

Fitness to Drive: The Ocular Perspective

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- I have no financial interests/relationships to disclose.
- Clinical cases:
- “the names are made up but the problems are real”. Any resemblance to real persons is purely coincidental.

Outline

- What does fitness to drive involve?
- Common ocular conditions affecting fitness to drive
- Road Traffic Act and Fitness to Drive
- Guidelines for assessing visual function to drive

Driving is a complex task...







Common causes of ocular morbidity

- Cataract
- Glaucoma
- NCDs
 - Hypertension → retinal vein occlusions
 - Diabetes → retinopathy



- Emergency conditions: trauma, retinal detachments
- Sickle cell disease → retinopathy
- Retinitis pigmentosa
- Age-related macular degeneration
- Congenital eye diseases





The Law and Driving

- In Barbados, the Road Traffic Act guides our traffic regulations, administered by the Barbados Licensing Authority.
- There is nothing in the Act that speaks to detailed regulations for vision. The closest reference is the certification of fitness to drive:
- Section 66 subsection 1 of the Road Traffic Act Cap 295 of the Laws of Barbados states:
 - *“ the Licensing Authority shall not issue a driving licence or a learner’s permit to any person unless it is satisfied that his vision, hearing and physical and mental fitness are adequate for him to hold a driving licence”*
- The Laws of Barbados Cap 295 Road Traffic Act 2002

Road Traffic Act cont'd

- Section 66 subsection 4 states:
- *“For the purposes of obtaining a driving licence, an applicant **may** be required to produce a medical certificate, signed by a medical practitioner, that the applicant is fit to be in charge of a motor vehicle, and the Licensing Authority may order the applicant to undergo such test as the Licensing Authority determines, to ascertain the fitness or ability of the applicant to drive the motor vehicle.”*

Road Traffic Act cont'd

- Section 76 subsection 5 states:
- *“Where the holder of a driving licence is 70 years of age or over, the licence of that holder **shall not** be renewed unless he produces to the Licensing Authority a medical certificate signed by a medical practitioner as to his physical fitness.”*

MEDICAL CERTIFICATE OF FITNESS TO DRIVE

The Road Traffic Act Cap.295

This is to certify that I have today examined

.....
(Name)

of.....
(Address)

and that in my opinion his/her hearing, vision, physical and mental fitness
are adequate to hold a driving license.

I further certify that he/she is fit to be in charge of a motor vehicle.

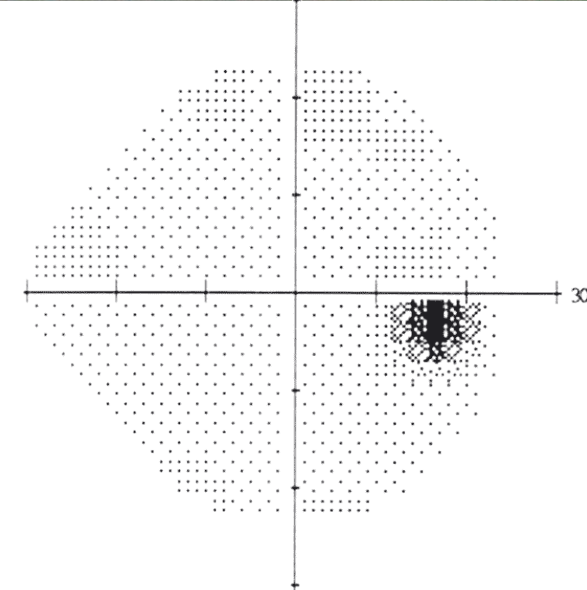
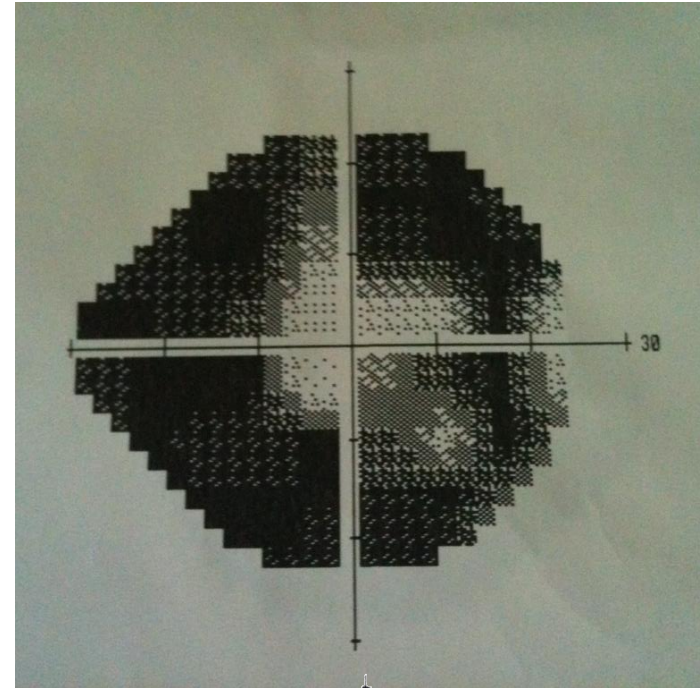
.....
Medical Practitioner's Signature

.....
Medical Practitioner's Name
(print or stamp)

Medical Registration Number :.....

Date:.....
YEAR-MONTH-DAY

- Doctors certifying fitness to drive should not neglect the evaluation of visual function when certifying these persons



- There are a number of tests which have been proven to be effective in evaluating fitness to drive. These tests include **visual acuity, visual fields, contrast sensitivity** and **useful field of view (UFOV)**.
- Rees GB. Vision standards for driving: what ophthalmologists need to know. Eye 2015; 29: 719-720
- Peli E. Low vision driving in the USA: who, where, when and why. CE Optometry 2002; 5(2): 54-58
- Yasdan-Ashoori P, Hove M. Vision and Driving: Canada. Journal of Neuro-Ophthalmology 2010; 30: 177-85
- <https://www.gov.uk/guidance/assessing-fitness-to-drive-a-guide-for-medical-professionals>

Visual Acuity

E	1	20/200
F P	2	20/100
T O Z	3	20/70
L P E D	4	20/50
P E C F D	5	20/40
E D F C Z P	6	20/30
F E L O P Z D	7	20/25
D E F F O T E C	8	20/20
L E F O D F O T	9	
F O F A T C E O	10	
F E E L O F F E	11	

EXTREME GLAUCOMA



ADVANCED GLAUCOMA



EARLY GLAUCOMA

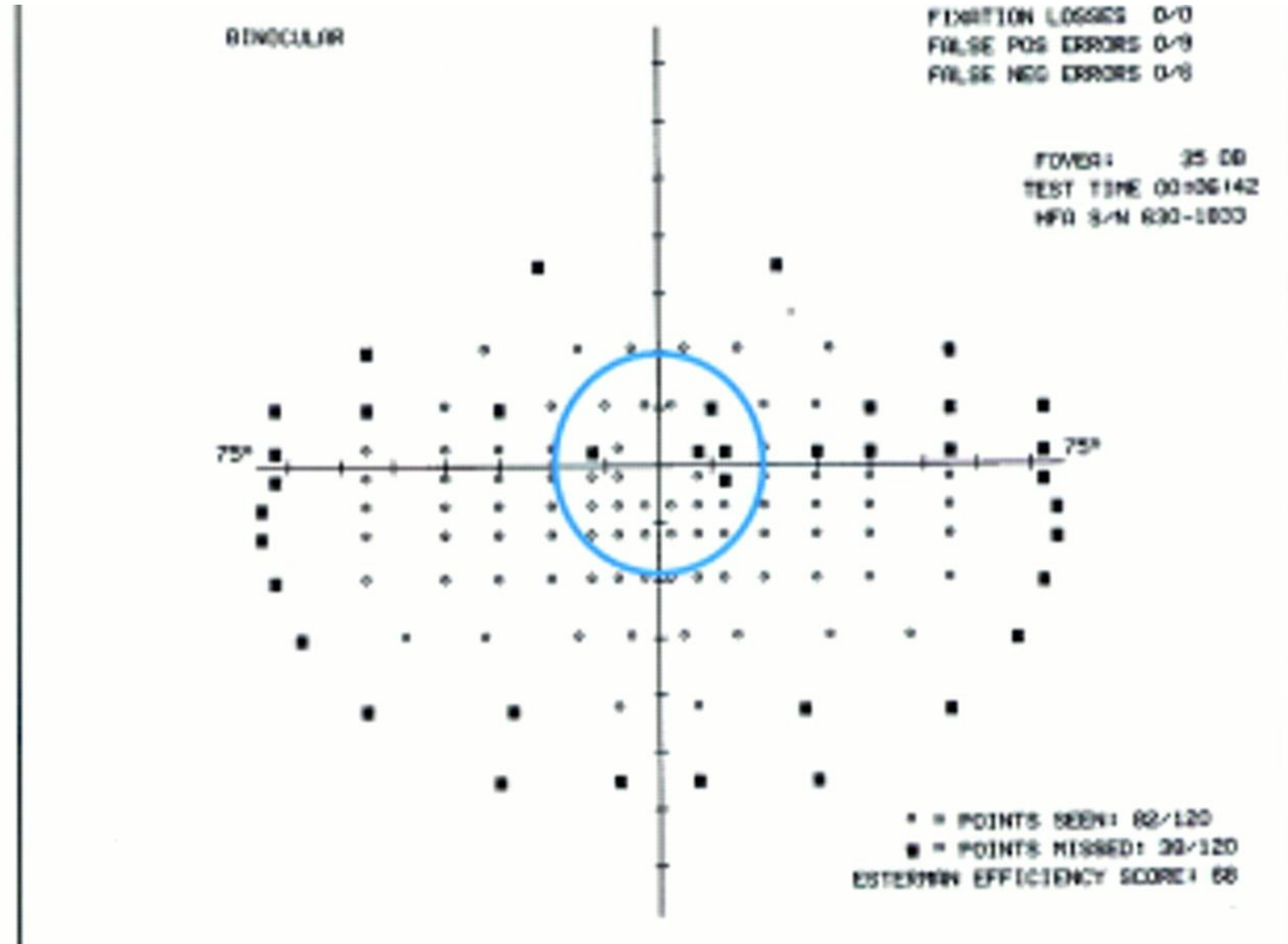


NORMAL VISION

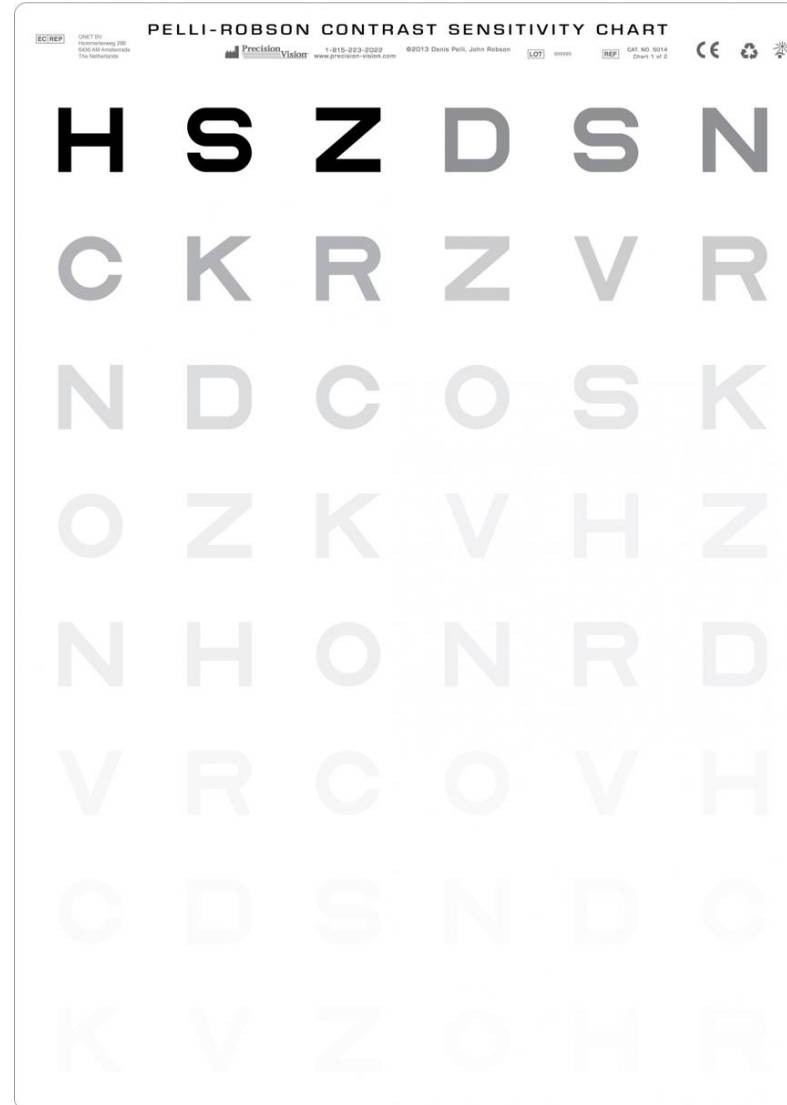


(Image adapted from the internet)

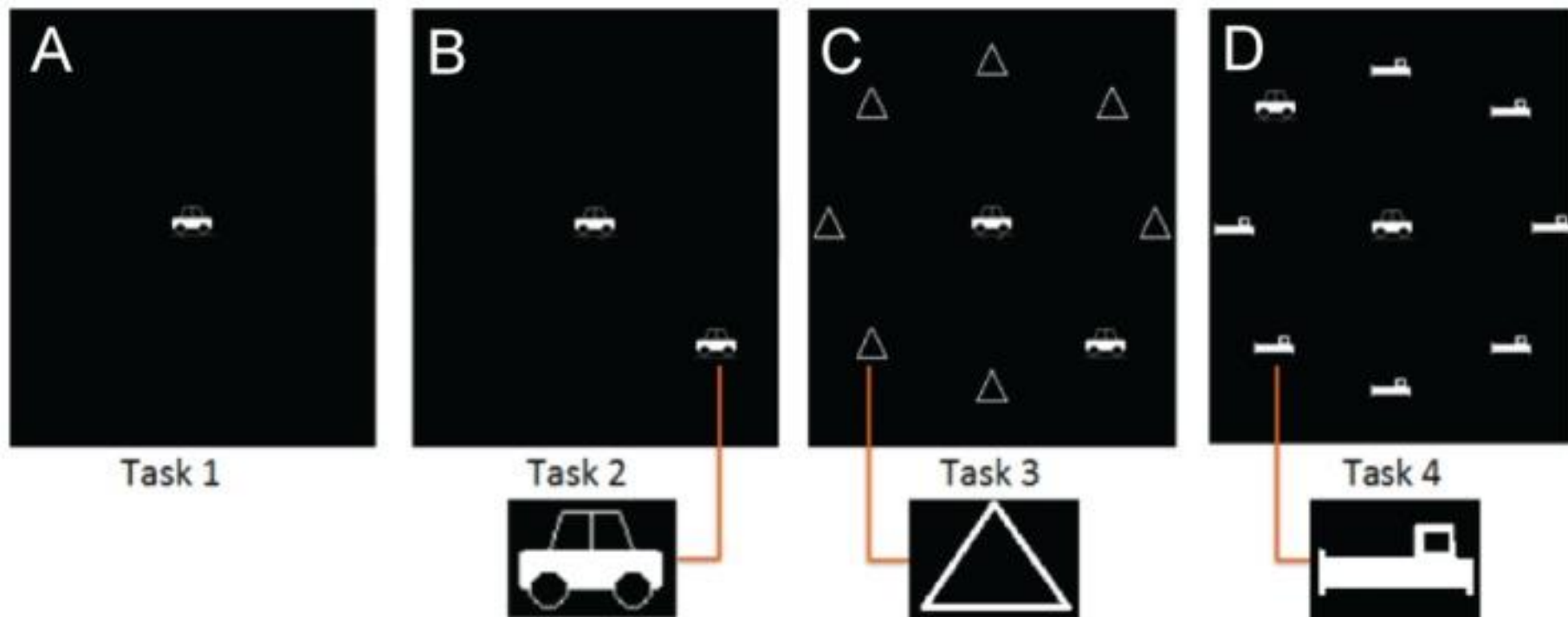
Visual Field Testing



Contrast sensitivity

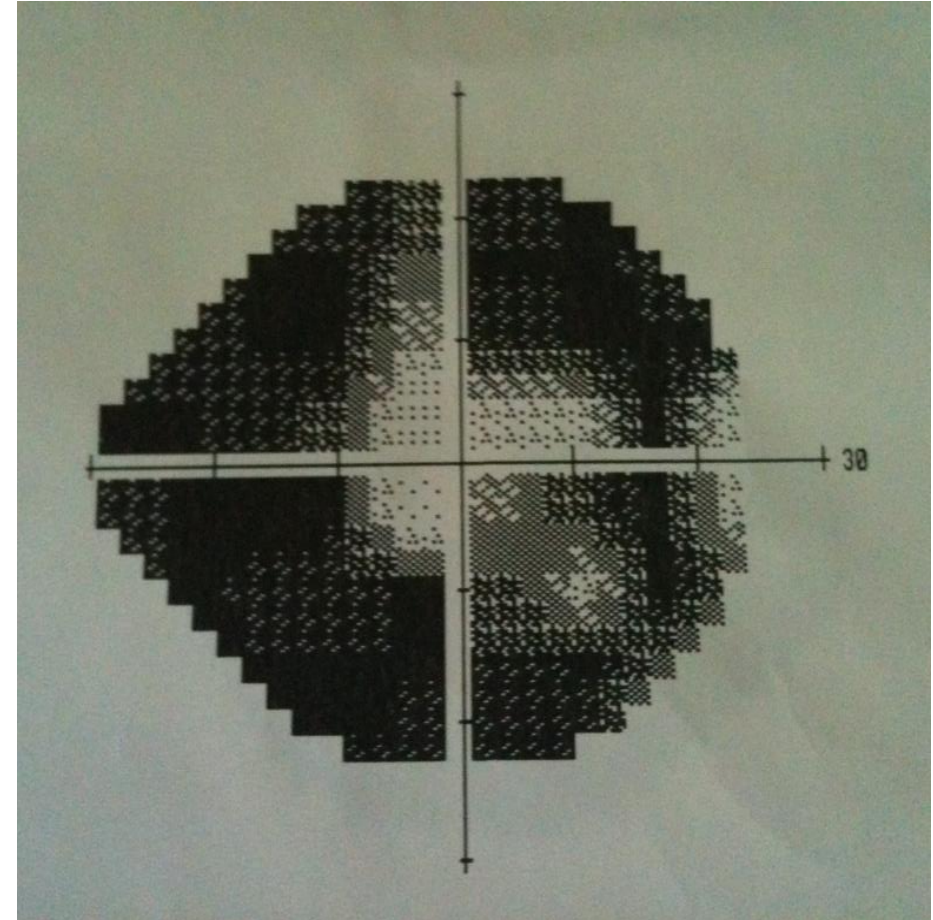


Useful Field of Vision (UFOV)



A case for improved regulation & legislation...

- 50 year old, referred as an emergency from general ophthalmologist with IOPs 40s both eyes, already blind in 1 eye
- Father has advanced glaucoma
- Patient an irregular attender at follow-up
- Drives for a living



Summary

- There are numerous forms of assessing visual function
- Visual acuity alone is an insufficient means of assessment
- Need to have a national framework to regulate visual standards for driving, in the interest of public safety.
- Patient self-reporting to the regulator
- Given our burden of non-communicable diseases affecting vision, and the risks associated with driving, all stakeholders must work together to implement a solution that works for us.

Thank You!

World Glaucoma Week



The week of March 12th every year...
March 11th – 17th, 2018

MCQs

- Which of the following visual impairments disqualifies a person from driving:
 - a) Having only one eye
 - b) Colour blindness
 - c) Laser treatment for diabetic retinopathy
 - d) Tunnel vision from glaucoma
 - e) Visual acuity of 20/40 (6/12)

- Which of the following accurately reflects the guidance on visual fitness to drive, within the Road Traffic Act of Barbados?
 - a) Drivers of public service vehicles require a certificate of fitness to drive
 - b) Drivers of commercial vehicles must pass a vision test before being licensed to drive
 - c) All drivers over the age of 70 must produce a certificate of fitness to drive for annual renewal of the driving licence
 - d) Persons applying for a learner's permit must pass the number plate vision test before such a permit may be issued
 - e) Doctors must directly report to the Licensing Authority, any persons over the age of 70 who are no longer fit to drive