Diabetic retinopathy screening – a short guide
Situational analysis for the 2020s

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Diabetic Retinopathy Screening in Europe
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WHO Regional Office for Europe 2020-2021

Screening Programmes – A Short Guide 2020

- WHO European Conference on Screening – Copenhagan 2020

Diabetic Retinopathy Screening – a Short Guide 2020

- guide for policy-makers on effective DR screening and important steps in implemementation

Diabetic Retinopathy Screening – A Situational Analysis

- to provide an up to date description of current provision and capacity
- to inform policy and operational advice in the short guide

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Previously

St. Vincent Declaration 1989

Screening for Diabetic Retinopathy in Europe:

- Liverpool 2005, Amsterdam 2008, Gdansk 2011, Manchester 2016

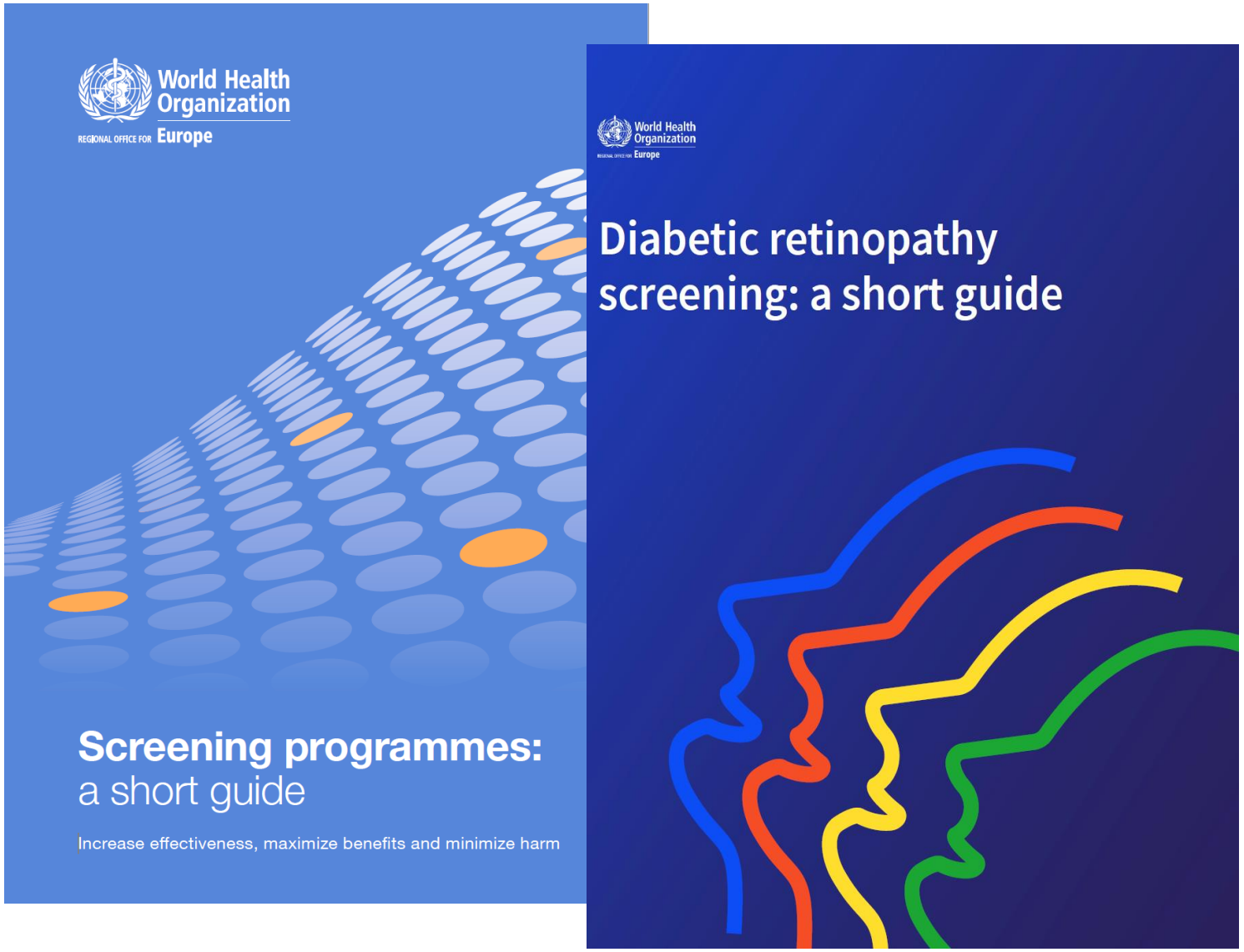
Income groups

High Income Countries	HIC
Middle Income Countries	MIC
Low Income Countries	LIC
Low and Middle Income Countries	LMIC

Reference:

World Bank country and lending groups. In: World Bank [website]. Washington (DC): World Bank; 2020 (https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups, accessed 16 December 2020)

How to design an effective DR screening programme?



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increase effectiveness

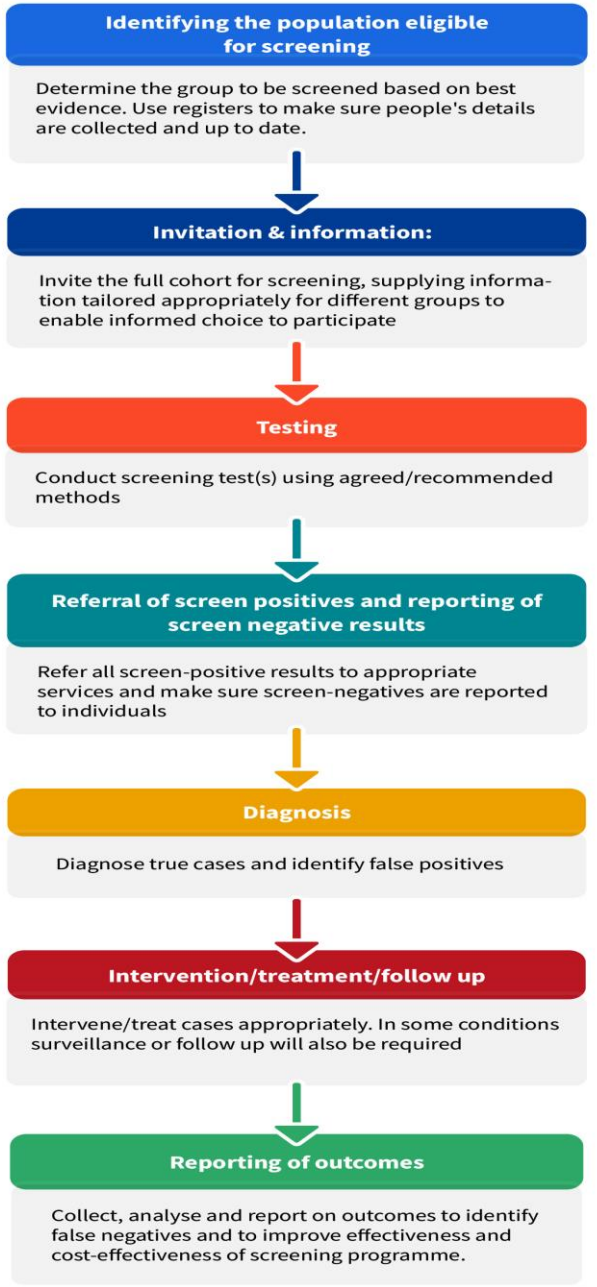
maximise benefit

minimise harm

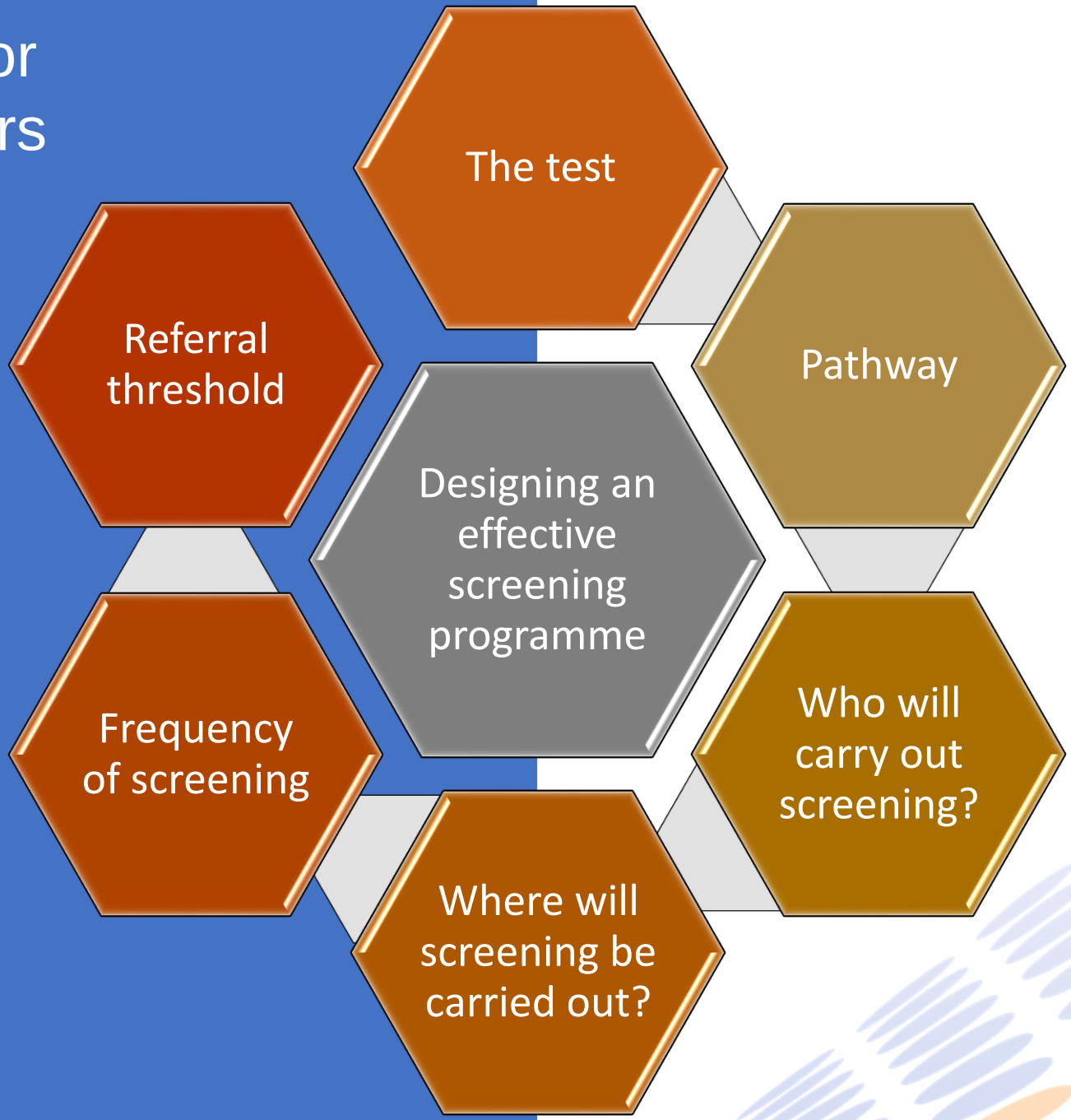
The test

Screening programmes are a pathway

- identify the population eligible for screening
- invitation and information
- testing
- referral of screen +ves/reporting of screen –ves
- results
- diagnosis
- intervention
- treatment and follow-up
- reporting of outcomes



Questions for policy makers



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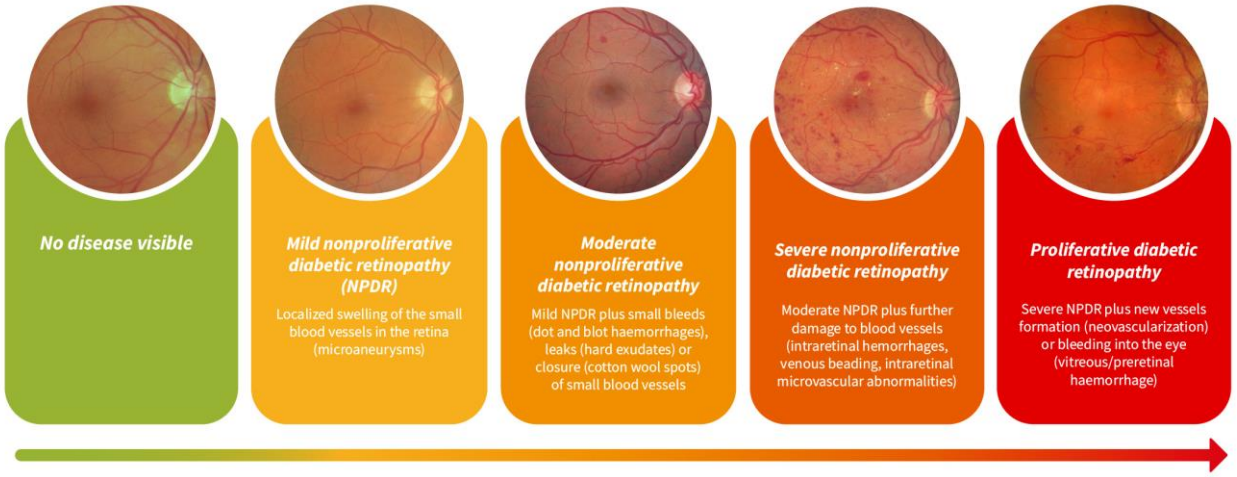
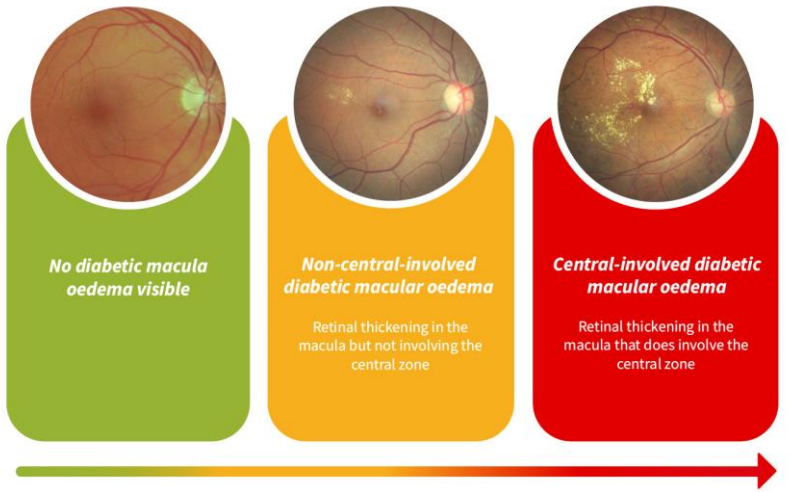
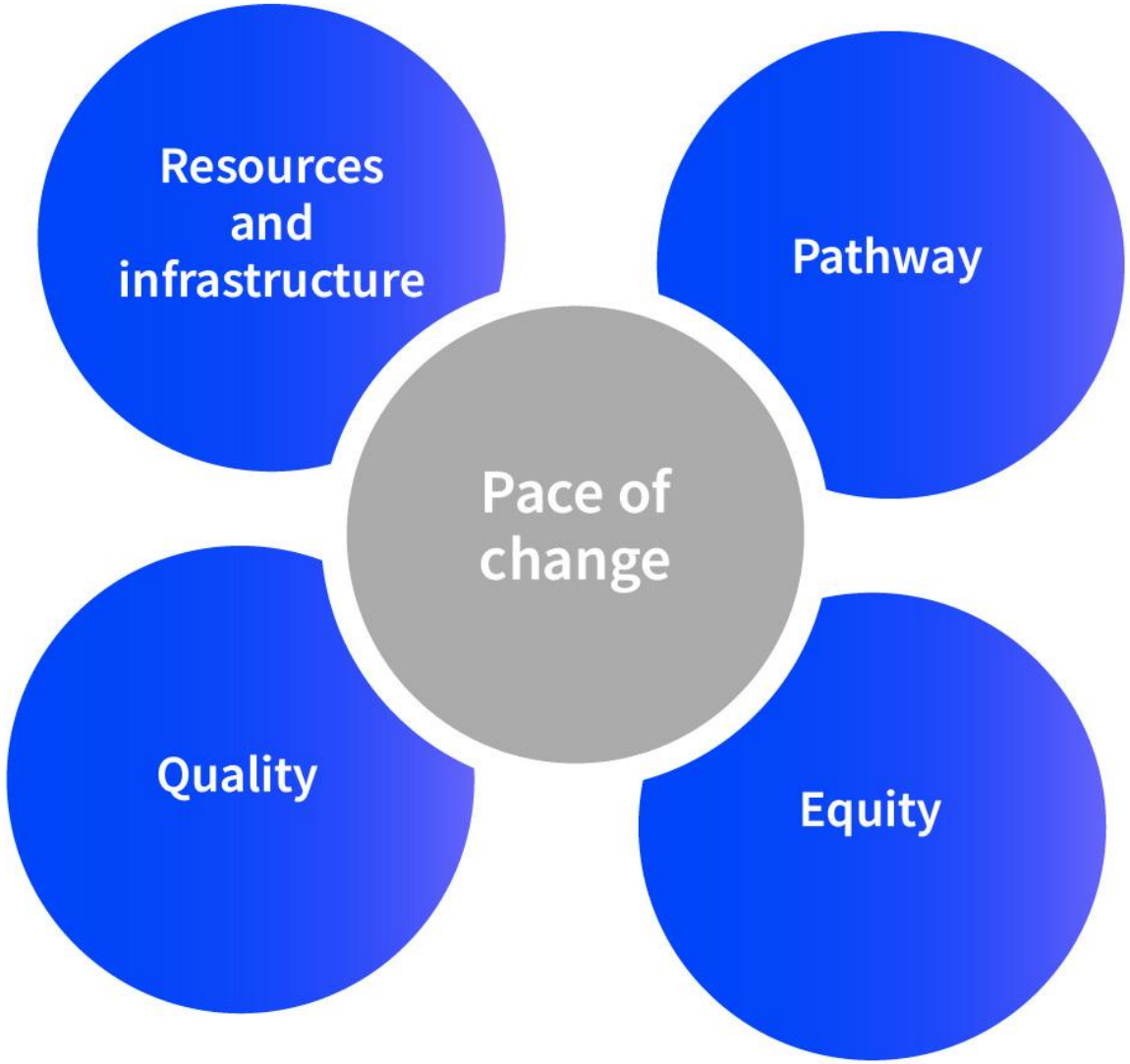
Referral thresholds





Framework for an improvement strategy



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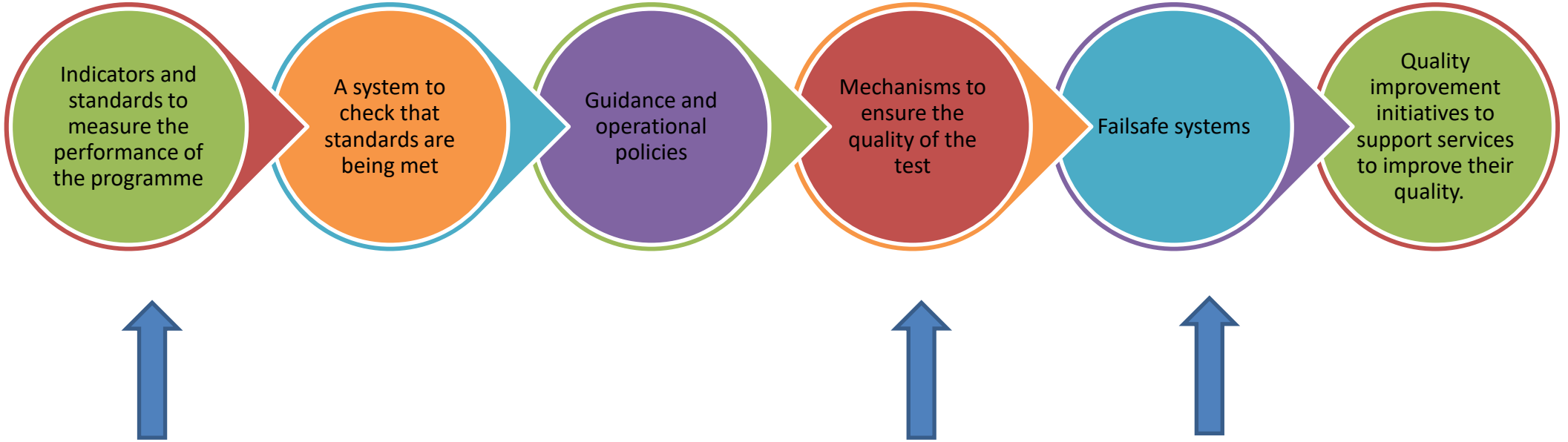
Quality assurance system



Achieve change through stepwise improvement

Some LIC and MIC do not have enough laser capacity

- steadily increase laser capacity expanding screening using available technology

Many countries cannot identify everyone who has a diagnosis of diabetes.

- accurate and comprehensive lists (nationally, regionally or locally)
- public awareness campaigns to improve attendance

Many countries cannot afford to buy digital retinal cameras

- slowly increasing camera use as resources
- trained and competent practitioners screen patients using slit-lamp bio or direct ophthalmoscopy

Many HIC don’t have screening pathways in place for all eligible population

- fragmented systems despite excellent diagnostic+treatment services
- focus on pathway and quality, using integrated e-health information systems

What we would like you to do

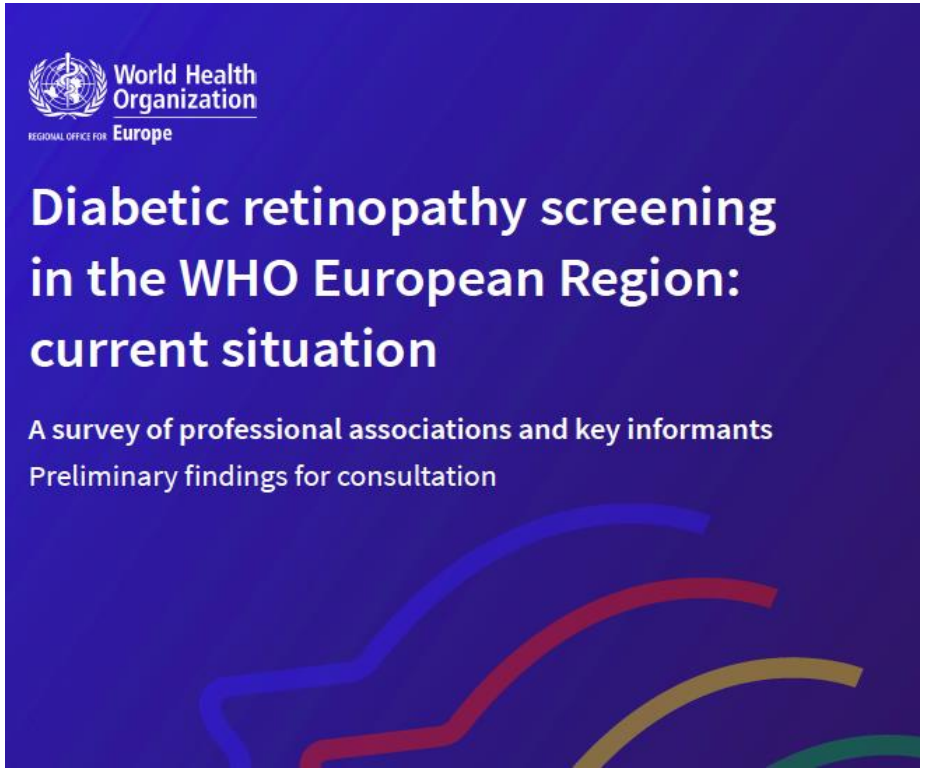
Try using the two short guides:

- act as advocates for screening
- seek engagement with local, regional and national policy makers
- consider contacting WHO Country Offices for guidance if needs be

Congratulations on all you are doing!!!

Situational analysis for the 2020s

Preliminary findings for analysis”- Part 1 “current situation



Survey

Developed by University of Liverpool in collaboration with WHO
ophthalmology & diabetes professional organisations nominated ophthalmologist and diabetologist
some Ministries of Health appointed respondents

45 (85%) responses from 53 member states; 4 from UK 48 surveys

- 8 states no response or could not complete survey
- 25 HIC; 16 LMIC

Analysed by structured framework, collated for thematic analysis

- 2 responses translated from Russian
- varied amount of detail provided – English language may have affected responses

Preliminary results presented here

https://www.euro.who.int/__data/assets/pdf_file/0005/498623/Diabetic-retinopathy-screening-prelim-findings-consultation-eng.pdf

Systematic screening

Organised

- a pathway is in place
- test offered to an identified cohort of people with diabetes at an agreed interval based on a register or list
- pathway is governed by protocols and guidelines
- quality standards based on evidence that service providers follow
- an information system that can monitor performance

Unorganised

- test is carried out in isolation
- ad hoc offers or individuals request a test

Organisation of DR screening

Evidence of screening occurring in most countries

Evidence of		Responses
Unorganised		28
Country-wide systematic screening	Finland, Ireland, Spain, Sweden, UK (England, Northern Ireland, Scotland, Wales)	8
Systematic screening in a region and being rolled out country-wide	Malta, Slovenia	2
Systematic screening in a region or part of health system (variable coverage)	Belgium, Denmark, Georgia, Germany, Netherlands, Portugal, Russian Federation	7
Systematic screening - unclear coverage	Hungary, Israel	2

Ophthalmologists deliver screening wholly (16) or in part (45/47 responses)

Endocrinologists (17), general practitioners (GP) (3)

Systematic screening predominantly by retinal photography with technician/nurse/GP grading

Frequency of screening

annual in majority
evidence of a move to: extended (5), variable interval (3), including systemic factors (6), risk-based (1)

Evidence of		Responses
Annual		30
2-yearly	Albania	1
5-yearly	Uzbekistan	1
Variable-interval **- 2-yearly for no DR** **- 3-yearly for no DR** **- T2DM and no DR** **- x2 visits no DR**	 Armenia, Germany, Norway, Spain, Scotland Finland, Sweden Netherlands	 5 2 1
No information provided		2

Other key findings

Few (6) reported a complete list of all people with diabetes (for invitations, call–recall, monitoring of coverage)

- lists at endocrinology/GP (26), informal/verbal referral (30)
- 17 could not provide information on DR screening coverage or uptake.

Most ophthalmologists (29/36) received training on DR only as part of primary professional training and then CPD

Many (26/48) reported good access to all treatment modalities; 12 some problems with access to one/more treatments including laser

- 5 reported limited access and long waiting lists could result in payment of of pocket

Being in a HIC (29 responses) did not necessarily lead to more systematic approaches to screening.

- 12 no call–recall system, 15 no form of QA or audits in place, 10 did not provide patient leaflets

Key messages

There is evidence of some screening taking place in most countries/regions, with varying degrees of organisation

The high response rate to the survey gives a clear picture of what is happening in most Member States

There is much that countries in the WHO European Region can do to improve the effectiveness of DR screening and this requires close collaboration between clinicians and policy makers

Plans for development, barriers and facilitators

Part 2 of the survey will shortly also be out for consultation

Plans for development, barriers and facilitators (1)

Importance of systematic or organised screening programmes was a frequent theme

Ideal model for the future = national programme with

- central diabetes register
- national guidelines
- consistent approach to grading

Barriers frequently described:

- lack of coordination and common guidelines
- fragmented systems

Need for cameras and lasers in some countries

Further equipment, new and updated technologies for screening and treatment being explored

- telemedicine, digital fundus photography AI-based systems

Importance of training of the screening workforce identified

Plans for development, barriers and facilitators (2)

Common theme - system to enable patients to be identified and move through screening without being lost to the system

- health information systems, diabetes registers, invitation and referral mechanisms

Quality, quality assurance system, monitoring and evaluation mentioned by only a few respondents

- mainly countries with well established programmes

Inequity and poor uptake as a barrier in some responses

- poor patient compliance, lack of awareness of DR screening, poor access in rural and remote locations

Health system leadership and governance – wide range of barriers

- lack of strategic direction, legal and regulatory barriers to screening (eg sharing of personal data),
- managing the interface between private and public health care,
- lack of leadership for DR

Respondents not included in plans or ideal models

- suggests professional groups less familiar/involved with importance of leadership and governance in developing a new programme

Next steps

The preliminary findings on the current situation are out for consultation and the plans for development soon will be.

- Please feedback any comments to the WHO and also let us know of any issues or additional comments personally or at at euncd@who.int

Scribes will capture comments today which will be fed back to WHO and policy makers

We are planning an academic publication from the situational analysis contributors.

- Suggested title: “Diabetic Retinopathy Screening in Europe – A Situational Analysis for the 2020s”
- Suggest contributors are recognised as a “Diabetic Retinopathy Screening in Europe Working Group”

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And finally a “Big Thank you” to everyone who has made all this possible!