

The Research Agenda-Setting for the Department of Health National Specialty Center for Eye Care

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ABSTRACT

Objective: To describe in detail the research agenda-setting process of the Department of Health National Specialty Center for Eye Care with the guidance of the National Institute of Health (NIH) - Department of Clinical Epidemiology.

Methods: A research agenda technical working group (TWG) was organized to spearhead the research agenda setting, in collaboration and guidance of the NIH. After identifying relevant internal and external stakeholders, the TWG drafted a contextual map that served as an overarching framework. Research topics were obtained from the stakeholders and the TWG collated, reviewed and summarized prior to ranking them systematically. Each topic was prioritized through a weighted ranking system evaluating its feasibility, public health benefit, and resource/cost requirements. A final en banc session including the stakeholders was held to formalize the approval of the research agenda. An infographic was developed to serve as a visual guide for consultants and trainees in initiating research.

Results: The TWG tallied 85 unique research topics from both the internal and external stakeholders. These topics encompassed a broad range of areas, including epidemiology, surgical, and medical management, health systems research, economic evaluations of interventions, and occupational/environmental factors.

Conclusions: The 2024-2027 research agenda of the Department of Health National Specialty Center for Eye Care was crafted, with the guidance of the NIH Department of Clinical Epidemiology. The goal was to improve the center's research output by aligning it with stakeholders thereby serving as a research benchmarking tool for the local ophthalmology community.

Key words: Research agenda-setting, clinical research prioritization, ophthalmology research, Department of Health, stakeholder engagement



INTRODUCTION

The Department of Health (DOH) designated selected hospitals/centers across the Philippines as “Specialty Centers” in 2021 through DOH Department Order 2021-0001.¹ The main strategy of the DOH was to decentralize and strengthen specialized healthcare nationwide through a hierarchy of: 1) National Specialty Centers (NSC), 2) Advanced Comprehensive Centers, and 3) Basic Comprehensive Centers. The Department of Health Eye Center, East Avenue Medical Center (DOHEC-EAMC) was designated as the NSC for Eye Care at this time and this designation was later reinforced by a law through the Regional Specialty Centers Act (Republic Act No. 11959) in 2023.² Under this act, a NSC is defined as a specialty center with the highest level of expertise (apex hospital) in clinical services, teaching and training, and research.

As the NSC for eye care, it is imperative for the DOHEC-EAMC to have a research agenda that is relevant, timely and developed and owned by DOHEC-EAMC influencers/stakeholders. The research agenda will guide the institution’s 35 ophthalmology trainees (24 residents and 11 fellows) and 47 ophthalmology consultants (22 with plantilla positions and 25 visiting) in the preparation, conduct, and eventual publication of their research. Even prior to research capability or capacity building activities, it is important for the department to identify internal and external research thrusts or directives so that all the trainees and consultants can be properly guided. On average, the DOHEC-EAMC publishes at least 3-4 peer-reviewed articles annually in local and international journals.

All graduating trainees (senior residents and fellows) of the department are required to submit an EAMC Institutional Ethics Review Board-approved, publication-ready research at the end of their training (hospital requirement for graduation). Other trainee levels may also initiate case reports/series or any other types of research which are separate from their hospital graduation requirement. They may present their research at the department conference, local and/or international conferences, and research contests. All trainees and consultants are highly encouraged to have their research published in a respected peer-reviewed journal.

The current DOHEC-EAMC research process is generally based on the initiative of the trainees who convey their ideas to the consultants who guide them. The consultant is usually a subspecialist who is an expert in the research topic. Consultant-initiated/driven research is presently just starting in the center, with the consultant as the principal investigator. Similarly, industry- and principal investigator-initiated local or international multi-center research clinical trials are slowly being introduced, with a site consultant as the sub-principal investigator

Our primary objective is to describe in detail the DOHEC-EAMC research agenda-setting process conducted from December 2023 to June 2024, with the guidance of the National Institutes of Health (NIH) Department of Clinical Epidemiology Research Agenda Team.

METHODOLOGY

A DOHEC-EAMC research agenda technical working group (TWG) was organized to spearhead the research agenda-setting project, in collaboration with and guidance of the DOHEC-EAMC leadership and NIH staff. The TWG was composed of one head/chairman, and 14 DOHEC-EAMC medical staff (10 consultants and 4 residents in training). The consultant members were chosen by the head of the TWG based on both their representation of their subspecialties and their interest in research. The four residents included the previous and current chief residents, and resident research representatives from year 1 and year 2.

The TWG initially identified potential internal and external stakeholders who could influence the research direction of DOHEC-EAMC. Internal stakeholders included the DOHEC-EAMC ophthalmology subspecialties: Cornea and External Disease, Retina, Glaucoma, Orbit and Oculoplasty, Low Vision, Trauma, Uveitis, Genetics, Ocular Trauma, Neuro-ophthalmology, and Pediatric Ophthalmology and Strabismus.

The TWG identified external stakeholders (government institutions, entities/ organizations, industry partners, patient interest groups, and satellite DOH eye centers) that might have influence/interest on the research agenda of

DOHEC-EAMC. The TWG also looked into the websites of government and international institutions/initiatives that could potentially influence our research agenda such as the Universal Healthcare Act³, National Unified Health Research Agenda (NUHRA)⁴, United Nations Sustainable Development Goals (UN-SDGs)⁵, Department of Science and Technology (DOST) - Philippine Council for Health Research and Development (PCHRD) Harmonized National Research Agenda and Development Agenda (HNRDA) 2022-2028⁶. Although research thrusts from these entities were general/encompassing (not specifically involving ophthalmology topics), we decided to include them in the contextual framework to serve as general research topic guidelines that may have some relation to ophthalmology. External stakeholders with more specialized thrust included the Philippine Academy of Ophthalmology.

The list of external stakeholders was eventually narrowed down by the TWG based on website research, and the actual interest of the external stakeholders in involving themselves.

The TWG drafted a contextual map that served as an overarching framework where the defined research output was guided by the internal and external stakeholders and the DOHEC-EAMC mission/vision. The final contextual framework (Fig. 1) that the TWG decided upon served as the basis for moving forward to generate the research topic list. The DOHEC-EAMC leadership fully

supported and approved the contextual framework and the final list of internal and external stakeholders.

After setting the contextual framework, the TWG immediately sent official letters requesting an unlimited list of research topics from the external stakeholders who would have more important/specific influence with the research direction of the DOHEC-EAMC. Official letters were also sent to all internal stakeholders (subspecialty heads of the DOHEC-EAMC) requesting a list of at least 5 research topics. The stakeholders were given 3 weeks to respond to the official letters and if there was no response within this time, the TWG assumed they were not interested. The TWG assumed that the subspecialty heads represented the preference of all their member consultants. The TWG collated all the received topics, which were reviewed and summarized/consolidated based on similarities and grouped by subspecialties. The summarized/consolidated topics were subjected to a ranking process involving all the stakeholders. Ranking was done online by Google forms® using a set of criteria decided upon by the TWG guided by the NIH panel of experts (Table 1). The TWG sent a google link to a representative of the external stakeholders that contributed to the list of topics. For the internal stakeholders, only the consultant staff (not the trainees) of the DOHEC-EAMC made a ranking/vote.

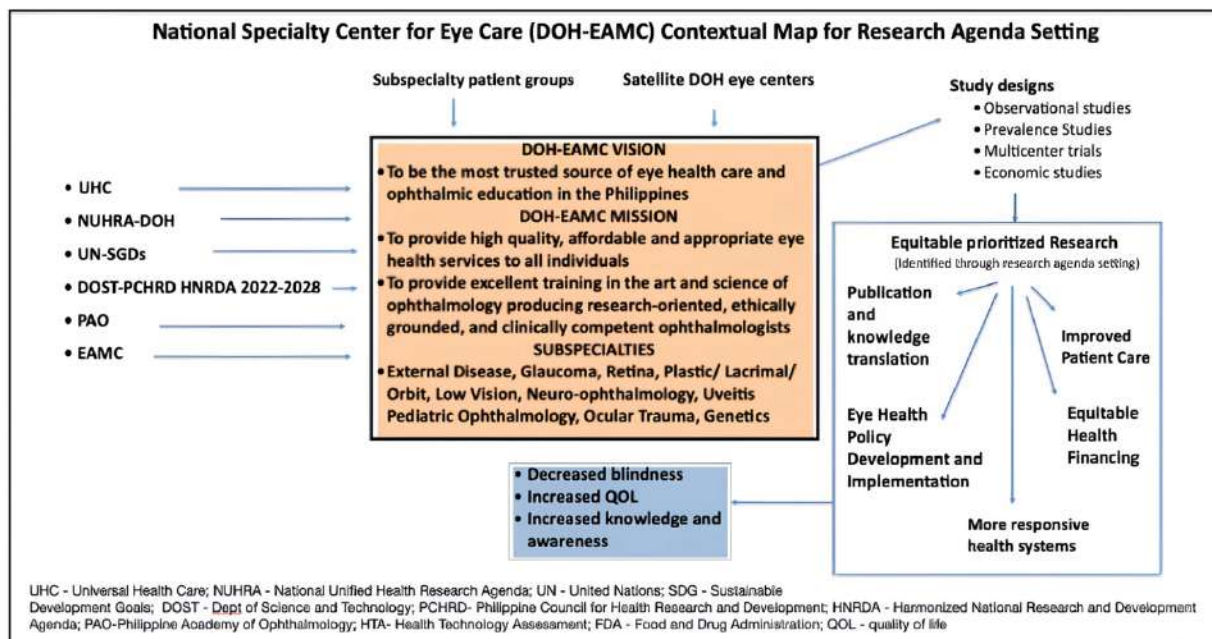


Figure 1. Contextual Framework

Ranking Criteria

Ranking of each research topic was based on three criteria which the TWG thought carried the most weight as the National Specialty Center: 1) Feasibility, answering the question- “Can we do it?”, which had 5 sub-items 2) Public Health Benefit, answering the question - “Should we do it?”, which had 6 sub-items, and 3) Resources/Cost, answering the question - “Are we willing to do it?”, which had 2 sub-items (Table 1). Each criterion for each research topic was graded from 1-5; one, least relevant to 5, most relevant).

Table 1. Criteria for Ranking of the Research Topics

Criteria for Ranking	Ranked from 1 (least relevant) to 5 (most relevant)
Feasibility	Consultant involvement in the research project (technical expertise)
	Research problem can be addressed in an ethical way
	Proposed intervention of or output can be applied in our setting
	Proposed budget is attainable; ability to get sponsors (government, industry, NGOs) for funding or the ability to self-fund the study
	Research is doable in a given timeframe of the ophthalmology resident/fellow/consultant
Public Health benefit	Research topic/area is a problem (magnitude of problem, disease burden)
	Gap exists in current knowledge or practice
	Proposed research output has a clear potential benefit (improved patient care, equitable health financing)
	Proposed research output has policy implications (policy development and implementation/improvement, responsive health system)
	Responsiveness to expressed needs and preferences of patients, clinicians, and other stakeholders, including community engagement in research
	Potential for multiplicative effect (e.g., lays foundation for future research or generates additional investment/funding)
Resources/cost	Output of proposed research is worth more than the cost of conducting the research
	Research output/intervention is sustainable

The raw score for each research topic was subjected to a multiplier for each of the 3 ranking criteria [Feasibility (F), Benefit (B), and Resources(R)]. The multiplier was based on the number of sub-items for each criterion over the total number of sub-items (13 total).

For example, if the score of one research topic was F=1, B=3, and R=2 then $F=5/13 \times 1=0.38$;

$B=6/13 \times 3=1.38$; $R=2/13 \times 2=0.31$; then the total score for this research topic will be $0.38 + 1.38 + 0.31 = 2.07$

Based on the scoring above with weighing, the highest score a research topic can achieve is 5 (most desirable) and the lowest is 1 (least desirable).

The face-to-face *en banc* session was an opportunity to finalize the entire research agenda process and promote buy-in and transparency from all the stakeholders who voted and participated. Although without voting power, the DOHEC-EAMC trainees were present in the *en banc* session since they were closely involved in research.

The *en banc* session which lasted half a day was attended by 8 consultant staff (plus 10 by zoom) for a total of 18 out of the 47 consultants. There were 29 trainees (7 fellows and 22 residents) also in attendance. There was one external stakeholder (Philippine Academy of Ophthalmology) representative and there were 5 members of the NIH-Department of Clinical Epidemiology Research Agenda Team who facilitated the *en banc* session. The list was deliberated upon from one research topic to another and the members of the *en banc* session attempted to group/consolidate/summarize some of the topics for the sake of brevity. The topics were grouped together by subspecialty and under other relevant headings.

Looking forward, this final research agenda would be monitored, evaluated, and updated periodically (every 3 years) or as deemed necessary by the DOHEC-EAMC research agenda-setting TWG. The DOHEC-EAMC research committee would be tasked to monitor and evaluate all research (trainee driven and consultant driven) at DOHEC-EAMC from research inception to completion. The scope would also include industry sponsored clinical trials or international multicenter principal investigator-initiated research.

RESULTS

After collating and consolidating the submitted research topics, the TWG tallied 85 unique research topics from both the internal and external stakeholders. These were subjected to ranking prior to the *en banc* session. Of the 47 DOHEC-EAMC consultant staff, 28 sent in their rank/vote. (**Fig 2**).

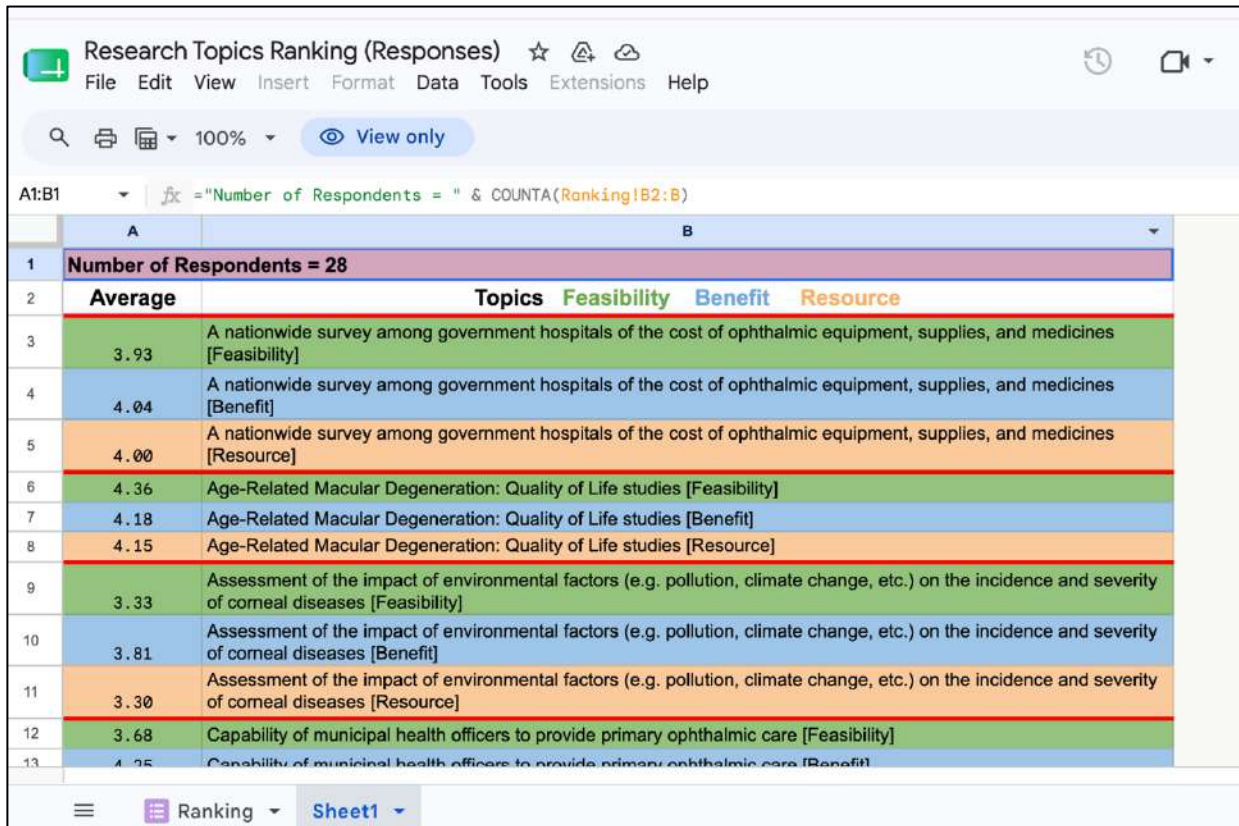


Figure 2: Sample of Ranking

After a thorough deliberation during the *en banc* session, the final list was arrived at (Table 2). The research topics were organized into several thematic sections to provide a structured framework. Headings included Epidemiology of various eye diseases. The Surgical and Medical Management section, the largest, was divided into subspecialties (Pediatric eye conditions, Systemic Ocular Diseases, Glaucoma, Trauma, Low Vision, Retina, Orbit, Plastics, and Lacrimal, Cancer, Infection, Genetics/Rare Disease, External Disease and Cornea). The remaining headings included: Long Term and Patient Centered Outcomes, Economic Evaluation of Interventions, Eye Care service delivery systems, and Occupational/Environmental.

Table 2. Output of the *En Banc* Session (Final Research Agenda Output)

Epidemiology
Retinoblastoma - epidemiology
Ophthalmic trauma - epidemiology
Pediatric Glaucoma - epidemiology
Secondary glaucoma in retinal disease - epidemiology
Ophthalmic malignancies - epidemiology
Optic Neuritis - epidemiology
Ocular Tuberculosis - epidemiology
Methicillin Resistant Staphylococcus Aureus (MRSA) ophthalmic infections - epidemiology
Polypoidal Choroidal Vasculopathy - epidemiology
Inherited Eye Disease - epidemiology
Corneal diseases in specific populations or geographic regions - epidemiology and risk factors

Surgical and Medical Management

** = Collaborative Role (for this heading, the group decided to identify the primary specialty-in-charge and the collaborating specialties)

A. Pediatric Eye Conditions

Retinopathy of prematurity screening, management and surgical outcomes
Retinoblastoma
Pediatric Eye Trauma - management and outcomes
Pediatric Cataract - management and outcomes
Pediatric error of refraction - management and outcomes
Pediatric Glaucoma: management, and outcomes
Strabismus - management and outcomes
Comparing genetic testing versus conventional clinical screening of retinoblastoma patients in the Philippines

B. Systemic Ocular Diseases (including neuropathies)

Diabetes Mellitus related treatment outcomes <ul style="list-style-type: none"> • Early Vitrectomy for diabetic retinopathy • Diabetic Macular Edema
Indocyanine Green Angiography characteristics of Vogt Koyanagi Harada Syndrome
Methylprednisolone regimens vs Oral steroids in thyroid eye disease: outcomes utilizing Vision, Inflammation, Strabismus, and Appearance (VISA)
Low vision management in Ethambutol toxic optic neuropathy (ETON)

C. Glaucoma

Primary Angle Closure Disease: Diagnostics, management algorithms and outcomes
Secondary glaucoma in retinal disease
Primary and Secondary Glaucoma: Screening, diagnostics and management

D. Trauma

Post-Traumatic Endophthalmitis - management and outcomes
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E. Low Vision

Low vision management in ethambutol toxic optic neuropathy (ETON)

F. Retina (including macular disease)

Retinal detachment repair: 5-year outcomes
Subtenon's triamcinolone injection for refractory macular edema
To determine the outcomes/endpoints of subthreshold focal laser for refractory macular edema
Non-Neovascular Age-Related Macular Degeneration: management and outcomes
Intravitreal Methotrexate in Vitrectomy for prevention of Proliferative Vitreoretinopathy
Endoscopy-Assisted Vitrectomy outcomes

Vitrectomy outcomes using the 3D (Heads up) Visualization System (Ngenuity®)
Polypoidal Choroidal Vasculopathy - management, and outcomes
Comparing genetic testing versus conventional clinical screening of retinoblastoma patients in the Philippines
Secondary glaucoma in retinal disease
Post-Traumatic Endophthalmitis - management and outcomes

G. Orbit, Plastics, and Lacrimal

Methylprednisolone regimens vs Oral steroids in thyroid eye disease: outcomes utilizing Vision, Inflammation, Strabismus, and Appearance (VISA)
Scar Management in oculoplasty using triamcinolone injections
Susceptibility of topical antibiotic therapy in adult patients with Primary Acquired Nasolacrimal Duct Obstruction (PANDO)
Orbital Malignancies: Surgical approaches
Eyelid Malignancies: Management and degree of functional restoration
Efficacy of Botulinum toxin A to lessen the asymmetry caused by Cranial Nerve 7 Palsy
Lacrimal sac bacteriology in adults with primary Nasolacrimal duct obstruction (NLDO)
Dermal Fat Grafting in contracted and anophthalmic sockets
Comparison of exposure keratopathy resolution after tarsorrhaphy vs. eyelid weights or upper eyelid cerclage
Orbital CT Scan to estimate Acrylic Implant size for Enucleation
Comparing genetic testing versus conventional clinical screening of retinoblastoma patients in the Philippines

H. Cancer

Orbital Malignancies: Surgical approaches
Eyelid Malignancies: Management and degree of functional restoration
Comparing genetic testing versus conventional clinical screening of retinoblastoma patients in the Philippines

I. Infection

Methicillin Resistant Staphylococcus Aureus (MRSA) ophthalmic infections: clinical presentation, management outcomes
Post-Traumatic Endophthalmitis - management and outcomes
Lacrimal sac bacteriology in adults with primary Nasolacrimal duct obstruction (NLDO)
Novel treatment modalities for corneal infections (e.g bacterial, fungal, or viral keratitis)
Utility of anterior segment Optical Coherence Tomography in corneal infections
Exploration of the microbiome of the ocular surface and its influence on corneal health and disease

involved in initiating and cascading research to the trainees under them. Consultants will also be open to and actively involved in partnering with research collaborators in line with the research agenda. These collaborators may be industry partners or other educational institutions that may also be sources of external funding. Internal sources of funding will include the St. Odilia Eye Foundation which the consultants/trainees may avail of after sending the president of the foundation an official letter of request.

The research agenda infographic will be posted on social media platforms including the DOHEC-EAMC Facebook page. Hard copies of the infographic will also be displayed in strategic areas of the eye center to make the staff aware of the results of this research agenda. This will help to avoid duplication of the research agenda at a national level, promote transparency, and make potential funders (especially international organizations) more aware of the research agenda/thrusts of the department. Dissemination at the eye center/hospital level will be carried out through department presentations, hospital research contents. Dissemination at the national level will be through oral and poster presentations at the ophthalmology annual and/or mid year conventions. International dissemination may be carried out through oral and poster presentations. Eventual publications in reputable/peer reviewed journals will help local and international dissemination.

All research outputs will be registered at the DOHEC-EAMC web-based research tracker (RT) and monitored and evaluated every 3 months by the DOHEC-EAMC research committee. The RT serves as the DOHEC-EAMC's monitoring and evaluation tool for all research studies by the department. It is embedded in the DOHEC-EAMC intranet accessible for viewing by all DOHEC-EAMC trainees and consultants. The RT was created in 2022 using google sheets to streamline monitoring of all DOHEC-EAMC research projects from start to finish. Presently, it is in active use with full management access (including editing capability) by members of the DOHEC-EAMC research committee members. The RT is updated at least every week by the chair of the research committee and committee members.

The plan is to continuously improve functionality of the RT so as to further improve the research monitoring and evaluation system. Research or data sets that have not been utilized, not pursued, half finished, or not published yet will also be available on the research tracker for the presented trainees to view, so they can possibly pick up these unfinalized projects, and eventually complete and publish them.

The challenge of the RT is to eventually create individual prompts regarding timeline (e.g. to alert both the trainees, consultants and members of the research committee). Eventual publications and citations can be monitored using Google Scholar™ (key words are Ophthalmology and East Avenue Medical Center) or Research Gate, if trainees or consultants register to this platform. The members of the research committee will be responsible for tracking the progress of publications and citations and other metrics for impact - policy building, inclusion in print and online media, etc.

The RT will also have a metric to rate if the research being conducted is in line with the updated set research agenda of the DOHEC-EAMC. This will be in a separate column of the spreadsheet.

A monitoring and evaluation plan of the DOHEC-EAMC research agenda is necessary in efficiently achieving the research targets. The monitoring and evaluation plan can help DOHEC-EAMC focus on the research targets and achieve critical deadlines, despite having a busy delivery of patient care.

A potential limitation of this process is the bias of topics introduced by both the internal and external stakeholders (There were only a limited number of external stakeholders but there were a lot of internal stakeholders (subspecialties within the eye center). Regarding originality and the gaps in literature, the internal stakeholders or the consultant subspecialists are the stakeholders who mainly address these issues. Some consultants may personally have a research bent that could somehow influence the agenda list. Perhaps there should have been more external stakeholder participation to decrease the bias. Also only 28/47 (60%) consultants voted/ranked the research topic list. Perhaps a greater percentage of consultants who

voted could have made the final research agenda more robust.

CONCLUSION

The DOHEC-EAMC or the Department of Health National Specialty Center for Eye Care's research agenda has been crafted for 2024-2027, with the guidance of the NIH Department of Clinical Epidemiology. This framework will guide our consultants and trainees in the preparation, conduct, and eventual publication of their research for the next 3 years. This research agenda will hopefully improve the research output of the Department of Health National Specialty Center for Eye Care and benefit both its internal and external stakeholders. The process documented here could also hopefully aid other local ophthalmology institutions in crafting their own research agenda and be a benchmarking tool for their research initiatives.

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- Dr. James Michael Suarez (2nd yr resident representative)
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- Dr. Kevin Santana (former chief resident)

ETHICS COMPLIANCE STATEMENT

The author affirms that this manuscript complies with the ethical standards of the Philippine Journal of Ophthalmology and adheres to the principles of responsible authorship and scholarly integrity. This manuscript does not involve research on human participants or patient data; therefore, institutional

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