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ORIGINAL RESEARCH

Australian Nurse Engagement in Eye Care: A National Survey

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Purpose: An estimated 13 million Australians live with one or more chronic eye conditions, with prevalence increasing. Eye care services today and in the future rely on effective workforces, in which nurses play a pivotal role. Despite nurse involvement in eye care, there is no information describing their engagement, deployment, training, and opinion. This paper offers the first review of nurse engagement in eye care in Australia.

Methods: We conducted an e-survey on Australian nurse engagement in eye care. Quantitative questions were analysed by descriptive, chi-square and bivariate correlation coefficients with assumed power of 0.80, and significance of p=0.05. Grounded theory, sentiment and saturation analysis extracted key themes, meaning and opinion from the qualitative questions.

Results: There were n=238 Australian nurse participants. Results indicated they were satisfied with their role, engaged in a wide range of healthcare and eye care setting and organisations, and adapted to their employer. Task-shifting "to" and "from" nurses was not universally supported but recognised by participants as necessary. Of concern, the results suggested that 68.6% of our participants would exit eye care over the next ten years, with insufficient entry pathways into the field for graduate and early-career nurses.

Conclusion: For Australia to meet and sustain eye care services for its population, steps must be taken to improve exposure and entry to the field for students, graduates, and early-career nurses. Strategies to train and prepare nurses for task-shifting are urgently required and the eye care nursing sector must professionalise to achieve positive change.

Keywords: Australia, nurse, eye care, ophthalmology, blindness, workforce

Introduction

Nurses represent 54% (350,000/642,000) of Australia's healthcare workforce.[1] While they are key providers of eye care, little is known about their role and engagement, nor how they could be mobilised in the future. This is important because there are an estimated 13 million Australians with one or more chronic eye conditions[2] and prevalence of eye disease is predicted to increase from 6.7% to 7.5% by 2050,[3] resulting in an increased need for nurses.[4]

Despite their prevalence, the existence of sub-speciality eye care nursing associations and national ophthalmic nursing practice standard guidelines,[5] there is limited information regarding nurse engagement in eye care in Australia in terms of their degree of involvement, training, deployment, and support.[6] There is no indication of their opinion and recommendations regarding their role today nor how future workforce numbers and skill levels will impact services, positively or negatively.

The national licencing body, the *Australian Health Practitioner Regulation Agency (AHPRA)* does not collect data on eye care nurse sub-specialisation. Therefore, there are no national data points exploring nurse engagement and evolution over time.[6] The Australian Ophthalmic Nurses Association (AONA)[7] are the only collective data point. Nationally in

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2022, AONA had n=426 members, of which n=412 were nurses (Personal communication with lead researcher Heather Machin; March 2022). As membership is voluntary, this figure does not indicate the true volume of nurses engaged in eye care, nor does it capture data on nurses in other fields who engage in eye care alongside their provision of other care services.

To address this knowledge shortfall, we surveyed Australian nurses engaged in eye care. The study was approved by the Royal Victorian Eye and Ear Hospital's Human Research Ethics Committee (21/1497HL), with governance approved by the Centre for Eye Research Australia (CERA). The study was funded by the Australian Ophthalmic Nurses Association (AONA) and led by CERA researchers.

Terminology

We used the term "eye care" rather than "ophthalmology" (where appropriate) to ensure we included the diverse engagement of nurses in this field and recognised the integration of eye care services across healthcare.

Method

We developed and launched a publicly accessible e-survey, powered by RedCap (Vanderbilt, USA), with the landing page hosted on CERA's website. (www.cera.org)

We started by completing a scoping review[6] which identified gaps in existing knowledge and assisted in developing the survey questions. We also examined surveys from other eye care providers, eg orthoptists,[8] to ensure our questions and outcomes were consistent with other professions, and data could be used by the sector and employers when designing future interdisciplinary eye care workforce plans. Finally, we completed a pilot validation step, prior to sign-off, launch and participant recruitment. The question set is provided in Supplementary 1.

The e-survey was available for 3 months (July–October 2021), and promoted through eye sector networks, association websites and social media pages, industry news stories and directly to employers. Participants were directed to the survey landing page, which provided participant information (and a link to the downloadable version). Consent was implied by participants clicking to confirm they had read the participant information, before being directed to the survey. Participation was open to nurses in Australia, registered with the national licencing body – AHPRA, and working in a role intersecting with eye care.

Data was saved onto RedCap, accessible to the CERA RedCap Administrator. The research team accessed de-identified survey responses. Data was downloaded from RedCap, and saved onto a password protected server at CERA, accessible to our lead researchers. Quantitative data (Questions 1–43 of the survey tool) was analysed via SPSS (IBM SPSS Statistics, version 26, software system, USA), while qualitative data (Questions 44–54 of the survey tool) was analysed via NVivo 12 QSR (QSR International, Australia).

We did not include a "mandatory completion of all questions" function. This ensured participants shared information they were comfortable providing and prevented inappropriate/inaccurate data due to forced completion.

As AHPRA does not record data on nurse eye care engagement, we were unable to determine a sample size. Therefore, our intent was to capture data from as many nurses as possible and develop a starting point for future investigation. To evaluate our quantitative data we used descriptive, chi-square and bivariate correlation coefficients (Pearson's two-tailed analysis) to examine associations between categorical variables. Despite not having a sample size target, our statistical power for analysis (to detect an effect of the independent variables on dependent variables) assumed the power of 0.80 and an alpha of p=0.05.

To evaluate qualitative data, we used grounded theory. This extracted previously unpublished data on the nurse opinions and recommendations.

Results

The survey attracted n=290 participants. Of those n=52 did not complete the survey and were removed. This resulted in n=238 remaining. Of the n=238, n=134 (57%) completed the quantitative automated questions (Q 1–43) and qualitative open text questions (Q 44–54), while n=104 (43%) completed only quantitative questions. This does not impact our analysis because quantitative and qualitative results were analysed differently.

Table 1 General Demographics of Respondents

Characteristics	N = (%)
Gender n=238 (100%)	
Male	15 (6.3)
Female	220 (92.4)
Non-binary	1 (0.4)
Other	2 (0.8)
Aboriginal and Torres Strait Islander n=238 (100)	
Yes	3 (1)
No	235 (99)
Nurse License (self-defined) n=238 (100%)	
EN	12 (6)
RN	202 (84)
RN – MW	5 (2)
RN- NP	2 (1)
NP	17 (7)
Training and qualifications n=238 (100%)	
Diploma	32 (13.5)
Bachelor	79 (33)
Graduate certificate/graduate diploma	82 (34.5)
Masters	40 (17)
PhD	5 (2)
Employer location n=231 (100%)	
City (capital and regional)	198 (85.5)
Rural	25 (11)
Remote	8 (3.5)
Employer management type n=231 (100%)	
Government health departments	109 (47.2)
Non-profit/benevolent organisations	16 (7)
Independent facilities (eg surgeon or GP owned practices)	53 (23)
Private multi-locations	47 (20.3)
Unsure	6 (2.5)
Eye only facility n=231 (100%)	
Yes	96 (41.5)
No	135 (58.5)

(*Continued*)

Table 1 (Continued).

Characteristics	N = (%)
Employed as n=226 (100%)	
General nurse (staff nurse, level 1)	86 (36)
Clinical nurse specialist	55 (24.3)
Manager	22 (10)
Practice nurse	21 (9.3)
Project worker	3 (1.3)
Professor	2 (0.9)
Clinical nurse educator	2 (0.9)
Director/CEO	1 (0.4)
Novice/graduate nurse	1 (0.4)
Other	33 (14.6)
Identifies as a nurse n=215 (100%)	
Yes	153 (71%)
No	62 (29%)

Notes: There were n=238 participants. We indicate where only partial participation occurred within sub-questions.

Table 2 Measures of Central Tendency

Measurements of Central Tendency (Mean, Medium, Mode)	
Age	49.5, 51, 60
Years as a nurse	26, 26, 40

Due to the content volume, we were unable to provide all results in this paper. Please see Supplementary 2 for additional data. General demographics are provided below and in Tables 1 and 2.

Quantitative Responses

Gender and Age

Participants self-identified predominantly as female (n=220, 92.4%), followed by male (n=15, 6.3%), and non-binary (n=1, 0.4%). There were n=2 (0.8%) that did not indicate their gender. The youngest was aged 24 and the oldest 69. The mean age was 49.5, the median 51, and the mode 60.

Location

Participants resided in New South Wales (NSW) (n=65, 27.3%), Victoria (n=56, 23.5%), Queensland (QLD) (n=46,19.3%), Western Australia (n=29, 12.2%), South Australia (n=24,10.1%), Northern Territory (n=8,3.4%), Tasmania (n=8, 3.4%), and lastly the Australian Capital Territory (n=2, 0.8%).

Aboriginal or Torres Strait Islanders

There were n=3 (1.3%) participants that identified as Aboriginal or Torres Strait Islanders. They were female with a mean age of 51, residing in NSW (n=2/3) and QLD (n=1/3) and identifying as Registered Nurse (RN) (n=2/3), and Enrolled Nurse (EN) (n=1/3).

Professional Type

The largest professional group were Registered Nurses (RN) (n=209/238(87.9%)). Of those n=202/238(84%) were RN with no other licence, n=5/209(2%) were duel licenced as RN and Midwife (MW), and n=2/209(1%) as dual RN and Nurse Practitioner (NP). Finally, n=17/209(7%) identified as NP only, and n=12/209(6%) as Enrolled Nurse (EN) (including Endorsed EN). The mean and medium years participants had been nursing, were both 26, though the mode was 40.

Qualifications

Their qualification levels were diploma n=32(13.5%), bachelor n=79(33%), graduate certificate/graduate diploma n=82 (34.5%), masters n=40(17%) and PhD n=5(2%).

There were n=100/238(42%) hospital trained nurses and n=138/238(58%) university trained nurses, with n=209/238 (88%) trained in Australia. The remaining n=29/238(12%) trained overseas.

In terms of post-graduate training, n=118/238(49%) completed a graduate transition year. Of those, n=41/118(35%) stated their graduate program included eye specialty rotations. The rotations were conducted predominantly in public institutions (n=31/41, 75.6%) followed by private (n=10/41, 24.4%). There were n=154/238(65%) that had completed ophthalmic coursework.

Employment

We found n=50/238(21%) participants had more than one employer. Of those, n=33/50(66%) indicated why they had multiple employers. Their reasons were: "wanted to extend/keep up skills elsewhere" (n=23/33,70%); "needed more hours as primary job did not provide enough" (n=6/33,18%); and "indicated a need to both extend their skills and increase their hours" (n=4/33,12%).

Participants Answered Remaining Employment Questions Based on Their Main Employer

Of n=238, n=231(97%) indicated the location of their employer. Of those, n=198/231(85.5%) worked in a city (capital and regional), n=25/231(11%) worked in a rural setting, and n=8/231(3.5%) worked in a remote setting. We found n=96/231(41.5%) worked in eye only facilities.

Their organisations were managed by government health departments (n=109/231, 47.2%), non-profit/benevolent organisations (n=16/231, 7%), private multi-locations (n=47/231, 20.3%), and independent facilities (eg, surgeon or GP practices) (n=53/231, 22.3%). There were n=6/231(2.5%) unsure who managed their organisation.

Extended Role

There were n=39/238(16%) using an extended scope of practice. By profession, n=5/39(13%) were EN, n=17/39(43.5%) RN, n=1/39(2.5%) RN-MW, and n=16/39(41%) NP. Of those, n=5/39(13%) were employed as practice nurses, n=1/39 (2.5%) project worker, n=7/39(18%) general nurses, n=9/39(23%) clinical nurse specialists, and n=17/39(43.5%) other. They worked within eye only facilities (n=14/39, 36%), and mixed-care facilities (n=25/39, 64%), across: government health departments (n=24/39, 61.5%), private multi-location companies (n=2/39, 5%), non-profit/benevolent organisations (n=1/39, 2.5%), and independent facilities (n=8/39, 20.5%). Finally, n=4/39(10%) were unsure of their organisation's management/ownership structure. The "type" (task) identified by respondents is outlined in Supplementary 2.

Identity

We asked participants if they "identified as an eye nurse/ophthalmic nurse?" With this, n=215/238(90%) responded. Of those, 153/215(71%) said "yes", and n=62/215(29%) said "no". Participants were asked to explain their response. Those saying yes, indicated that they:

- Worked in services/departments/organisations that did only or predominantly eye care

- Worked for a service that supported eye care
- Had completed eye care training
- Were an AONA member
- Joined as a graduate and never left
- Were passionate about eye care.

Those saying no, indicated that they:

- Did not have formal eye care qualifications
- Identified as something else (eg surgical assistant, practice nurse, emergency nurse practitioner, anaesthetic nurse, nurse manager, coordinator or were in a project position)
- Did not care for enough patients with eye conditions/needs to consider themselves an eye nurse.

Satisfaction

Participants were asked if they were satisfied with their current position. Of our n=238 participants, n=204(86%) provided a response. Of those, n=180/204(88%) answered "yes", and n=24/204(12%) answered "no". Those that answered "no" explained their response in open text. Their responses ranged from: not working to full potential, underutilised, limited opportunities in the workplace, limited scope compared to other ophthalmic areas, low pay, conflicts with colleagues (nurses and medical staff), no recognition of training and experience or through wage recognition, constantly stressed, lack of support, bored, repetitive, frustrated, administrative burden, lack of adaptability/adoption in the field – making it too slow to change, and finally, because they had been working in the field a long time.

Nurses working in rural settings were most satisfied (100%); followed by city based (capital and regional city) (87%); and lastly, those in remote settings (86%). We found no statistical significance between satisfaction and location of where they worked (*p=0.074*).

Those working in independent facilities were most satisfied, with 95% of respondents in that work environment responding as "yes". This was followed by government health departments (88%); private multi-location companies (84%); and non-profit/benevolent organisations (73.3%). We found no statistical significance between satisfaction and their place of work (*p=0.064*).

In terms of self-identification as an eye care/ophthalmic nurse, the responses were similar, with 88.4% of those who did identify indicating satisfaction, compared to 88% of those that did not identify. There was a strong statistical significance between job satisfaction and self-identification (*p=0.006*).

Based on their employment position, those employed as CEO/directors, clinical nurse educators, professors and novice/graduate nurses were the most satisfied (100%); followed by managers (94.5%); practice nurses (94%); general nursing team members (staff nurse, level 1) (87%); those with other titles (87%); clinical nurse specialists (86%); and lastly, project workers (67%). There was a strong statistical significance between job satisfaction and employment position (*p=0.021*).

Regarding age, respondents at the beginning and end of their career were more satisfied. Those aged 25 and under, and aged 66 and over, indicated 100% satisfaction – though they represented the smallest respondent group. They were followed by those aged 51–55(92%); 61–65(92%); 26–30(90%); 36–40(83%); 56–60(88%); 31–35(87%); 40–45(87%), 36–40(83%) and lastly, 46–50(80%). (Figure 1) We found no statistical significance between job satisfaction and age *(p=0.074)*.

Those that worked in an eye-only facility were more satisfied (92%) than those that did not (86%). We found no statistical significance in satisfaction regarding working in an eye only facility (*p=0.089).*

Future

In terms of intent to continue to work in eye care, n=204/238(86%) responded. They indicated: indefinitely n=64/238 (26.9%), 5–10 years n=62(26%), 1–5 years n=68(28.5%), and under 1 year n=10(4.2%). Results indicated that within the

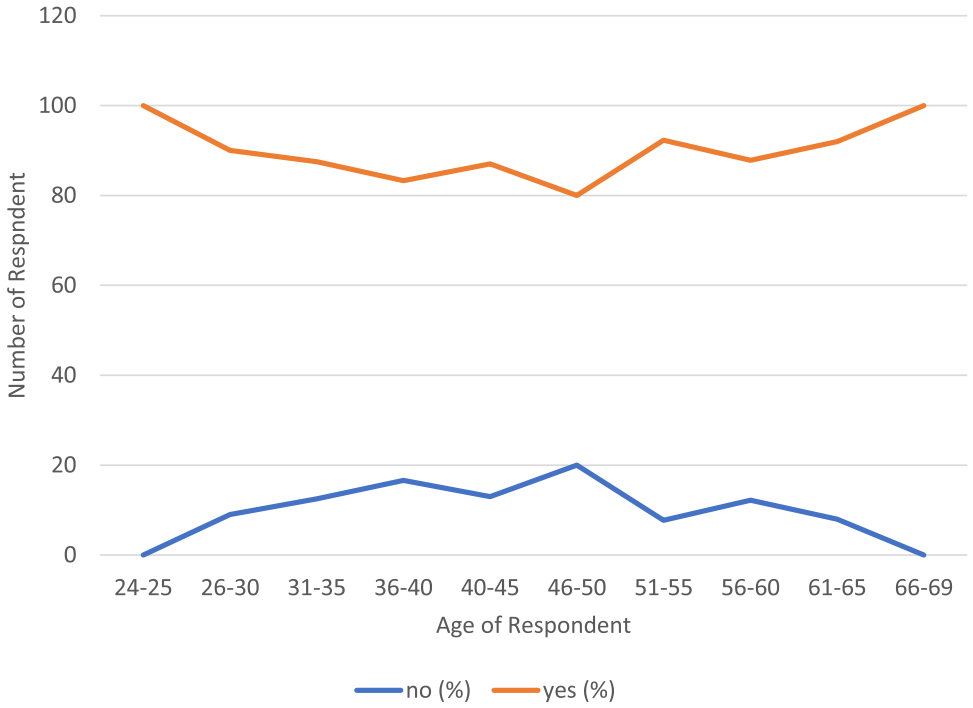

Figure 1 The figure indicates that job satisfaction (yes = satisfied; no = not satisfied) of respondents was higher at the begging and end of their working age years.

next ten years, 68.6% (n=140/204) of respondents will leave the profession. We found no statistically significant correlation between job satisfaction and intent to continue working (*p=0.12*) (Table 3).

Qualitative

Qualitative commentary is themed into four categories: Strengths and Weaknesses (Question (Q) 44–45), Task-shifting "to nurses" and "from nurses" (Q 49–52), Education (Q 46–48) and Other (Q 53–54). There were n=134/238 (56%) respondents who answered some or all of the qualitative questions. These are outlined next and in Table 4.

Strengths and Weaknesses

There were n=98/238(41%) participants who commented on the strength of the profession. While n=12/98(12.2%) were unsure of the strengths, the remaining n=86/98(87.8%) offered a range of comments. Collectively, respondents viewed the profession as a small niche area of healthcare, yet one that was brimming with opportunities and possibilities. The

Table 3 Intent of Respondents to Stay in Eye Care and/or Nursing Over the Next ten Years

Time	All Survey Respondents n=238 (100%)	Those Who Specified n=204 (100%)	Respondents Exiting Eye Care in 10 Years
Indefinitely	64 (26.9)	64 (31)	n/a
5–10 years	62 (26)	62 (30)	140/204 (68.6%)
1–5 years	68 (28.5)	68 (33)	
Under 1 year	10 (4.2)	10 (5)	
Not specified	34 (14)	n/a	

Notes: This table indicates that 68.6% of those who responded to the question will be leaving the profession over the next ten years.

Table 4 Summary of Respondent Opinion on Four Key Themes

Theme	Respondents n=	Summary
1. Strengths and Weaknesses of the Profession		
Strengths	98	1. Small niche area of healthcare, yet one brimming with opportunities and possibilities. 2. Good work-life-balance, little afterhours work, life-long employment options, career advancement (through extended practice) 3. The ability to work both autonomously and in a team *Respondents recognised and viewed the camaraderie and support from other healthcare disciplines and other eye care providers and staff, and technological changes, favourably.*
Weaknesses	122	1. Limited professional profile (eg, the multi-state nature of AONA), recognition and awareness of the profession 2. Recruitment – particularly graduate and early-career nurses 3. Aging workforce 4. Reluctance by experienced nurses to share their knowledge with younger nurses 5. Lack of under-graduate, post-graduate, and work-based training options – particularly outside of cities 6. Deployment to other areas of their organisation 7. Funding to recruit and train – especially graduate nurse positions 8. Lack of integration of the AONA National Standards by managers/organisations 9. Lack of formal recognition/official certification of the "Ophthalmic Nurse", and the lack of eye care knowledge or interest by some nurses to learn, advance or support their own profession
2. Task shifting ("to" and "from" nurses)		
Total respondents	134	Respondents identified five key themes that influenced their decision to support task shifting "to" and "from" nurses. They believed these needed to be addressed to make task shifting viable: 1. Time (to complete the tasks) 2. Workforce size (volume of people in the workforce to perform all the tasks) 3. Training (accessibility to education and competency programs) 4. Practicality (managing tasks and demand within an under-staffed healthcare system) 5. Impact on nurses (impact on job satisfaction and future recruitment because of tasks allocated to nurses)
In support	51	
Not in support	70	
Unsure	13	
3. Education		
Total respondents	105	1. On-The-job 2. Informal and formal (certificate, post-graduate) 3. Sector provided in-services (eg, professional societies and agencies and commercial industry organisations) *Training ranged from face-to-face, online, lecture attendance to interactive and participatory formal coursework. They identified on-The-job training providers as other nurses, ophthalmologists, optometrists, and orthoptists.*
Current education access		
Barriers to access		1. Nurses themselves (unwillingness to change and learn and share knowledge) 2. Insufficient quantity of opportunities 3. Limited time (eg, unable to obtain time due to rostering) 4. Lack of comprehensive and stable access to courses 5. Variance across the nation – with east coast mainland locations receiving the lion's share 6. Lack of exposure at the undergraduate level (coursework and placement) and too few graduate positions
4. Other		
Total respondents	85	To attract and retain nurses into the field and make effective long-lasting change, respondents recommend: 1. Amalgamating AONA into one entity 2. Encouraging universities, governments, and employers to increase undergraduate exposure, and create clear career pathways into eye care for early-career nurses 3. Fund nurse-led research and engagement in national debate 4. Improve interaction with other health care providers to strengthen shared care modelling

Notes: This table highlights the 4 key themes extracted from the qualitative survey questions, being: 1. Strengths and Weaknesses of the Profession, 2. Task shifting "to" and "from" nurses, 3. Education, and 4. Other.
Abbreviation: AONA, Australian Ophthalmic Nurses Association.

field offered good work-life-balance, little afterhours work, life-long employment, career advancement and the ability to work both autonomously and in a team. Respondents recognised the camaraderie and support from other healthcare disciplines and other eye care providers and staff. It was recognised that eye care was constantly changing, particularly due to technological advancements. These changes were viewed as strengths and welcomed with enthusiasm.

Self-descriptors included the terms: dedicated, multi-skilled, passionate, welcoming, committed, and united. Respondents believed the profession was strong due to the accessibility of training and education, and networking.

Respondents believed eye care nurses offered a dedicated patient-focused and holistic approach to care and had the ability to build rapport with patients and support their needs. Helping patients was a key motivator.

In terms of weaknesses, n=122/238(51%) responded. Of those, n=9/122(7.3%) were unsure of the weakness; n=1/122 (0.8%) did not think there were weaknesses, and the remaining, n=112/122(91.8%) provided comment. Respondents indicated that the profession was limited due to factors such as: professional profile, leadership and advocacy, recognition and awareness, recruitment – particularly of younger graduates, retention of existing nurses, an ageing workforce, reluctance by experienced nurses to share their knowledge with younger nurses, lack of under-graduate, post-graduate and work-based training options – particularly outside of cities, deployment to other areas of their organisation, funding to recruit and train – especially graduate nurse positions, lack of integration of the National Standards by their managers/ organisations, a lack of formal recognition/official certification of the "Ophthalmic Nurse", and lastly, a lack of eye care knowledge or interest by some nurses to learn, advance or support their own profession.

Career wise, respondents indicated there were limited options for Enrolled Nurses to expand their practice; insufficient opportunities within the General Practice setting and rural/remote setting, and too few nurse-led eye care clinics; and that Australia was not keeping up with other countries (UK, USA, Ireland) in relation to extended practice. Respondents felt this was due to barriers from their organisation or manager, and the wider medical and healthcare groups who prevented nurse involvement in extended eye care tasks in Australia.

Respondents indicated that the field was fast paced. This was reflected extensively in relation to the operating theatre, where respondents felt they were on a factory line (especially when rostered onto cataract lists), where there is a lot of demand and pressure. The lists could be long, stressful, and according to some participants, without consistent breaks. Those working in the private sector amplified these comments, stating there was a greater emphasis on profit.

Finally, the anticipated impact of the ageing nursing workforce, colliding with growing demand, and a limited recruitment of early-career nurses into eye care, was the key concern for participants. They worried about the impact of these factors on long-term sustainability of nurse engagement in eye care and in turn, access to services.

Task-Shifting

To determine if participants supported in principle, task-shifting to and from nurses, we consolidated, and mined their responses (extracting sentiment and meaning), to questions 49–52. There were, n=134/238(57%) that responded to these questions. Of those, n=13/134(10%) were unsure or did not know if task-shifting was good or not, while n=70/134(52%) did not support it, and n=51/134(38%) did support it.

Their responses were not based on the capabilities of the nurse or other professionals, nor their willingness, or support for shared-care models, as they favoured the team approach and knew that with effective training, professionals including nurses, were capable of performing a range of tasks. Instead, they focused on five key areas applicable to both shifting tasks "to" nurses and "from" nurses: being: 1. Time (to complete tasks), 2. Workforce size (volume of people to perform tasks), 3. Training (accessibility to education and competency programs), 4. The practicality (managing tasks and demand within under-staffed healthcare systems) and 5. The impact on nurses (impact on job satisfaction and future recruitment because of tasks allocated to nurses).

Respondents identified a task hierarchy, with multiple professionals competing for certain tasks (eg, intravitreal injections) but not so much for other tasks (eg, daily living activities or minor procedures) – and that this competition created interdisciplinary tension. They believed that if professions were compensated for tasks, and involvement was planned carefully and safely in shared-care models, then services could be effectively adapted to meet the needs of the community/population rather than being based on where the professional was employed. They supported the evolution and shifting of tasks if training was available, and the service was ready to provide wholistic and integrated shared care services.

Respondents believed that without careful planning and rationale, the sector would only be "shuffling" professionals around rather than addressing the core issues of adequate healthcare staffing numbers. They believed task-shifting needed to be allocated on the fundamental need to reduce demand through prevention and advanced treatment options. They

indicated that task-shifting in either direction required transition planning to ensure the role of the nurse was not undermined or devalued, they were not "dumped" with tasks others did not want to perform, and they were positioned to attract and retain nurses into the field. For example, it was stated that nurses were already being replaced by other eye care professionals in some parts of Australia – especially in the Northern Territory and Victoria, and that this had a negative impact on the attraction of nurses into eye care in those locations. The "to" and "from" task-shifting responses are outlined in further detail in Supplementary 2.

Other

There were "other" comments from n=85/238(36%) participants. They highlighted that to attract and retain nurses into the field and make effective long-lasting change, that the nursing community must nationalise and professionalise AONA. As one entity, AONA could encourage universities, governments and employers to increase exposure and opportunity to eye care for early-career nurses, increase nurse-led research and engagement in national debate, fund more nurse training and research, improve interaction with other healthcare providers to strengthen shared care modelling, support each other to advance together, create clear paths into eye care, take self-responsibility for the training and advancement of nurses (not just expecting ophthalmologists to train nurses). Other ideas included the value of importing eye care nurses from other countries and using inter-departmental rostering strategically to expose more nurses to eye care.

Discussion

We conducted Australia's first survey of nurse engagement in eye care. Our cohort were representative of the general Australian nursing population in relation to gender, age, Aboriginal or Torres Strait Islander status, qualifications, registration type, state-territory – location, and hours of work. For example, 1.3% of our participants identified as Aboriginal or Torres Strait Islander, in comparison to 1.1% of nurses in the national nursing and midwifery workforce pool.[9]

The survey indicated Australian nurses work in all areas of eye care and a range of settings. This is reflective of their adaptability, usefulness, expertise, and familiarity of an integrated healthcare system. They were satisfied with their role and enjoyed working in the field and with other providers.

Of concern, results indicated that 68.6% of respondents will exit eye care within ten years. While these nurses exit, there is an insufficient quantity of early-career nurses to replace them. This exodus will occur simultaneously with an increase in eye care demand. Without examination into entry points and exposure to eye care for undergraduate and early-mid career nurses, then Australia may experience a shortage of eye care services at its most critical moment.

We believe that task-shifting and the use of nurses in extended practice requires further investigation. Firstly, from the perspective of time, training, practicality, workforce size and impact to nurses, and secondly, based on what is needed for the Australian population. Nurses, like other professionals, must learn from other countries and find ways to adapt their practice in preparation for future demand. For example, nurses in other countries are already effectively performing extended practice (eg, intravitreal injections) to the benefit of those health systems and nursing professions.[10–12] Therefore, further work is needed to determine how the role of the Australian eye care nurse can be reimagined to effectively address the future demand of eye care services. To do so, a willingness on both sides of the "to" and "from" task exchange must occur. Careful reimagination could attract and retain nurses into the field – offering career pathways. This could be conducted in a manner that enhances rather than devalues eye care nursing.

Limitations

Whilst we recruited participants extensively, with no prior baseline on eye care nurse workforce numbers, we are unsure of what percentage of that group our participants represent. Additionally, our survey captured data on those already in the field and did not capture data on how to improve entry points to attract and retain nurses into the field. Further workforce studies of student and early-mid career nurses who do not work in eye care would enhance future recruitment and retention plans. This could help understand the barriers and reluctance and allow the sector to develop and implement strategies.

Recommendations

Our results highlight a need for routine national data capturing of nurse engagement in eye care. Collection through AHPRA, would be appropriate, however as the term "Ophthalmic Nurse" is not yet recognised by AHPRA, then this is problematic. If AHPRA data is not yet possible, at least in the short term, organisations like AONA could work with other associations and providers to identify and capture eye care nurse workforce data. To be most effective and recognised externally as a unified cohort, AONA must also consolidate into one national group.

The nursing and eye care sectors need to explore ways to expose undergraduate and early-mid career nurses to eye care and remove barriers preventing their attraction. A component of this would involve evaluating the eye nurse's role and support for the evolution of the role through task-shifting which, if performed well, may be more attractive to younger nurses, and provide greater opportunities for their engagement and advancement.

Finally, our survey offers opportunities for further investigation and comparison. For example, to other nations, professionals (eg optometrists), or other nurse sub-specialisations (eg, midwifery, primary care, mental health). Investigations could explore satisfaction, entry-exit points, training, and career pathways.

Conclusion

We conducted the first survey regarding eye care nurse engagement in Australia. Our research indicated Australian nurses are engaged in a wide range of healthcare settings and organisations across the country. Their role is diverse, and they are adaptive. Their diversity makes them essential providers for future services as they continue to adapt and maintain a diverse skill set, necessary for integrated eye care services, shared-care models, and the reduction of healthcare costs, by "freeing" ophthalmologists and other medics to focus on other tasks. If Australia and its eye care sector is to responsibly meet the eye care needs of the population by 2050, then it must address the wider key barriers of time to perform tasks, workforce size, access to training, practicality within an under-staffed healthcare system, extended practice, and the impact on nurses. Finally, for positive future change to occur, nurses themselves must take ownership of their profession, work to improve the image of eye care nursing, and actively attract nurses into the profession.

Abbreviations

AHPRA, Australian Health Practitioner Regulation Agency; AONA, Australian Ophthalmic Nurses Association; CERA, Centre for Eye Research Australia; EN, Enrolled Nurse; NP, Nurse Practitioner; NSW, New South Wales; NW, Nurse Midwife; QLD, Queensland.

Data Sharing Statement

All applicable data has been provided with this paper. For further enquiries please contact the corresponding author.

Ethics Approval and Informed Consent

The study was approved by the Human Research Ethics Committee at the Royal Victorian Eye and Ear Hospital (21/1497HL), and governance approved by the Centre for Eye Research Australia. Consent was implied by participants clicking to confirm they had read the participant information, before being directed to the survey.

Consent for Publication

The content of this research is the original work of the authors. The authors provide permission to Clinical Ophthalmology, Dove Press, to publish the work.

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Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

The authors have no competing or conflicting interest in this work.

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