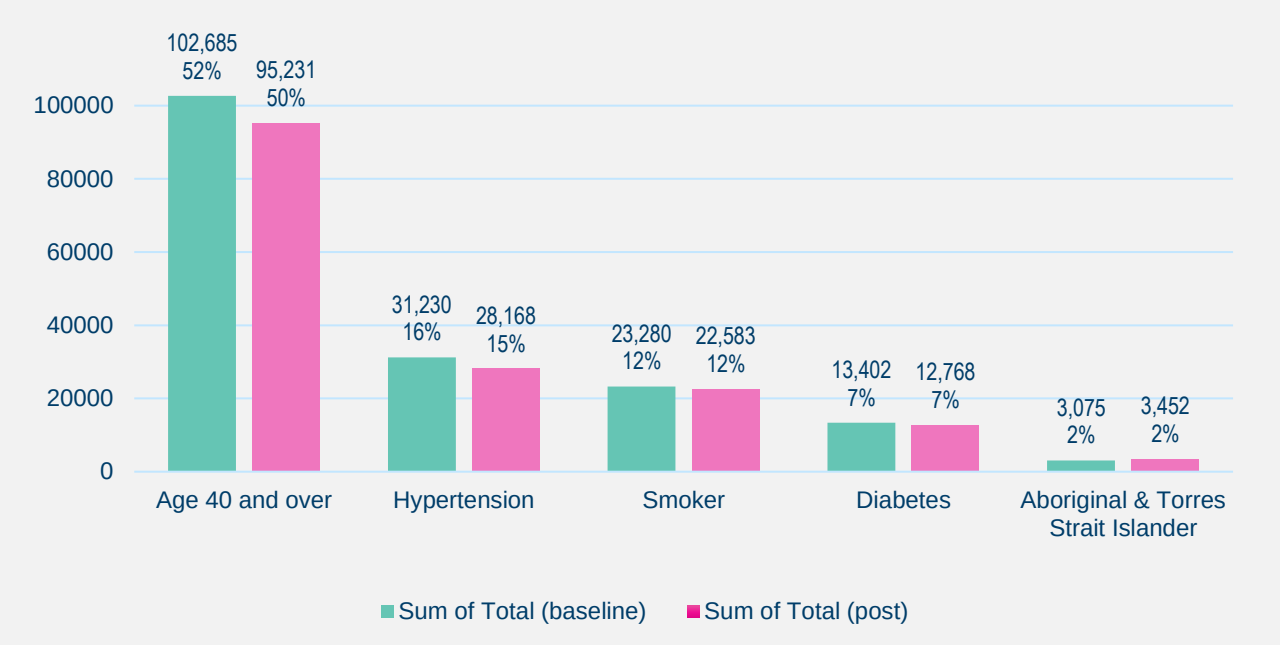


Figure 4. Percentage of over 40, smoker, and Aboriginal and Torres Strait Islander cohorts with GPMP, TCA, or review completed in the last 12 months (baseline and post project).

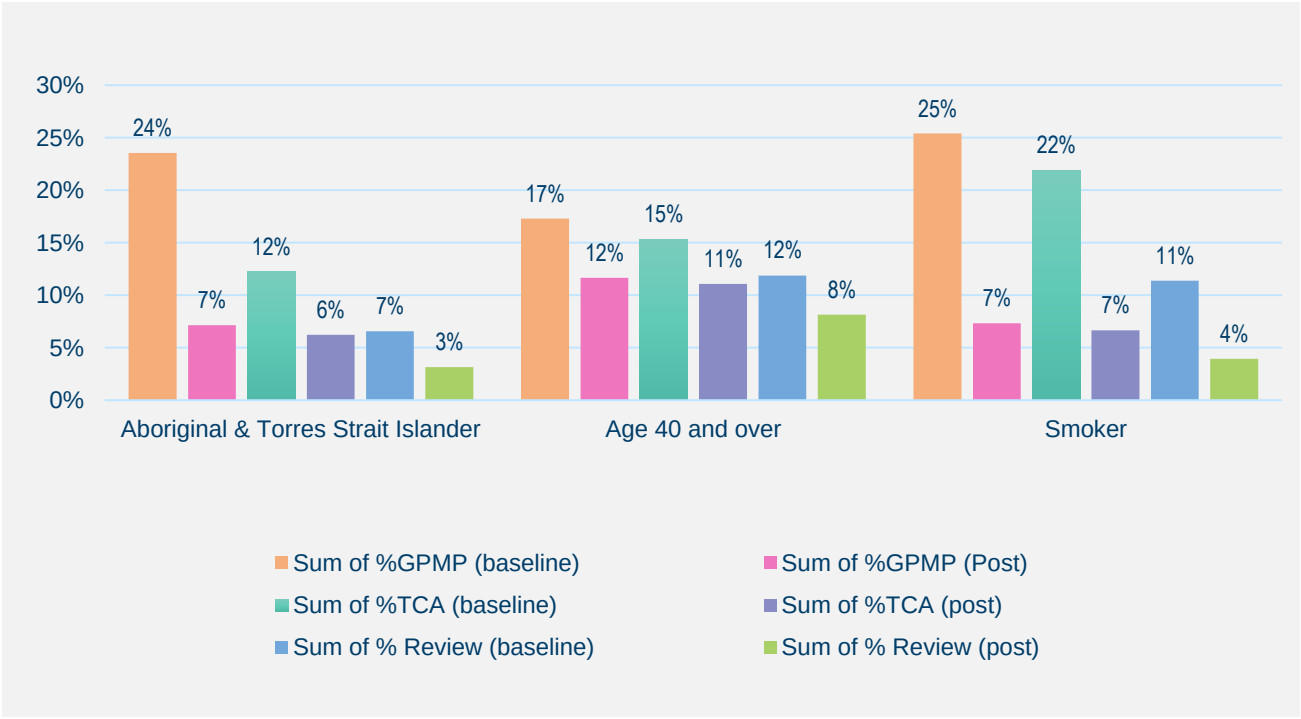
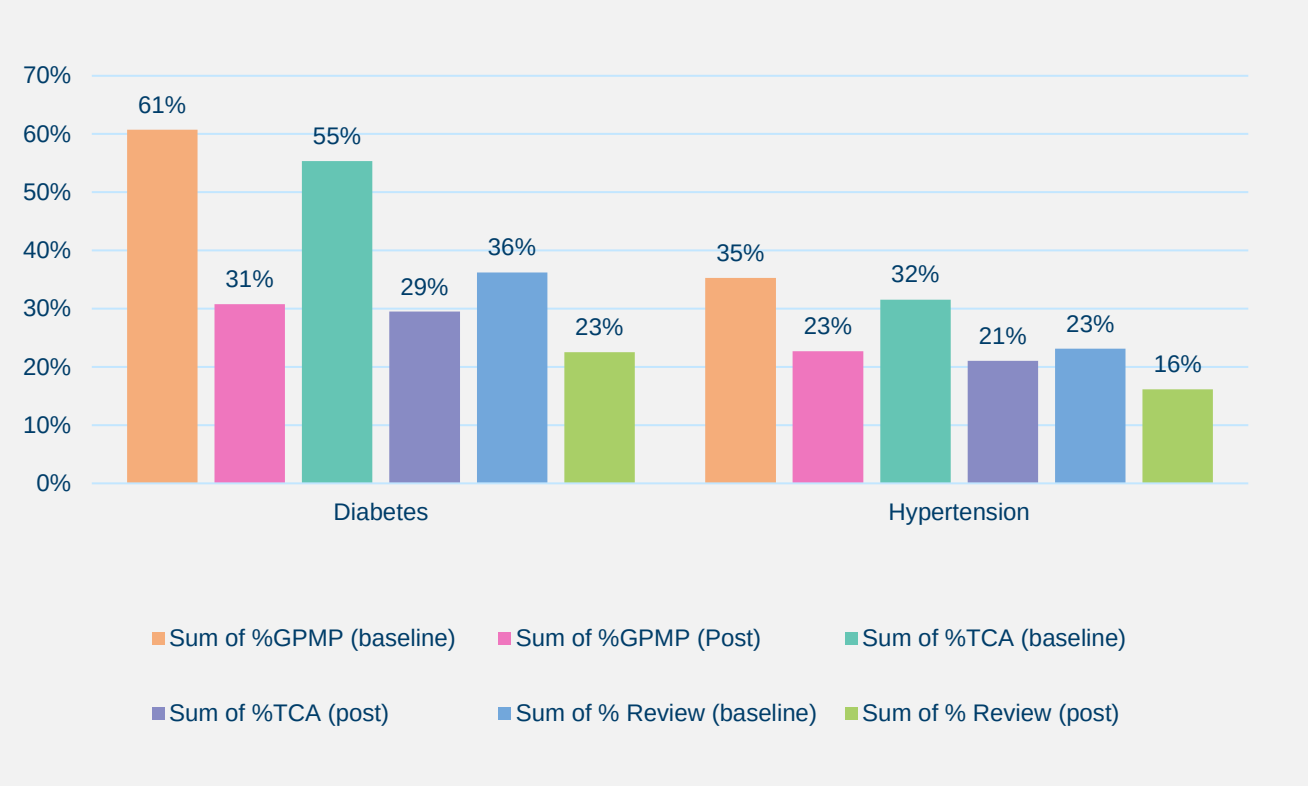


Figure 5. Percentage of diabetes and hypertension cohorts with GPMP, TCA, or review completed in the last 12 months (baseline and post project).



Key findings:

- The chronic disease management in “at-risk” cohort measures were initially chosen as a project indicator due to a lack of eye health fields being available to report on in the general practice clinical information system
- The percentage of the active practice population in each “at-risk” cohort remained stable across the project
- The changes noted between baseline and post-pilot measurements (i.e. decline across all care planning measures in all cohorts) do not assist in the interpretation of the impacts of this project on eye care in general practice
- Reduction in care planning over the period of this project could be related to a decline in general practice attendance early in 2023[5].

[5] https://www1.racgp.org.au/newsgp/professional/out-of-pocket-costs-linked-to-decline-in-gp-servic#:~:text=From%20January%20to%20the%20end,the%20same%20stretch%20of%202022.

Quality improvement activities

General practices undertake ongoing quality improvement activities to monitor, evaluate and improve healthcare provided to their patients. Financial incentives are available to general practices that are registered for the quality improvement Practice Incentives Program, and are guided and supported by their local PHN with activity design, implementation and evaluation[6]. The Embedding eye health preventative care into primary care project was an opportunity for general practices to review systems and processes that identified, referred, treated and managed patient at risk of eye disease. During the project, practices implemented new systems or adjusted current ones to reduce the chance of at-risk patients being left undiagnosed. Quality improvement activities varied for each general practice, however mostly centred around embedding eye health-related questions in health assessment and management plan templates, as well as patient information forms.

Key findings:

- 89 per cent of practices reported that they implemented a new system and/or made changes to their current systems or workflows that supported the identification and/or referral of patients at-risk of eye disease
- 80 per cent of practices now routinely ask new patients when their last eye check was completed (compared to 26% at the start of the project)
- 72 per cent of practices now include eye screening as part of **all** health assessment templates and the remaining 28 per cent for some health assessment templates (in particular the over 75, 45-49, 40-49 at risk of T2DM, and Aboriginal and Torres Strait Islander peoples). This compares to 49 per cent and 32 per cent respectively at the start of the project
- 94 per cent of practices responded that they include eye screening as part of their chronic disease management plans (for example, they ask the question, “When was your last eye test?”). Inclusion of this question in the GPMP templates was reported as one of the key effective quality improvement activities undertaken by practices as part of the project
- Practices were most likely to use their clinical software or a data extraction tool to identify patients at-risk of eye disease
- Practices identified the following quality improvement activities to be most effective:
    - Updating chronic disease care plans to include eye health questions
    - Updating health assessments to include eye health questions
    - Updating new patient intake form to include eye health questions
    - Updating optometry provider directory in clinical software
    - Creating an autofill optometry referral letter in clinical software
    - Adding a patient recall on receipt of correspondence back from an eye care provider
    - Using software and data extraction tools to set recalls or send reminders to patients, and to set reminders for health professionals
    - Use of health promotion resources to increase awareness and health literacy around eye care and disease.

Referrals to optometrists and ophthalmologists

The following data tables and graphs summarise the referrals sent from a general practice to either an optometrist or ophthalmologist, as well as the method in which the referral was sent. Referral details also include patient gender and associated risk categories. Referral numbers have been broken down per PHN, local government area and month. This data was internally tracked and collected by practices, then de-identified and aggregated before submitting to their respective PHN. Each PHN aggregated their data before submitting to the Lead PHN.

[6] https://www.murrayphn.org.au/quality-improvement/

Table 6: Aggregated referral data

			Month 2023								Total
			Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Practices submitting data			30	41	44	46	44	44	44	45	**-**
Total referrals for the month			**311**	**373**	**504**	**582**	**476**	**467**	**505**	**381**	**3599**
How many referrals to eye health providers have been completed this month via each method?	1 Manually sent to provider (mail or fax)	Optometrist	119	130	159	202	177	187	197	148	**1319**
		Ophthalmologist	52	54	78	59	57	57	63	42	**462**
	2 Electronically sent to provider (secure messaging)	Optometrist	6	13	12	16	21	19	24	9	**120**
		Ophthalmologist	15	12	37	49	20	26	64	27	**250**
	3 Informal either verbally and/or written referral communicated to patient but not sent to provider	Optometrist	112	150	201	228	203	174	152	151	**1371**
		Ophthalmologist	8	3	18	29	5	4	6	7	**80**
Of the patients referred to an eye health provider this month, what was the breakdown by gender?	1 Male		157	174	234	275	241	226	232	191	**1730**
	2 Female		148	184	250	279	229	240	224	147	**1701**
	3 Other		1	0	0	1	0	0	0	1	**3**
Of the patients referred to an eye health provider this month, what were the risk factors identified?	1 Over 40		243	230	402	377	308	348	331	302	**2541**
	2 Diabetes		101	96	178	239	211	132	136	118	**1211**
	3 Smoker		31	77	73	106	60	62	112	66	**587**
	4 Hypertension		111	153	203	257	149	166	149	140	**1328**
	5 CALD		24	52	21	36	29	37	59	24	**282**
	6 Aboriginal and/or Torres Strait Islander		9	10	29	34	9	18	51	16	**176**
	7 Family history of eye disease		6	57	16	76	33	36	73	15	**312**
	8 Increased digital screen time		59	20	60	89	35	35	93	33	**424**

Table 7: Number of referrals to eye care providers by local government areas of the participating practices (highest to lowest).

LGA	PHN	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Total
Baw Baw Shire	GPHN	54	50	79	101	19	27	59	28	**417**
Whittlesea City	EMPHN	96	74	74	53	30	20	14	13	**374**
Melbourne City	NWMPHN	23	50	62	29	103	21	28	33	**349**
Knox City	EMPHN	39	41	59	61	35	40	28	23	**326**
Indigo Shire	Murray PHN	5	17	34	36	26	18	41	41	**218**
City Greater Bendigo	Murray PHN	0	10	13	29	35	37	40	38	**202**
Latrobe City	GPHN	11	18	26	48	10	13	51	24	**201**
Melton City	NWMPHN	0	26	10	23	35	39	35	28	**196**
City of Greater Geelong	WVPHN	5	5	38	27	19	58	11	28	**191**
City of Greater Shepparton	Murray PHN	3	26	12	24	32	35	31	28	**191**
South Gippsland Shire	GPHN	24	17	17	37	13	20	32	13	**173**
Wellington Shire	GPHN	21	13	15	25	26	24	30	8	**162**
Yarra Ranges Shire	EMPHN	7	5	12	20	22	24	22	19	**131**
Surf Coast Shire	WVPHN	5	6	8	13	11	13	13	15	**84**
Rural City of Wangaratta	Murray PHN	17	6	5	10	11	14	5	9	**77**
Southern Grampians Shire	WVPHN	0	0	15	17	14	10	17	0	**73**
Wyndham City	NWMPHN	0	4	5	3	8	20	18	6	**64**
Wodonga City	Murray PHN	0	0	8	5	12	13	12	10	**60**
Albury City	Murray PHN	0	0	5	8	10	12	11	13	**59**
Alpine Shire	Murray PHN	0	2	3	7	0	0	1	4	**17**
Pyreness Shire	WVPHN	1	3	3	0	0	6	1	0	**14**
Merri-bek City	NWMPHN	0	0	1	6	1	0	3	0	**11**
Ballarat City	WVPHN	0	0	0	0	4	3	2	0	**9**
Total		**311**	**373**	**504**	**582**	**476**	**467**	**505**	**381**	**3599**

Comparison between LGAs is not advised as the number of practices participating in each LGA is not equal and the number of GPs providing data for each practice respectively is not equal.

Figure 6. Total referrals per month (aggregated)

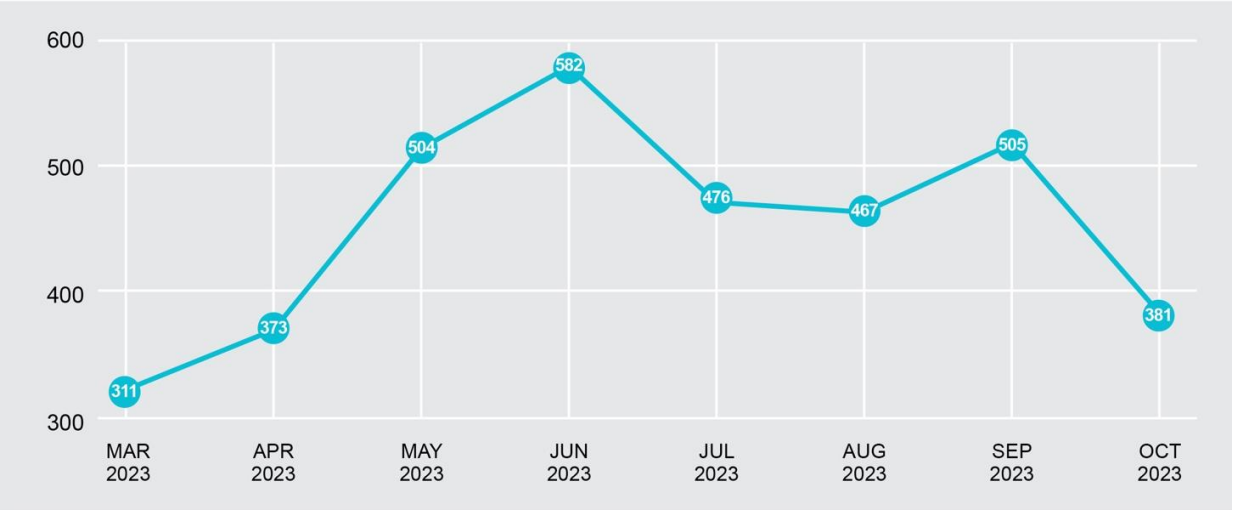


Figure 7: Percentage of total referrals for each risk factor

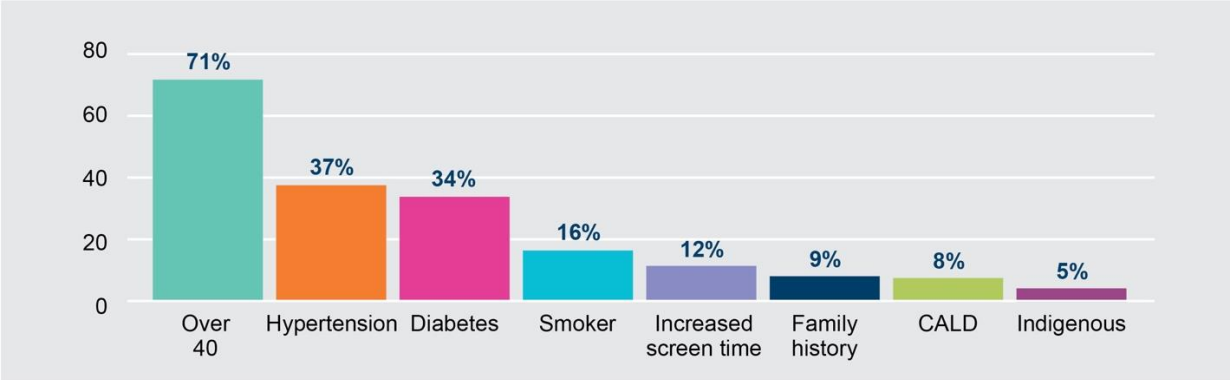
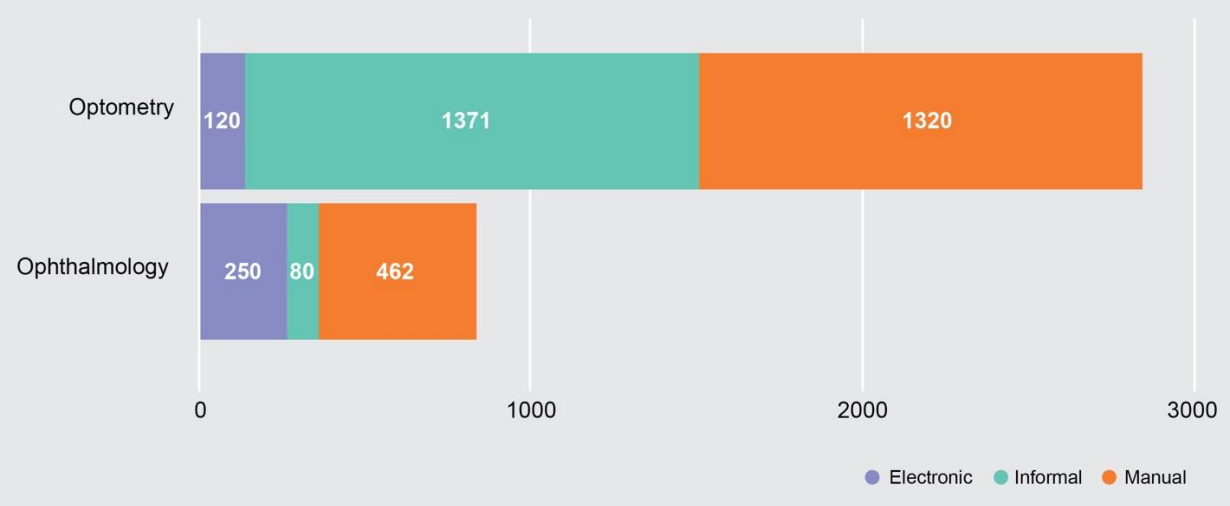


Figure 8: Referral method to optometry and ophthalmology



Key findings:

- A total of 3,599 referrals were made by the 46 participating general practices to eye care providers between March and October 2023
- 78 per cent of the total referrals made were to optometry services, 22 per cent to ophthalmology (three referrals were made to both optometry and ophthalmology)
- Since participating in this project, 81 per cent of practices reported that they now refer more often to optometry services (19 per cent reported no change)
- The average number of patient referrals per month per practice was 11
- The most common method of making a referral to optometry services was to give the written referral to the patient, the next most common method was providing the patient with a verbal referral. These instances were classified as “informal” where the GP does not send the referral directly to the provider. More “formal” methods of referral included faxing the referral to the optometrist or sending via email. Less common methods included sending via secure messaging
- The most common risk factors for the patients being referred to an eye care provider were being over 40, having hypertension or diabetes.

Eye checks and outcomes

Correspondence received from optometrists and ophthalmologists informed general practices as to whether the patient attended their eye health appointment and the outcome of the appointment. This data was internally tracked and collected by practices, then deidentified and aggregated before submitting to their respective PHN.

In many cases, practices had to follow up and request feedback, as it was not received in a timely manner if received at all. Therefore, it is important to note that correspondence received from optometrists and ophthalmologists includes instances where phone calls were made by the general practice to obtain the information - correspondence was not always automatically received, written or electronically. A summary of the correspondence received, and the outcome of the referrals is provided in the following tables and graphs.

Figure 9: Number of referrals versus number of correspondence received per month

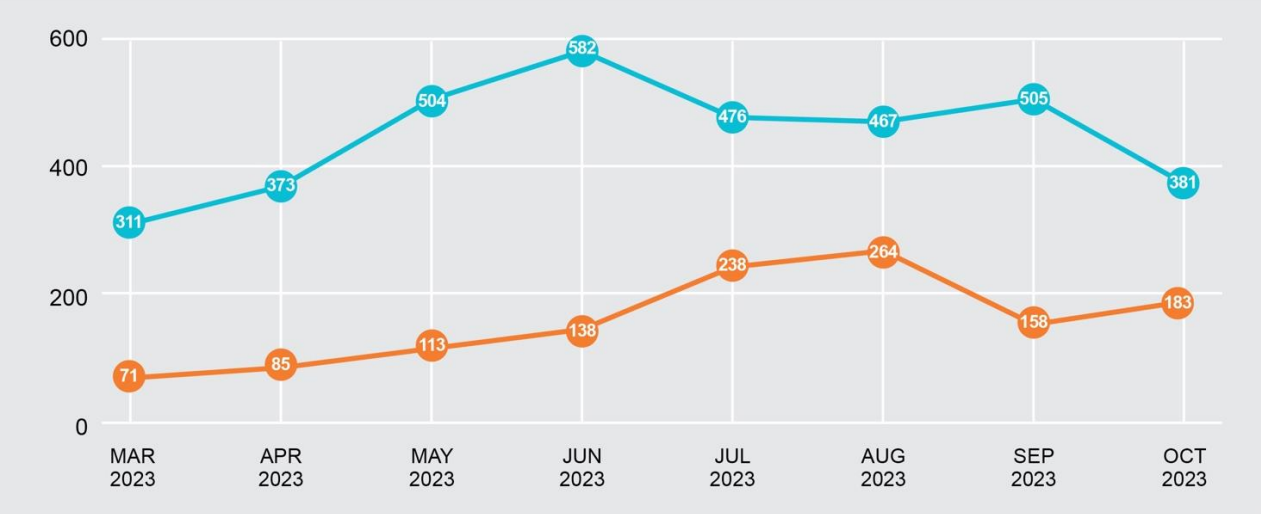


Table 8: Aggregated data on the referral outcome.

		Month 2023								Total
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Practices submitting data		26	36	40	43	44	44	44	45	**-**
Total outcomes for the month		**71**	**85**	**113**	**138**	**238**	**264**	**153**	**183**	**1245**
Have you received correspondence indicating that the patient attended the visit with the eye care provider?	**1 Yes**	49	68	72	116	156	213	139	136	**949**
	2 No, patient didn't attend	5	6	13	13	35	49	14	46	**181**
Was a diagnosis made by the eye care provider? If so, what was it?	**1 No**	18	18	23	32	43	88	51	74	**347**
	2 Refractive error	4	21	16	7	9	15	8	17	**97**
	3 Glaucoma	4	4	7	9	13	10	17	10	**74**
	4 Cataract	18	13	18	29	24	29	28	18	**177**
	5 Macular degeneration	1	2	3	5	3	7	9	9	**39**
	6 Diabetic retinopathy	2	5	8	5	22	8	12	6	**68**
	7 Other	16	18	26	19	54	71	28	14	**246**
Has any treatment been provided or recommended?	**1 No**	29	32	43	50	37	62	59	64	**376**
	2 Corrective lens	14	19	12	14	19	27	18	33	**156**
	3 Surgery	2	4	7	14	16	34	23	13	**113**
	4 Medication	6	9	12	22	21	51	21	14	**156**
	5 Other	1	6	11	10	26	30	22	17	**123**
Is any further action required?	**1 None**	18	11	12	22	25	67	30	46	**231**
	2 Referral to another health professional	9	22	24	35	6	22	17	10	**145**
	3 Ongoing management by eye care provider	17	25	45	36	76	86	73	67	**425**
	4 Ongoing management by GP	12	14	28	20	23	33	22	26	**178**
	5 Other	2	3	0	0	3	10	1	0	**19**

Figure 10. Outcomes by diagnosis category

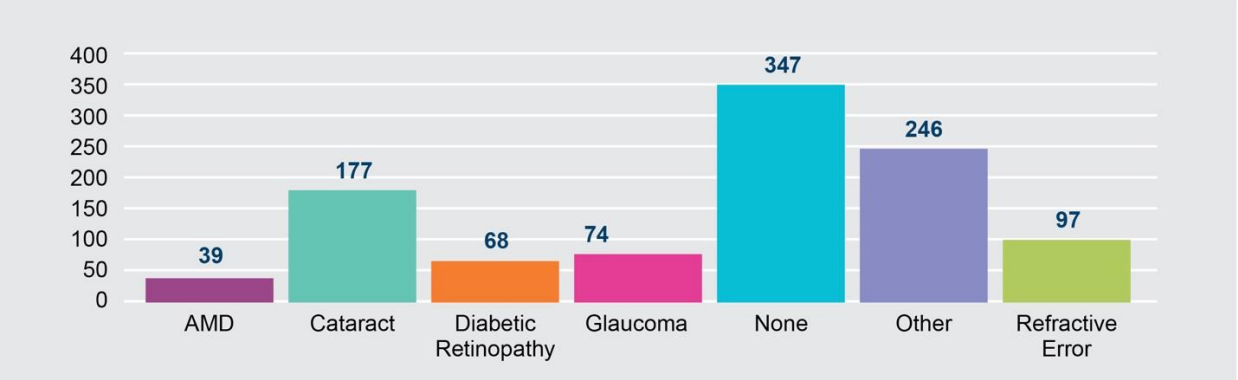


Figure 11. Outcomes by treatment category

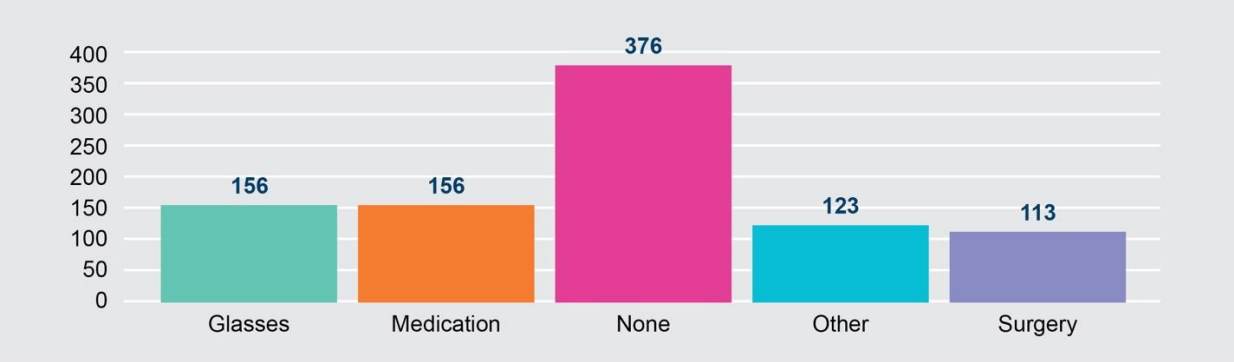
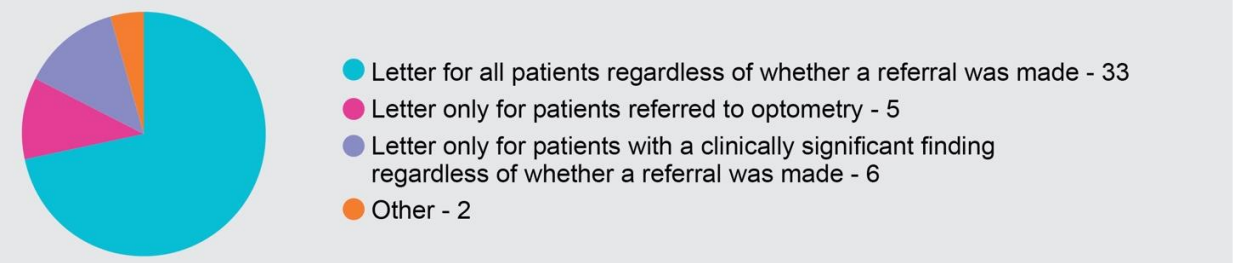


Figure 12. GP rated preference for receiving referral feedback from optometry



Key findings:

- Correspondence was received from the eye care provider for 1255 of the referrals (35%)
- The most commonly reported referral outcome was “none” (i.e. no significant finding)
- The second most frequently reported outcome was the “other” category which practices reported to include diagnoses such as dry eye disease, eye infection and allergic eye disease
- Where a treatment was started or recommended by the eye care provider, medication and glasses were most commonly prescribed, followed by the “other” category which practices reported to include treatment of underlying systemic condition, visual aid other than glasses or lifestyle changes
- 58 per cent of participating practices reported at the end of the project that they now receive correspondence from optometry more often than they did at the beginning of the project
- The survey of general practices participating in the project indicated that 72 per cent of GPs would prefer correspondence back from optometry for **all patients** regardless of whether a referral is made. Thirteen per cent indicated a preference for receiving correspondence only for patients with a clinically significant finding.

HealthPathways key performance indicators

HealthPathways is a set of online clinical pathways designed and agreed locally, to assist clinicians to make assessment, management and referral decisions at the point-of-care. HealthPathways has been adopted by Australian PHNs broadly, with each PHN responsible for developing and maintaining their own set of localised pathways and promoting use within their catchment. Where statewide referral criteria exist to access public services, these criteria are shared with all the states' PHNs to ensure consistency.

The set of ophthalmology HealthPathways available for primary care clinicians covers conditions such as cataracts, corneal problems, red eye, eye trauma and vision loss. These were promoted to the participating practices as a tool to assist in the assessment and referral of patients at-risk of eye disease or with a presenting eye complaint.

Data aggregated across the five PHNs showing the number and usage of the ophthalmology HealthPathways, at baseline and at the end of the project, is provided in Table 9. Eastern Melbourne PHN and North Western Melbourne PHN have a common platform (Melbourne HealthPathways) and therefore data is only included in the aggregated data set once.

Table 9: Number of ophthalmology HealthPathways and number of views.

HealthPathways	Baseline March to October 2022*	Post-pilot March to October 2023
Number of ophthalmology	139	147
Number of localised ophthalmology	91	94
Number of views of ophthalmology	9,998	9,365

**Baseline data amended from initial baseline report of 10,017due to error in PHN reporting*

Key findings:

- 76 per cent of practices rated the ophthalmology HealthPathways as very or somewhat effective in supporting their practice to achieve their project goals.
- One practice commented that, "HealthPathways is especially useful for early career GPs, GPs new to the area, and for nurses to use." Another practice reported that "HealthPathways are also really good as a local resource."
- There was a change in the way Google Analytics processed webpage data during the project which may have impacted on reporting of HealthPathways page views across all PHNs and may explain the reduction in page views. It is therefore hard to make any conclusions about the uptake or change in use of HealthPathways based on the number of page views at the end of the project compared to before the project.

Other primary care providers and key performance indicators

Other primary care providers and ACCHOs were originally included in the project plan to capture health professionals and establish processes that would identify and refer groups at-risk of eye disease, in organisations outside of a mainstream general practice setting.

During the project planning phase, it was quickly identified that 'other primary care providers' and ACCHOs would both require a unique and separate strategy compared to a mainstream general practice setting. This would stretch the scope of the project and after careful consideration by the Steering Committee and Department of Health, a decision was made to remove the key performance indicators associated with 'other primary care providers' and ACCHOs. In place of these key performance indicators, the focus would be on undertaking activities to promote the training resources available.

Eye health training key performance indicators and outcomes

Health professionals participating in the project were required to complete the online training modules relevant for their profession i.e. Common eye conditions for GPs and Introduction to eye health and vision care and the Advanced eye care modules for nurses.

Health professionals were also encouraged to participate in the webinars, either through participation in the live event or by watching the recording. The following tables provide a summary of the participation in the training activities and the impact the training has had on the knowledge and clinical practice of the health professionals who completed it.

Training module participation

There were 114 practice staff from the project's participating practices who completed at least one of the Vision 2020 Australia online training modules. Of these 114 individuals, 52 were in a GP role (45.6%), 53 were in a nursing role (46.5%) and nine were in an administrative role (7.9%).

Table 10. Number of participants and role of participants completing each module.

Module title	Numbers of practice staff completing the modules	Number of GPs	Nurses	Administrative role
Introduction to Eye Health and Vision Care	90	32	50	8
Advanced Eye Care Training for Primary and Allied Health	68	26	39	3
Common Eye Conditions	69	44	23	2
Diabetes and Eye Health	10	7	3	0

Note: Childrens vision and Emergency Eyecare modules were released after the end of the project and therefore participation data is not available for this report.

Webinar participation

Table 11. Number of participants and role of participants for each webinar

Webinar title	Numbers of attendees to the live event *	GP	Nurse	Other	Number of views of YouTube recordings
Eye Health Webinar 1: Glaucoma deep-dive	18	9	4	5	64
Eye Health Webinar 2: Age-related macular degeneration	12	6	3	3	83
Eye Health Webinar 3: Diabetes and eye health	12	4	5	3	43
Eye Health Webinar 4: Children's vision	8	5	2	1	15
Eye Health Webinar 5: Ocular emergencies^	-	-	-	-	23
Eye Health Webinar 6: Cataracts deep-dive	6	2	2	2	6

*Number from participating practices only and may include a small number of individuals from another practice within the same postcode as the participating practice. The impact on the overall results is likely very minimal.

^ Recording only

Health professions eye health knowledge

Evaluation questions were built into the modules and webinars and participants were asked to rate their knowledge and clinical practice prior to and at completion of each activity.

Table 12. Change in self-reported knowledge and clinical practice following completion of each module

Module title	Introduction to Eye Health and Vision Care	Advanced Eye Care Training for Primary and Allied Health	Common Eye Conditions	Diabetes and Eye Health
Knowledge of the main eye conditions that cause vision loss	+54.95%	+27.51%	+61.18%	+34.79%
Ability to identify the main eye conditions that cause vision loss	+57.38%	+27.72%	+55.99%	+32.85%
Knowledge on when to refer a patient to an eye health professional	+37.83%	+22.32%	+44.70%	+21.79%
Knowledge of the risk factors for vision loss	+40.56%	+31.37%	+43.16%	+25.66%
Asking your patients about their vision and eye health? (Never to Always)	+32.30%	+32.92%	+62.21%	+27.39%
Incorporating information about vision and eye health into your daily practice? (Never to Always)	+41.73%	+31.08%	+72.96%	+21.93%

Table 13. Change in self-reported knowledge and clinical practice following participation in each webinar

Webinar title	Trend for self-reported knowledge levels
Eye Health Webinar 1: Glaucoma deep-dive	Following completion of the webinar, participants' self-reported knowledge increased by: • 65% for knowledge of glaucoma • 77% for knowledge of risk factors for glaucoma • 60% for knowledge of when and where to refer patients at-risk of vision loss from glaucoma to an eye health professional
Eye Health Webinar 2: Age-related macular degeneration	Following completion of the webinar, participants' self-reported knowledge increased by: • 81% for knowledge of age-related macular degeneration (AMD) • 84% for knowledge of risk factors for AMD • 64% for knowledge of when and where to refer patients at-risk of vision loss from AMD to an eye health professional.
Eye Health Webinar 3: Diabetes and eye health	Following completion of the webinar, participants' self-reported knowledge increased by: • 33% for knowledge of diabetic eye disease. • 34% for knowledge of risk factors for diabetic eye disease • 36% for knowledge of when and where to refer patients at-risk of vision loss from diabetic eye disease to an eye health professional
Eye Health Webinar 4:	Following completion of the webinar, participants' self-reported knowledge increased by:

Webinar title	Trend for self-reported knowledge levels
Children's vision	• 50% for knowledge of common eye conditions that may affect children • 55% for knowledge of risk factors for the common eye conditions that may affect children • 37% for knowledge on assessing children's vision • 41% for knowledge of when and where to refer a child at-risk of a vision disorder and/or loss • 43% for knowledge of when and where to refer a child experiencing an ocular emergency
Eye Health Webinar 5: Ocular emergencies (Recording only)	Following completion of the webinar, participants' self-reported knowledge increased by: • 93% for knowledge of conditions and features that are ocular emergencies • 90% for knowledge of how to carry out an initial assessment of and triage ocular emergencies in general practice • 62% for knowledge of how to provide a safe initial first aid management of ocular emergencies in general practice • 74% for knowledge of when and where to refer ocular emergencies
Eye Health Webinar 6: Cataracts deep-dive	Following completion of the webinar, participants' self-reported knowledge increased by: • 52% for knowledge of cataracts • 76% for knowledge of risk factors for cataracts • 35% for knowledge of when and where to refer patients at-risk of vision loss from cataracts to an eye health professional

Health professionals were also surveyed at the end of the project and asked to rate their change in ability to identify, assess, manage and refer patients with or at-risk of eye disease as a result of completion/ participation in the online training and webinars.

Figure 13. GP rated ability to identify/assess/manage/refer as a result of eye health training

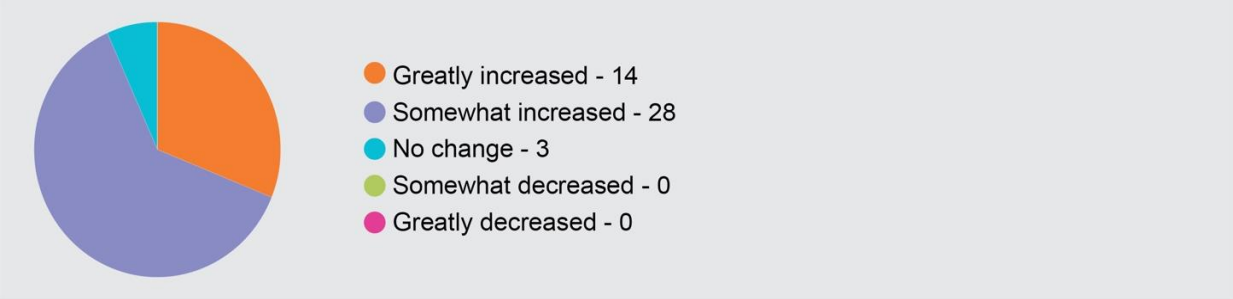
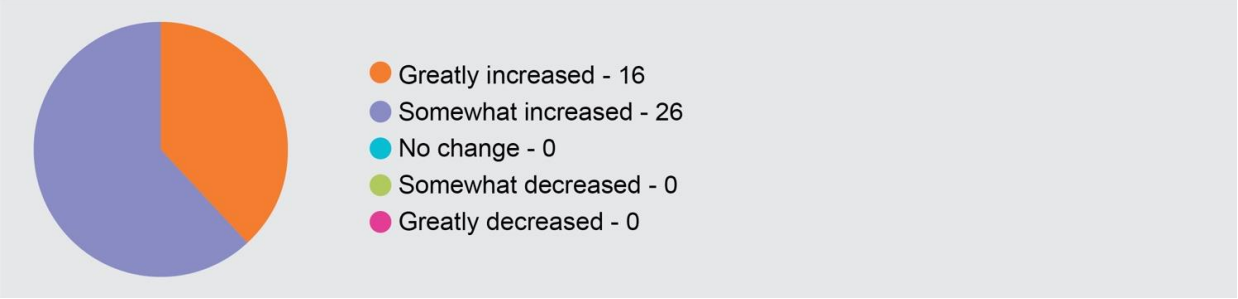


Figure 14. Nurse rated ability to identify/assess/manage/refer as a result of eye health training



Key findings

- A total of 114 practice staff from participating practices completed at least one of the Vision 2020 Australia online training modules. Of these, 52 were in a GP role (45.6%), 53 were in a nursing role (46.5%) and nine were in an administrative role (7.9%)
- A drop-off was observed in the participation in the webinars as the project progressed
- Results from the inbuilt evaluation questions within the modules indicated an increase in self-reported learning across all modules
- The Common eye conditions module resulted in the highest overall increase in self-reported knowledge and change in clinical practice
- 93 per cent of GPs and 100 per cent of practice nurses rated their ability to identify, assess, manage and refer patients with or at-risk of eye disease as somewhat or greatly increased as a result of their participation in the online training and webinars. One practice commented that, “So much knowledge was gained from this project. The education was invaluable to the nurses.”
- The Vision 2020 Australia online modules were rated as the second most effective project resource by practices, with 74 per cent rating as very effective and 24 per cent rating as somewhat effective in supporting the practice to achieve their project objectives. Another practice commented that, “The Vision 2020 education modules were invaluable in delivering up-to-date education on eye disease and education surrounding treatments.”
- The Vision 2020 Australia webinars were rated as the fourth most effective resource by practices, with 50 per cent rating as very effective and 41 per cent rating as somewhat effective in supporting the practice to achieve their project objectives
- Making the Vision 2020 Australia training activities available to all staff members was reported by 70 per cent of the practices as a way to ensure that any improvements/ changes made as a result of the project are adopted at a whole-of-practice level
- The Common eye condition module is now an RACGP-approved CPD activity under the RACGP CPD Program (1.5hours EA + 0.5hours RP CPD). Approval was granted on 20 October 2023.

Reflection and recommendations

PHN Reflection Report summary

Each PHN completed a reflection report with responses summarised below.

Support and benefits from the leads

The collaborative efforts led by the two lead PHNs, such as establishing a steering committee, maintaining open lines of communication with regular check-ins, and offering invaluable resources including a Teams chat and resource page, have significantly enriched the project's progress. Some PHNs were juggling several other QI projects in addition to the Embedding eye health project.

Barriers to PHNs implementing the project

Selection and engagement of practices was initially a barrier due to the timing of the Expression of Interest (EOI) process and concurrent events e.g. floods, Christmas break and other competing projects within the practices. Additionally, some PHNs experienced low interest for this project from practices compared to other PHN QI projects. Other QI projects aligned more clinically at a practice-level (cancer screening and heart failure) and had higher funding.

Manual data collection presented challenges both for the practice to collect and the PHN to receive. Chasing up manual data collection with each general practice was time consuming, as were face-to-face practice visits, especially due to the geographical spread of practices in rural Victoria. A challenge for PHNs was to aggregate the data without skills and knowledge around data management, privacy and storage of data.

Enablers to PHNs implementing the project

The project's success was enabled by several key factors, including the presence of a dedicated program facilitator, a high level of interest from practices and GPs, as eye health represented a new and compelling field for general practitioners with a keen interest in gaining a deeper understanding of this sector of allied health. Additionally, the project benefited from the support of the steering committee and the development of valuable resources. Having clear project resources and instructions to follow allowed for a smooth and consistent approach with each practice. Vision 2020's involvement, guidance and development of webinar promotional material further contributed to the project's achievements.

It was also important to carefully select practices during the initial phase of the project, to ensure they had the capacity to fulfil the project requirements with a motivated and enthusiastic project champion in the practice to guide the project.

Most useful resources provided by leads or developed by individual PHN

Resources that proved to be exceptionally valuable included:

- EOI/procurement documents
- Orientation and activities package with embedded templates and pre-pilot survey for general practice created by the Lead PHNs
- Orientation for eye health project session with slides
- Induction PowerPoint provided a simplified overview of the project for practices and worked well in conjunction with the induction document
- PHN-developed comms resources (for social media/ newsletter)
- Power BI dashboard was a useful tool to track the project deliverables, locally and statewide
- Information regarding the Victorian Aboriginal Spectacles Subsidy Scheme (VASSS) and Victorian Eyecare Service (VES programs) was welcomed by practices especially for directing patients who found the cost of eye checks and purchasing glasses a barrier
- Child eye screening document.

Subject matter experts were very helpful in providing clinical context and practical implementation advice, which would have been even more beneficial in the eye health project planning stage.

Suggestions for the future

To further enhance project effectiveness, the following is suggested:

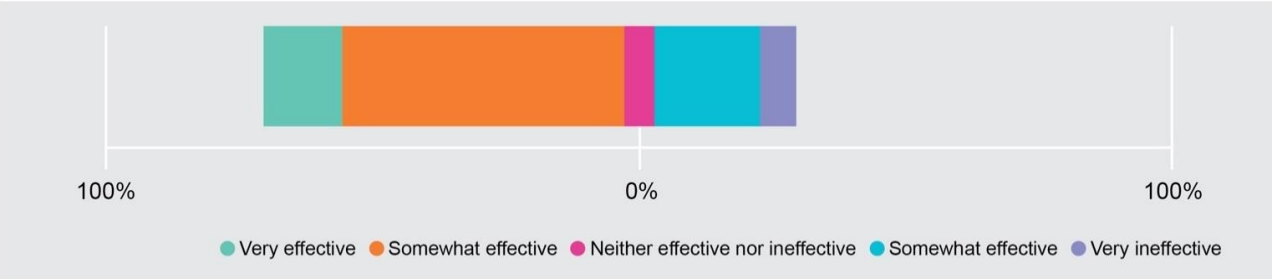
- The development of tailored separate orientation packs for both PHNs and practices, actively involving subject matter experts in project planning, and advocating for practical timeframes in the department
- Initiating stakeholder engagement in the project's early stages
- Ensure all participants had a clear understanding of the agreed project scope during the planning phase may have been helpful to uphold alignment and prevent some scope creep experienced during implementation

- In the EOI documentation, to select the most appropriate practices for a project, it would be valuable to include clearer questions to define the roles and requirements of staff and practices. Some practices had no nurse or practice manager, which they did not initially mention in the EOI application, leading to a lack of nurse input or practice manager support and a greater burden on the GP to complete all deliverables for the eye health project
- The ability for the project facilitators to track which practice had completed their online learning modules/attended the webinars would have minimised the multiple follow-ups required by PHN staff or practices.

Practice reflection

Practices were asked to rate the effectiveness of the project and resources in embedding eye care into their practice systems.

Figure 14. Practice rating of project effectiveness



Sixty-seven per cent of practices rated the project as very or somewhat effective. The barriers to implementing the project were noted as manual data collection, time constraints, receiving correspondence back from optometry and software limitations for tracking eye health.

The top three most effective tools/ resources rated by practices to support them throughout the project were:
1. Support provided by the PHN project staff
2. Vision 2020 Australia training modules
3. Orientation and activities package.

Recommendations

Optometry Australia (previously known as Optometry Victoria/South Australia)

Optometry Victoria/South Australia and now Optometry Australia were very excited to see that eye health was placed on the agenda with active steps to improve eye health outcomes. However, there were some areas of which, if the project was to be re-invigorated, in our opinion, from the perspective of major stakeholders in this project, would assist in sustained improvement in eye health outcomes.

- To start, eye health pathways are a very complex area with nuanced roles and considerations. An example of how it is different from other areas of healthcare is that referrals to ophthalmology, whether private or public, would preferably come via optometry. For this reason, inclusion of SME input is critical in ensuring these nuances are reflected in the project. From the meetings, the general sentiment of all SMEs involved, not just optometry, was that by the time the first meeting for SME inclusion took place in December 2022, while opportunity for feedback and discussion was offered and appreciated, changes to implementation approaches could only be minimal given that pilots had already started

- As alluded to above, optometry are major stakeholders in the eye health space. For this reason, it would be even more crucial to ensure consultation with the profession in the initiation of this project
- A major part of the evaluation component relied heavily on optometry reports back to GPs. During consultation, Optometry Victoria /South Australia and other stakeholders consistently and repeatedly advised that while optometry reports to GPs were always recommended as a good idea when eye conditions were detected, primarily for relationship-building purposes, a report to the patient's GP for every individual patient that an optometrist examined, regardless of eye health status, was not achievable for optometrists nor desirable for GPs. One of the barriers noted was that current patient record management systems did not allow for efficient transfer of reports and the resultant administrative burden on all stakeholders involved to manage these reports would be very resource intensive
- Anecdotally, successful embedding of another practitioner's care in the care of any practitioner's patients usually requires trust in the skills and care of the other practitioner before the transfer of trust would more likely occur. While the eye health resources for upskilling and professional development to GPs were of a high level, the focus on engagement with their local optometrists to strengthen relationships should have been more of a priority. In addition, GP involvement in the program was well incentivised with thousands of dollars offered to GPs - proportions of this could potentially have been allocated to this engagement. Similarly, there was opportunity for optometrists to have been offered the same incentives to invest in engagement opportunities. Two-way channels of engagement would potentially have been more impactful.

PHN leads

- Feedback received from stakeholders highlights the importance of engagement with key subject matter experts before project planning begins. Opportunities for discussion, information sharing, and project design are a key component to a project's overall success and ongoing commitment and contribution from relevant stakeholders. This is also imperative regarding cultural inclusiveness
- To reduce the burden of manual data tracking on practices and to support the uptake of quality improvement activities related to eye health, there needs to an electronic reporting option available in general practice clinical software that can easily identify when a patient had their last eye check. This would allow practices to easily identify patients who are at-risk of eye disease and would benefit from an eye check or are overdue for an eye check. Currently, there is no field available in the general practice clinical software that enables practices to simply enter a date of the patient's last eye check
- A lack of software systems that support general practice and allied health to electronically transfer patient information easily and safely between health professionals contributes to a wide range of issues including patients not being appropriately referred, patients remaining undiagnosed or not receiving appropriate treatment, and a lack of communication between health providers. Further work is needed in the electronical referral space at a statewide level, to advance capability for communication between general practice and allied health

Careful consideration should be given to ensure that project requirements do not outweigh the project benefits for those involved. Imbalances between these two aspects can deter practices from participating in projects and can impact on the overall performance and satisfaction with the project.

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