

KEY FINDINGS: Rapid Assessment of Avoidable Blindness in Papua New Guinea

The first national Rapid Assessment of Avoidable Blindness (RAAB) in PNG

Vision impairment and blindness are health concerns both globally, and in Papua New Guinea - new estimates are required to advocate for appropriate intervention programs.

A RAAB gives the prevalence and primary causes of blindness and visual impairment, the quality of eye care services, barriers, cataract surgical coverage (CSC) and other indicators of eye care services. A RAAB+DR can also assess the prevalence of diabetes and diabetic retinopathy (DR), which pose an increasing threat, particularly in urban areas.

Assessing the prevalence of DR is vital to planning eye care services and eye health education.

This study assessed the prevalence of blindness and vision impairment, in adults 50+ years, across all regions of PNG. In the National Capital District (NCD), diabetes and DR was also assessed.

The aim of this project is to contribute to the development of eye care services in PNG through gathering evidence on the prevalence of avoidable blindness and vision impairment in all four regions in PNG, and the prevalence of DR in the National Capital District (NCD).

How did we do it?

- Visited 100 randomly selected communities across the whole country
- Examined the vision of 4,818 adults
- Provided dilated eye examinations to all participants with visual acuity <6/12 in either eye to determine the primary cause of blindness or visual impairment
- Identified barriers to cataract surgery in those with significant cataract
- Performed random blood glucose tests on 1,186 adults in NCD
- Provided dilated eye examinations to all participants with diabetes to screen for diabetic retinopathy



Estimated national prevalence of blindness

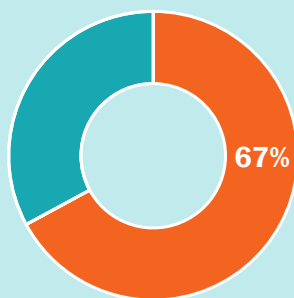
5.6% in adults 50+ years

This estimate is higher than the rates reported in the 2005 RAAB survey completed in Kiko and Rigo regions, and higher than any other country in the region

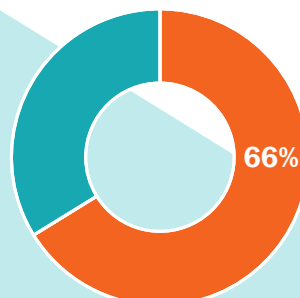
40,746 people in PNG are blind in both eyes

67,987 are blind in one eye

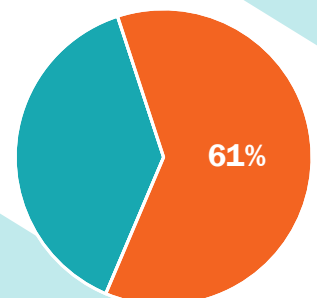
Participants with distance refractive error who did not have appropriate spectacles



Participants with a primary cause of blindness or visual impairment due to untreated cataract



61% of blindness is experienced by women



Untreated cataract and uncorrected refractive error are the two most common primary causes of blindness and visual impairment globally, and in PNG – this reflects the unmet need for cataract surgery and refractive error services in PNG.

KEY FINDINGS

DIABETES AND DIABETIC RETINOPATHY (NCD REGION):



- **7.8%** is the estimated prevalence of diabetes† in adults aged 50+ years
- Over **80%** of those with known diabetes **had never had an eye examination for diabetic retinopathy before**
- Approximately half (**49.5%**) of the people with diabetes (known as “newly-diagnosed”) **had some form of diabetic retinopathy and or maculopathy**

† Diabetes diagnoses = Adults reporting previous diagnosis of diabetes or adults with a random blood glucose level $\geq 200\text{mg/dl}$ or 11.1mmol/L

GENDER DIFFERENCES ACROSS PNG



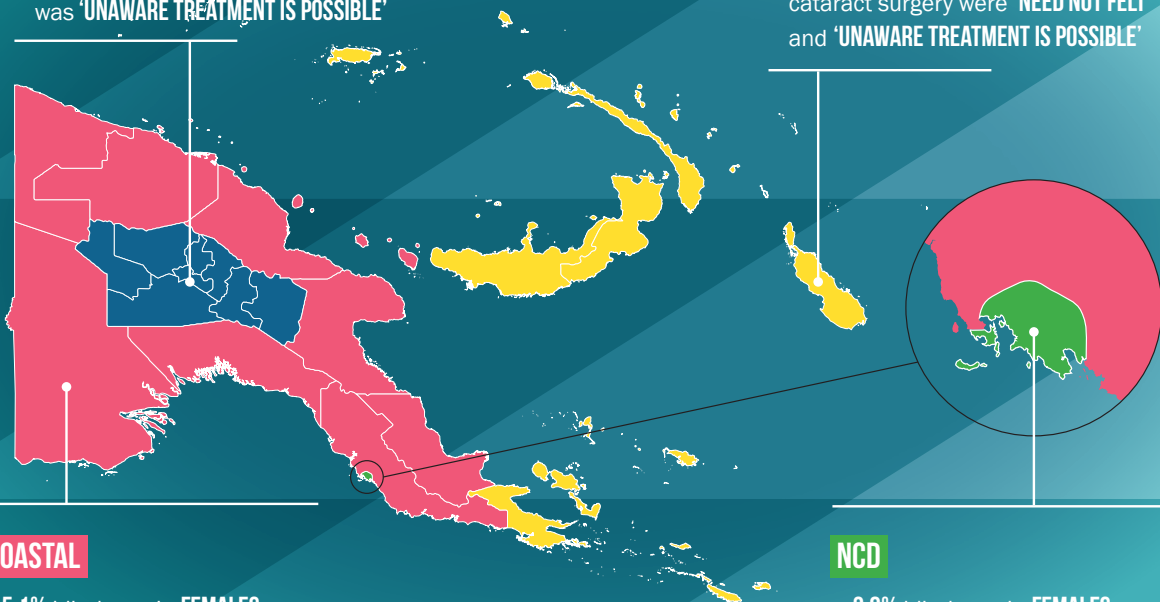
- More women are unaware that cataract treatment is possible (**37.6%** versus **31.5%**) and are less likely to feel that they need surgery (**36.1%** versus **30.9%**)
- More males presented with distance spectacles than women (**66.1%** versus **33.9%**)
- More males presented with near spectacles than women (**57.7%** versus **42.3%**)

HIGHLANDS

- **11.1%** blindness in females, **6.6%** blindness in males
- **LOWEST CATARACT SURGICAL COVERAGE *** in the country (**10.0% FEMALE**, and **28.8% MALE**)
- Poorer outcomes were observed (**ONLY 30.6% BCVA COULD SEE 6/12**)
- Most commonly reported barrier to cataract surgery was **'UNAWARE TREATMENT IS POSSIBLE'**

ISLANDS

- **2.2%** blindness in females, **0.7%** blindness in males
- **HIGHEST CATARACT SURGICAL COVERAGE** (**55.3% FEMALE**, and **84.7% MALE**)
- Most commonly reported barriers to cataract surgery were **'NEED NOT FELT'** and **'UNAWARE TREATMENT IS POSSIBLE'**



COASTAL

- **5.1%** blindness in **FEMALES**, **3.4%** blindness in **MALES**
- Most commonly reported barriers to cataract surgery were **'COST'** and **'CANNOT ACCESS TREATMENT'**

* Cataract surgical coverage = Percentage of people who have had cataract surgery amongst all individuals who have had or need cataract surgery with visual acuity of $< 6/60$.

NCD

- **3.0%** blindness in **FEMALES**, **3.4%** blindness in **MALES**
- Most commonly reported barriers to cataract surgery were **'NEED NOT FELT'** and **'UNAWARE TREATMENT IS POSSIBLE'**