Community Awareness, Promotion and Prevention Part 2

Postgraduate Diabetes Management and Education

Module 7102

Semester 1

Dr. Tan Ming Yeong
E-mail: TanMingYeong@imu.edu.my

INTERNATIONAL MEDICAL UNIVERSITY
MALAYSIA

Content Outline

- Proposed solutions for Diabetes Prevention
  - Diabetes awareness
  - Diabetes prevention –screening
  - Collaboration
- Summary

Diabetes Prevention Initiatives

- Awareness
- Identify high risk group with screening
- Collaboration
- Research

Public Awareness on Diabetes Prevention

- Public Awareness on Diabetes Prevention is discussed under the following topics

  - Research on public awareness of diabetes
  - IDF Global Strategic Plan to Raise Awareness of Diabetes
  - Mass media

Studies of Public Awareness of Diabetes in Malaysia

Title /year	Place of study	No	Tool	Results
Knowledge of DM 2006	KK Seremban	66	Questionnaire	Mean score 64% Knowledge correlate with age (p=0.008)
Diab awareness assessment 2017	General Public	350	Questionnaire	Mean score 11.1 (moderate) Knowledge correlate with age, level of education, Family History and having DM
Knowledge and attitude of DM 2014	General Public	150	Questionnaire	Mean score79% (fair) Knowledge correlate with age, level of education
Knowledge of DM 2017	General Public	380	Questionnaire	54% (good), 41% (fair) 5% (poor)
Knowledge of DM 2019	General Public	400	Questionnaire	71% (moderate) Knowledge correlate with age and level of education

Public Source of DM Information

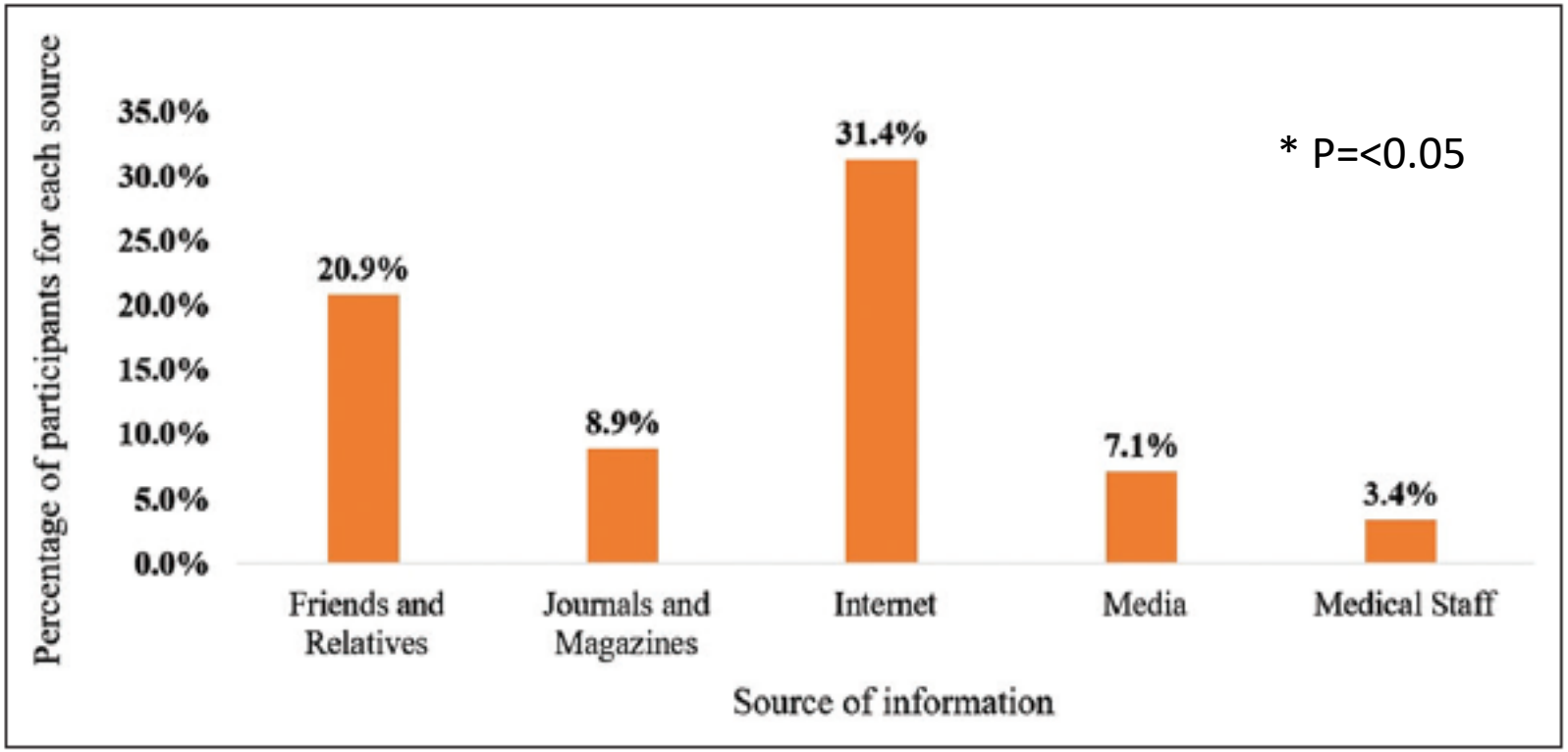


Fig. 1: Participants' sources of information about diabetes mellitus

Qamar M. et al. Asian Journal of Pharmaceutic and Clinical Research 2017

Ipsos Healthcare

ASCENSIA Diabetes Care

HOW AGREEABLE ARE YOU WITH THE FOLLOWING STATEMENTS FOR YOUR DIABETES CONDITIONS? *(ON A SCALE OF 1-7 WHERE 1 REPRESENT STRONGLY DISAGREE AND 7 REPRESENTS STRONGLY AGREE)*

Statement on diabetes condition/ Level of agreement	Diabetes patients who gave a rating of 5, 6 and 7
My doctor is the best resource for helping me cope with my diabetes	54%
My doctor knows what is best for me	61%
My doctors is more responsible for managing my diabetes than I am	57%

More than **50%** of the diabetic patients have the **perception that their doctors should be the one taking charge of their diabetes condition** and they know best (e.g. medication and follow up with the doctors).

Base: Diabetic Respondents (n=69)

GAME CHANGERS

With Permission from Ascensia Diabetes Care Malaysia

- IDF Global Strategic Plan to Raise Awareness of Diabetes 2003

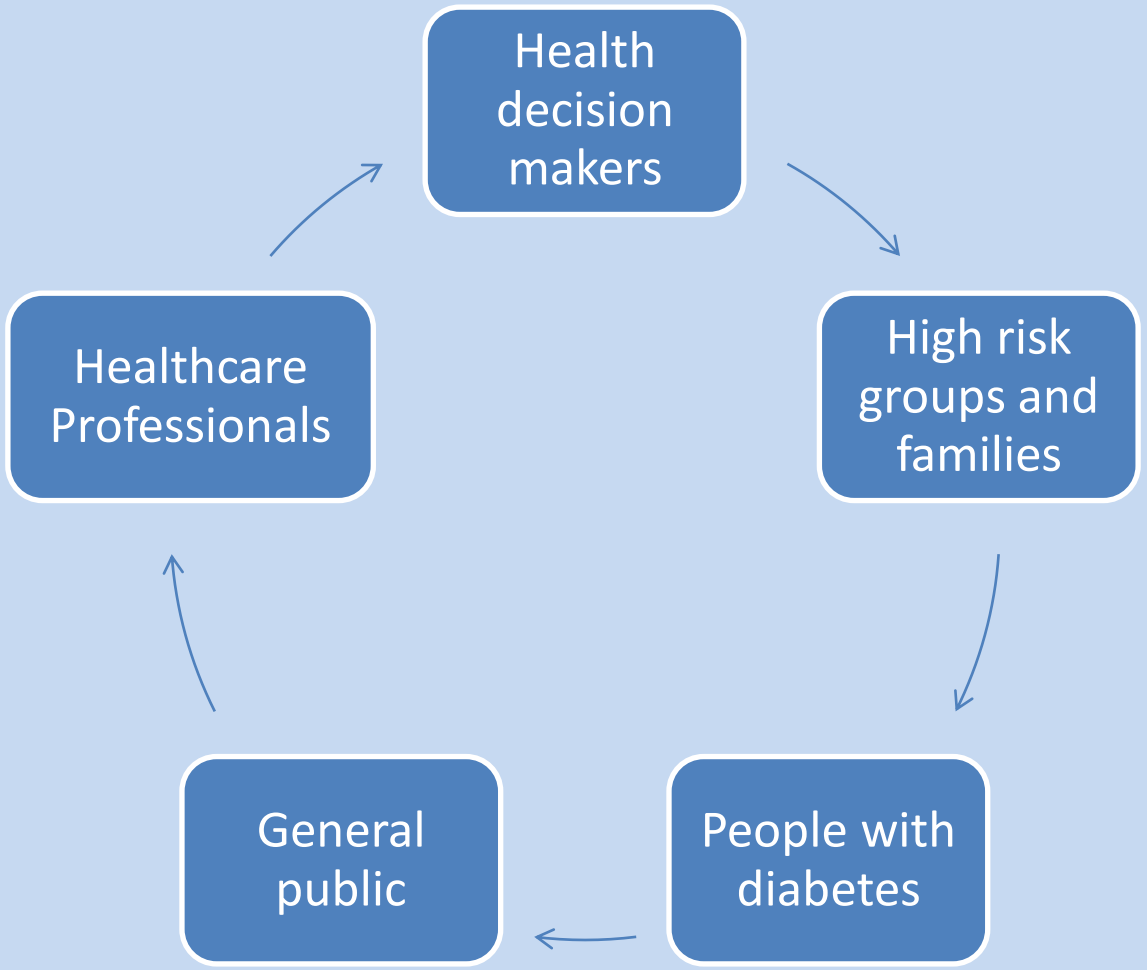
IDF Global Strategic Plan to raise Awareness of Diabetes

The 4 Core Messages

- Diabetes is a common condition and its frequency is dramatically rising all over the world
- Diabetes is a life-threatening condition
- Diabetes can be detected early and managed effectively
- In some instances diabetes can be prevented

IDF Global Strategic Plan to raise Awareness of Diabetes

Target Audience for Core Messages



Linking Communication Strategy with Core Messages

Core Strategic Message	Target Audience	Underlying Communication Message
Diabetes is a common condition and its frequency is dramatically rising all over the world	People with diabetes	If you have diabetes, you are not alone
	High Risk group	You are at high risk of developing T2DM because you have one of the risk factors
	General Public	Many people (and may be you too) have diabetes without even knowing it
	Healthcare professionals	Diabetes and its consequences must be recognized
	Health decision makers	Diabetes and its consequences must be recognized early and be prevented

Linking Communication Strategy with Core Messages

Core Strategic Message	Target Audience	Underlying Communication Message
Diabetes is a life-threatening condition	People with diabetes	If neglect diabetes, you can get serious DM complications and shorten your life
	High Risk group	Live healthy lifestyle and reduce weight, Important to have bld sugar, Bld pressure, lipid check regularly as diabetes can affect many parts of your body
	General Public	DM is a very serious, life-long condition that can affect/damage heart, eye, kidney and feet
	Healthcare professionals	Perform comprehensive monitoring of parameters and regular complication screening for people with diabetes
	Health decision makers	Assign adequate resources to ensure prevention, early diagnosis, treatment

Linking Communication Strategy with Core Messages

Core Strategic Message	Target Audience	Underlying Communication Message
Diabetes can be detected early and managed effectively	People with diabetes	Manage your diabetes daily is important to stay healthy and live longer Join support group
	High Risk group	Consider annual check bld sugar, BP, lipid if >45yr, overweight, family history of diabetes Be aware of early signs and symptoms of DM
	General Public	Learn more about DM, its early signs and symptoms. Consider checking your bld sugar level if not done yet
	Healthcare professionals	Diagnosed DM early and manage based on CPG, update knowledge with CPD
	Health decision makers	Assign adequate resources to ensure prevention, early diagnosis, and overall management of DM

Linking Communication Strategy with Core Messages

Core Strategic Message	Target Audeince	Underlying Communication Message
In some instances diabetes can be prevented	People with diabetes	Encourage your family members for screening as they are at risk group
	High Risk group	Healthy lifestyle can reduce risk of DM. Reduce weight if overweigh, be active and stay in touch with your healthcare team
	General Public	Lead a healthy lifestyle, avoid being overweight and reduce if overweight, being active and seek healthcare advice if you may think you are high risk
	Healthcare professionals	Recognize people at risk of DM and recommend appropriate lifestyle change
	Health decision makers	Assign adequate resources to ensure prevention, early diagnosis, and overall management of DM

Strategy to Dissemination Core Message

Target audience	Communication strategy
Health Decision Maker	Through local, national, regional and international diabetes association, WHO or appropriate bodies Identify and train lobbying advocates
High Risk groups	Partner with relevant organization e.g. religion, community activities, websites, health brochures, patient association, YMCA, Diabetes and other health organization
General Public	Media channel, school, workplaces, conduct awareness programme, website, Partner with relevant organization e.g. religion, community activities, health brochures, patient association, YMCA, Diabetes and other health organization
People with diabetes	Global or regional publication, member association, website, educational materials, YMCA, patient journals
Healthcare professionals	Global media channels, collaboration of health promotion activates in healthcare settings, websites, media activities, awareness program, conferences, CPD training, E-learning

Advocacy to Policy Makers

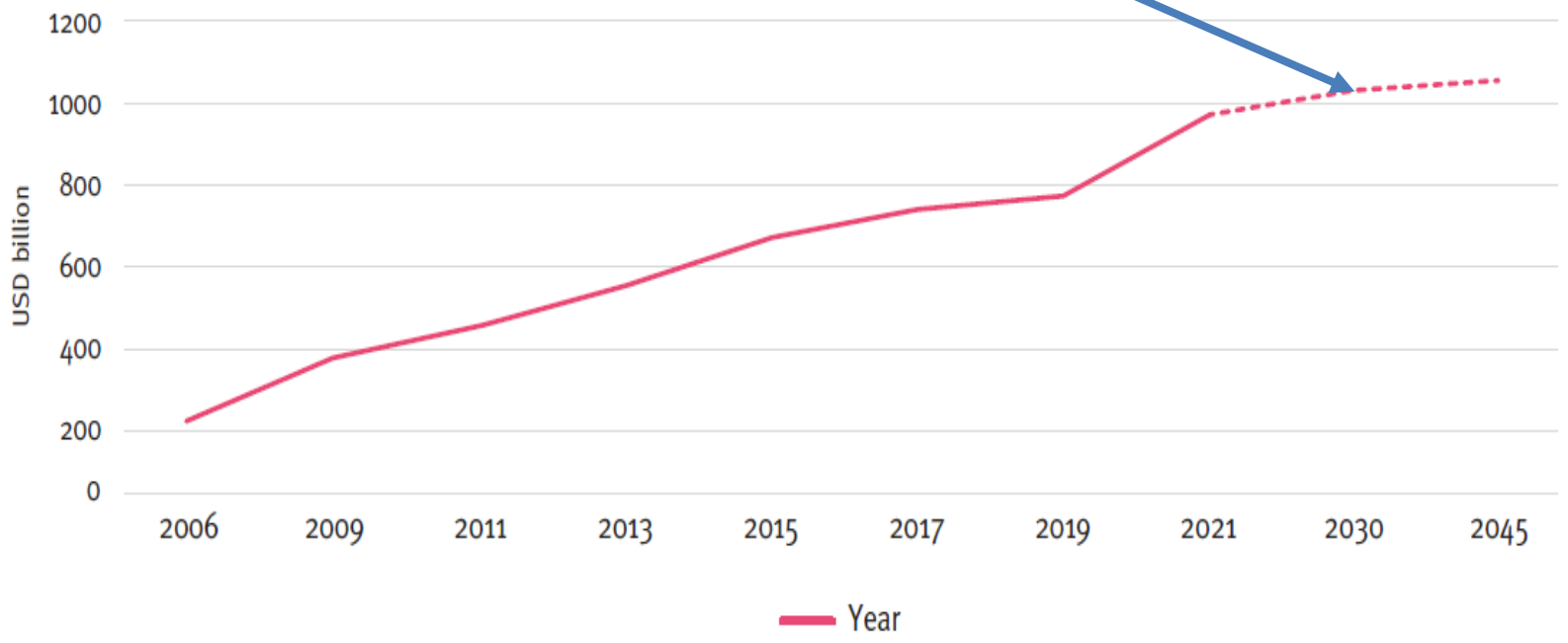
Successful program needs support from policy makers. Lobby the following message:

- Preventing diabetes in the long term is cheaper than treating it (slide 58)
- Research have shown that Lifestyle interventions are effective in prevention of Type 2 Diabetes and even more effective than medication
- Assign adequate resources (money and manpower) to ensure prevention, early diagnosis, treatment and management of diabetes
- Advocate for healthy environment and society by Implementing food and environmental policies that addresses weight reduction and encourage exercise

Economy Impact of Diabetes

The Total Diabetes-related Health Expenditure will reach ***ONE TRILLION USD*** by 2030

Figure 3.14 Total diabetes-related health expenditure for adults (20–79 years) with diabetes from 2006 to 2045



Adapted from IDF Atlas 2021

National Strategic Plan for Non-Communicable Diseases (NSP-NCD) 2016-2025

- Approved by MOH on 10 April 2017
- In-line with Malaysia's commitment at the global level for NCD prevention and control
  - Including Sustainable Development Goals (SDGs)
- Governance: **Cabinet Committee for a Health Promoting Environment (JK Kabinet bagi Persekitaran Hidup yang Sihat or JKPHS)**
  - Chaired by Deputy Prime Minister
  - Membership: 12 ministers

Implementation of NSP-NCD 2016-2025

1. National Plan of Action for Nutrition of Malaysia III 2016-2025
2. National Strategic Plan for Tobacco Control 2015-2020
3. Policy Options to Combat Obesity in Malaysia
4. Salt Reduction Strategy for Malaysia 2015-2020
5. National Strategic Plan for Active Living 2016-2025
6. Malaysia's Alcohol Action Plan 2013-2020
7. National Strategic Plan for Cancer Control Program 2016-2020
8. Enhanced Primary Healthcare (EnPHC) initiative
9. *Komuniti Sihat, Pembina Negara* (KOSPEN) initiative

Mass Media

Prioritizing Food Policy Options to Reduce Obesity in Malaysia

Bridging the Gap to Awareness of Diabetes

- Create Public awareness through
  - ❖MASS medium
  - ❖Work with industry
  - ❖Public talk

Diabetes Advocates

STAND AGAINST PREDIABETES
Don't sugarcoat it.

Lifestyle Management & Support For People With Prediabetes

Healthcare Professionals

- Online webinars
- Physical workshops

Public/People with Diabetes

- Public survey on knowledge of Pre-diabetes
- Public health Education Materials on Pre-Diabetes

Summary of Diabetes Awareness

- Diabetes awareness participated by all levels:

✓ policy makers

✓ healthcare providers

✓ High risks group of diabetes

✓ People with diabetes

✓ general public

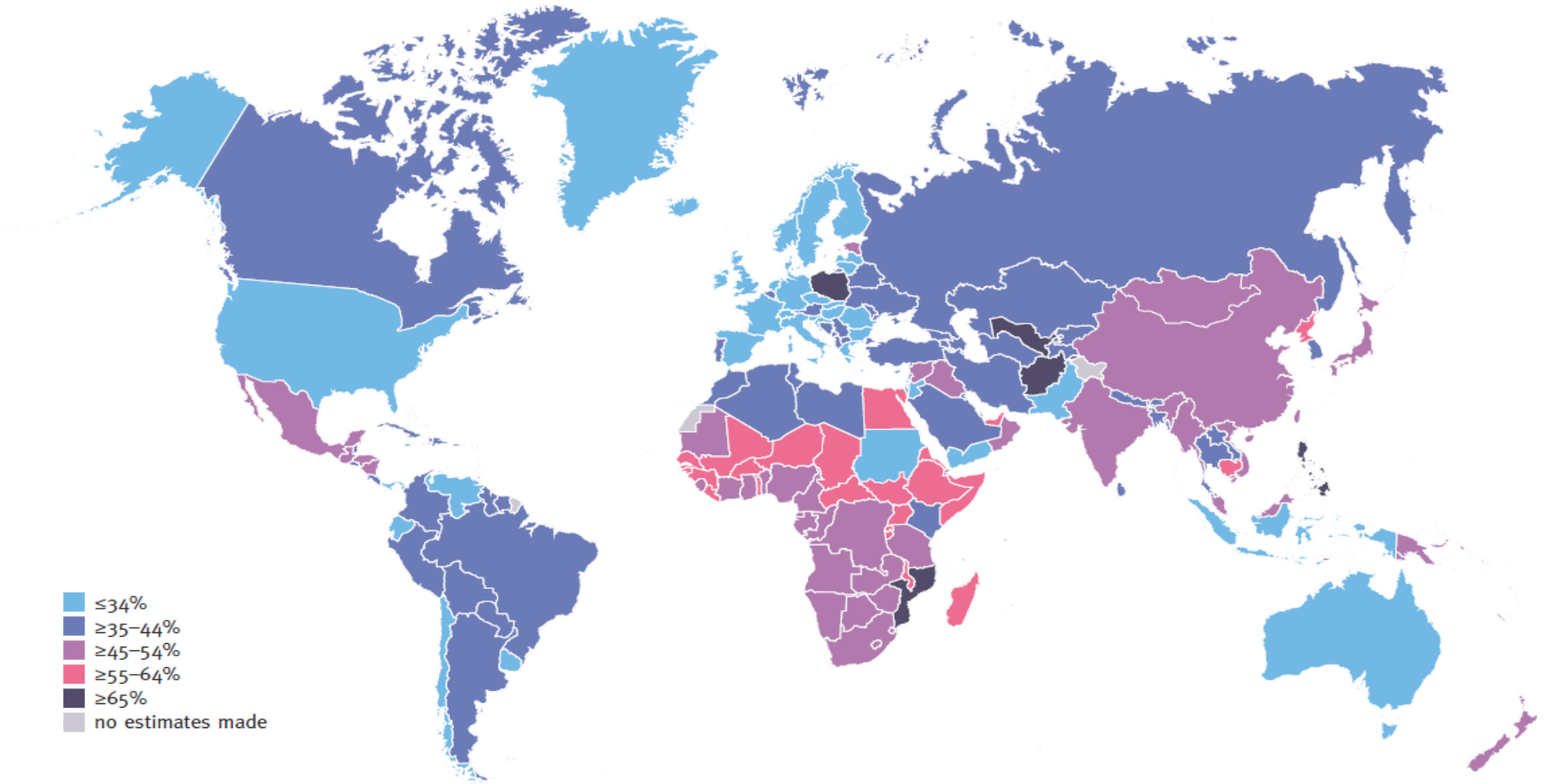
- The four core messages should be disseminated using a variety of channels that is most suited to the different audience

- Identify High Risk Group with Screening

  - Rationale for screening
  - Target audience for screening
  - Diabetes screening Method
  - Proposed Model of systematic screening

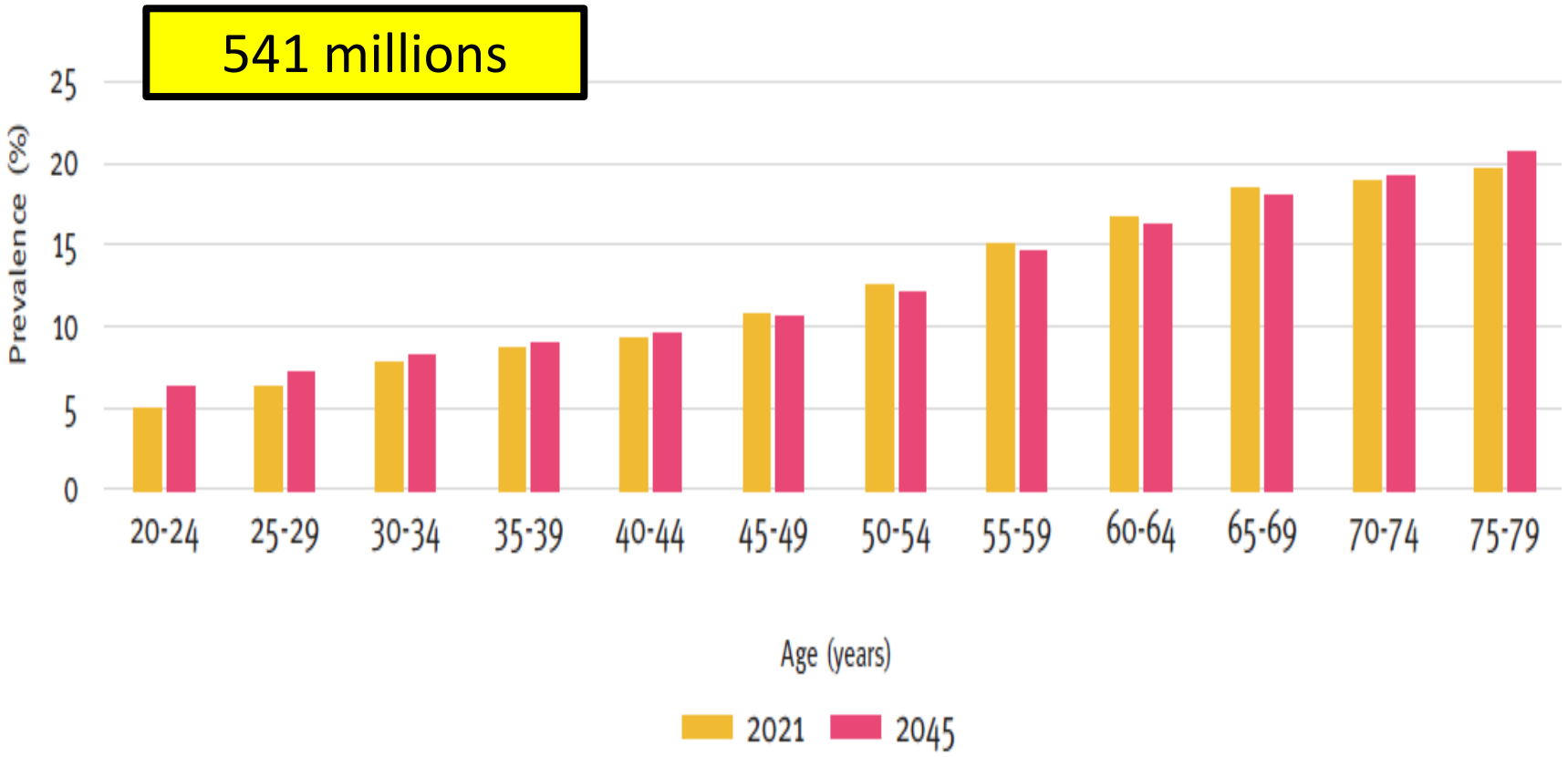
One in Two Adults with Diabetes are Undiagnosed

Map 3.3 Proportion of adults (20–79 years) with undiagnosed diabetes by country in 2021



Adapted from IDF Atlas 2021

Prevalence of Impaired Glucose Tolerance Adults (20-79yrs)

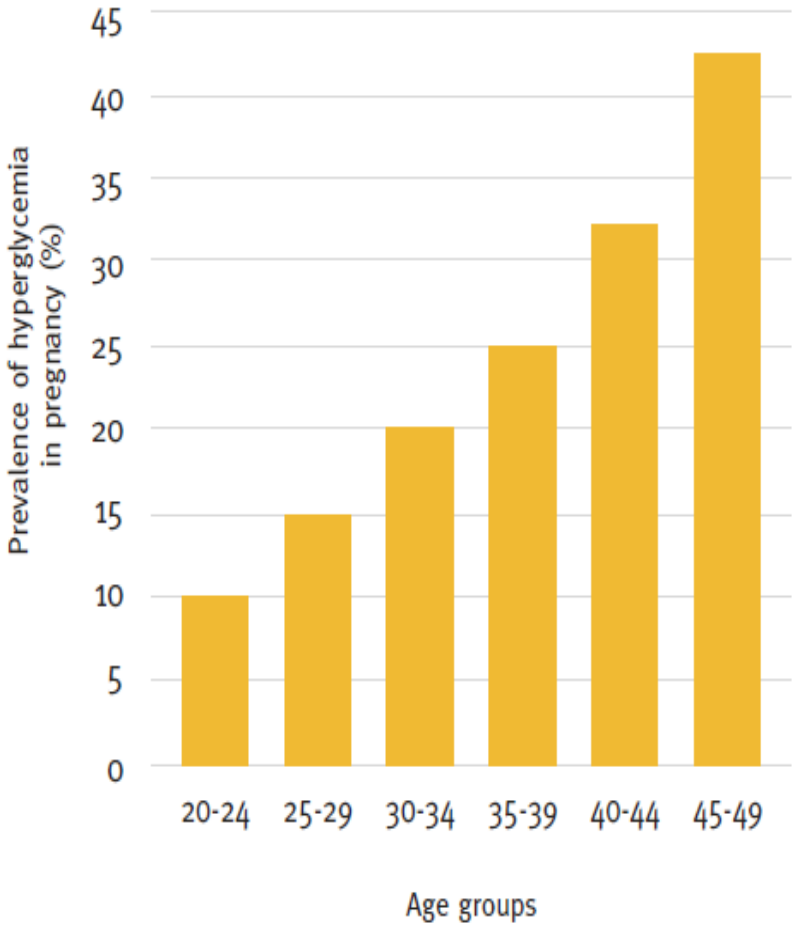


Adapted from IDF Atlas 2021

Hyperglycaemia in Pregnancy

Table 3.19 Global estimates of hyperglycaemia in pregnancy in 2021

Total live births to women aged 20–49 years in millions	
Hyperglycaemia in pregnancy	
Global prevalence	16.7%
Number of live births affected in millions	21.1 million
Proportion of cases due to GDM	80.3%
Proportion of cases due to other types of diabetes first detected in pregnancy	9.1%
Proportion of cases due to diabetes detected prior to pregnancy	10.6%

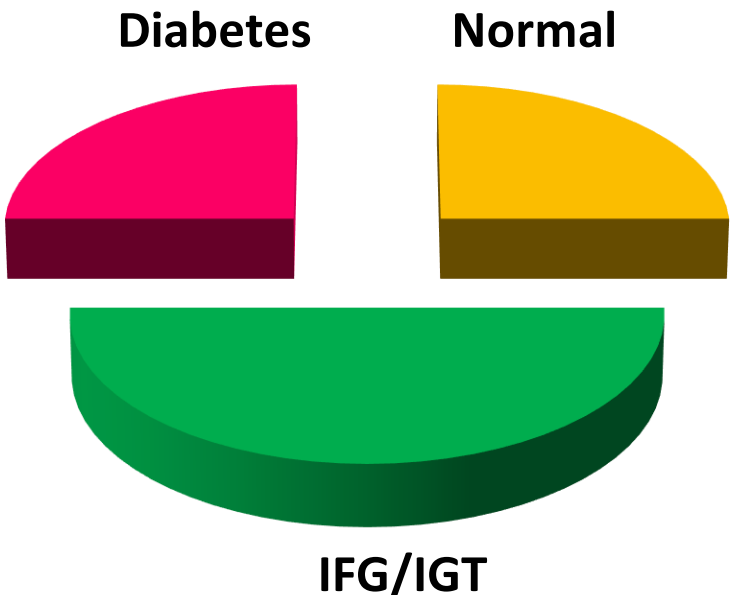


Adapted from IDF Atlas 2021

Natural History of Pre-DM

Pre-DM

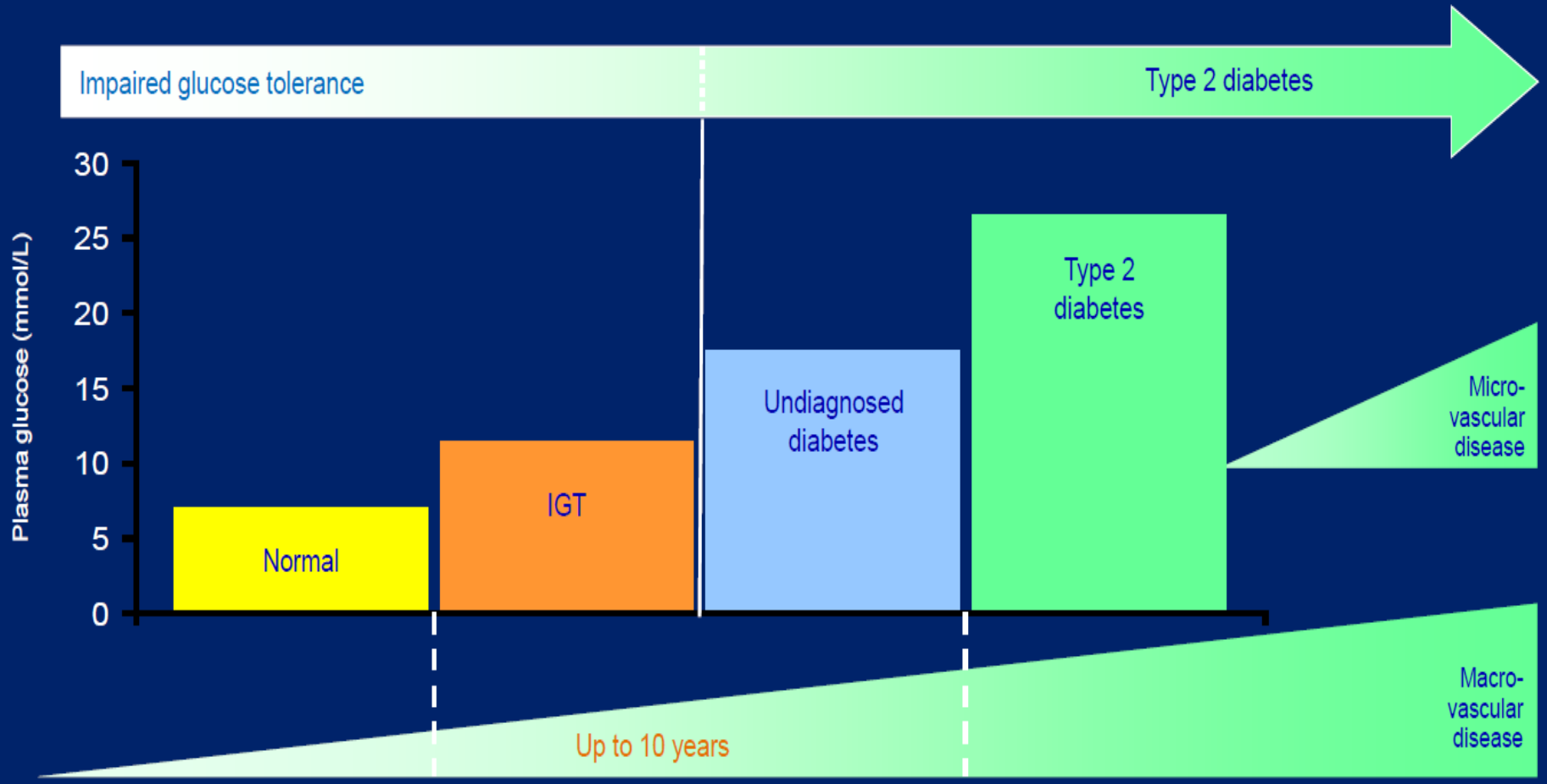
After 5 Years



Nathan et al Diabetes Care 2007

What are the associated risks with Pre-diabetes?

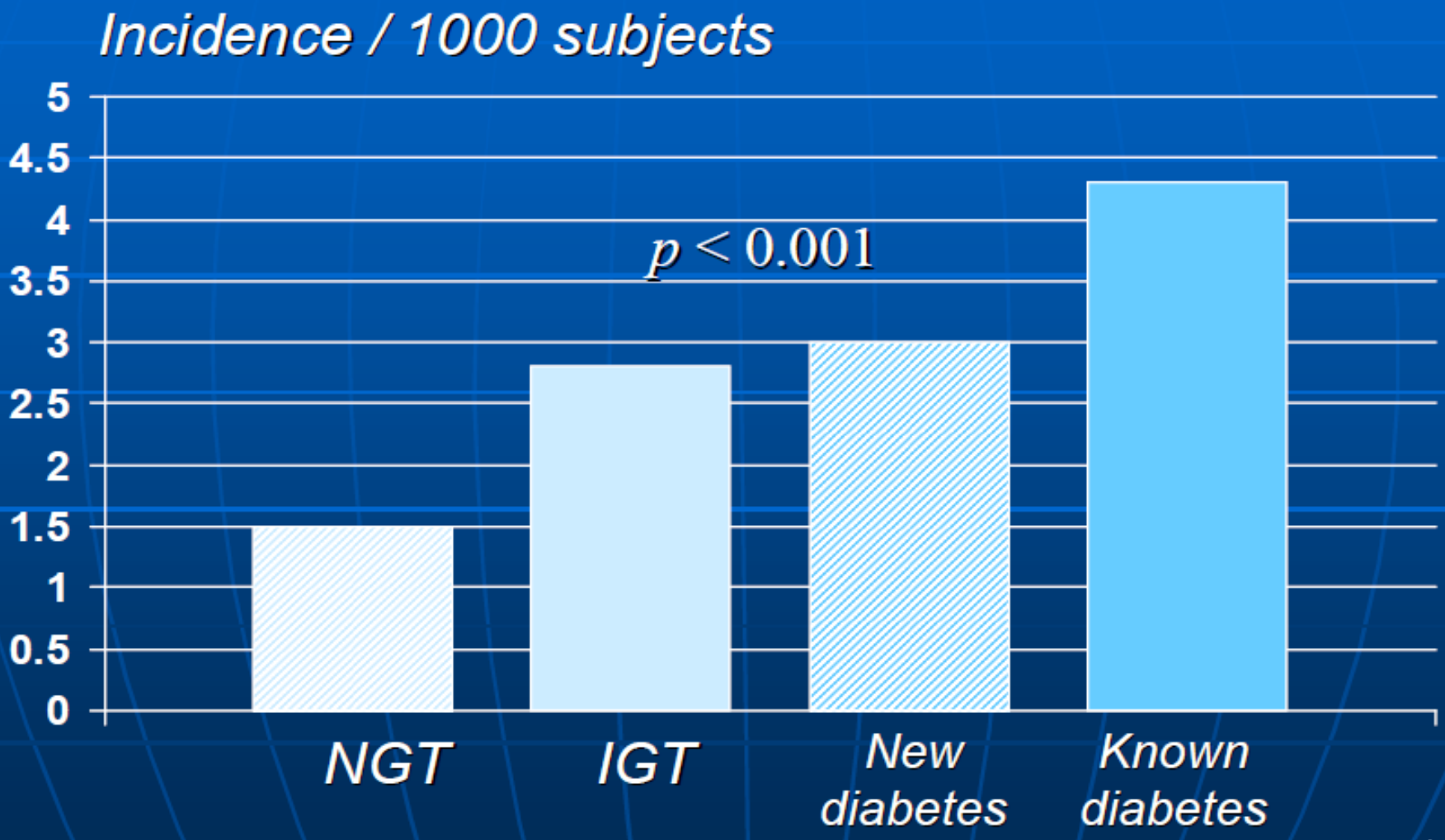
Vascular complications in diabetes continuum



NHANES: National Health and Nutrition Examination Survey
www.cdc.gov/nchs/products/elec_prods/subject/nhanesii.htm
Janka HU. Fortschr Med 1992;110:637–41

Acknowledged from Dr. Ekgaluck Wanothayaroj, Thailand

Risk of cardiovascular disease according to glucose tolerance



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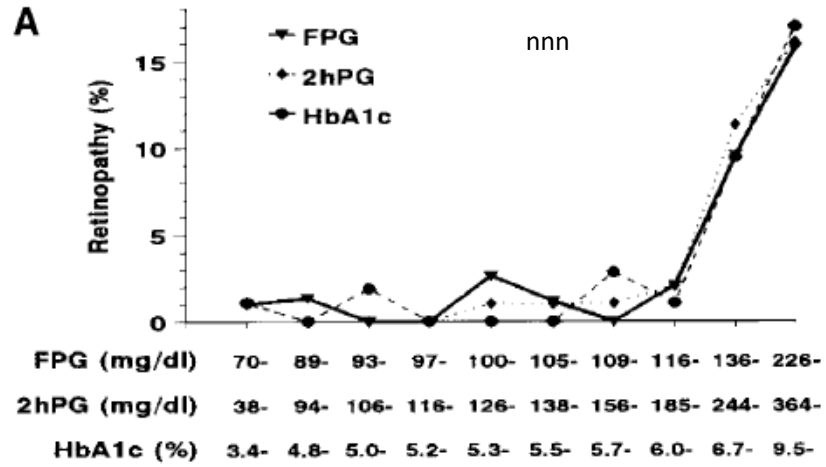
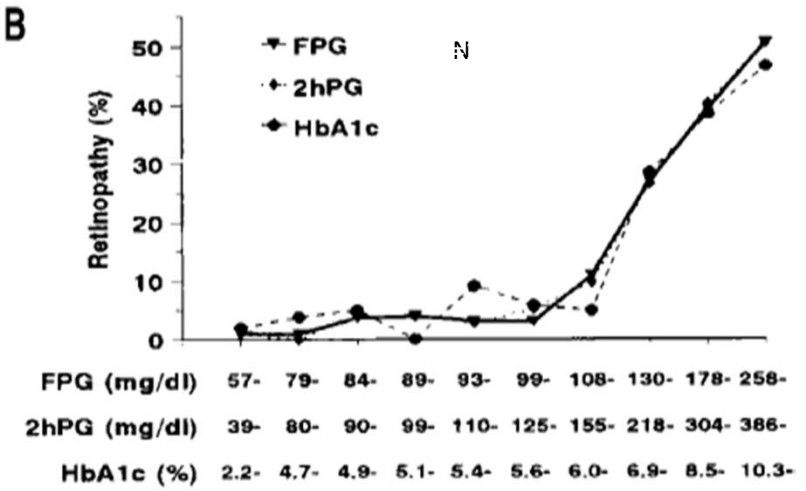
Adapted from : Eschwege, E. *et al. Horm. Metab. Res.* 15: 41-46, 1985

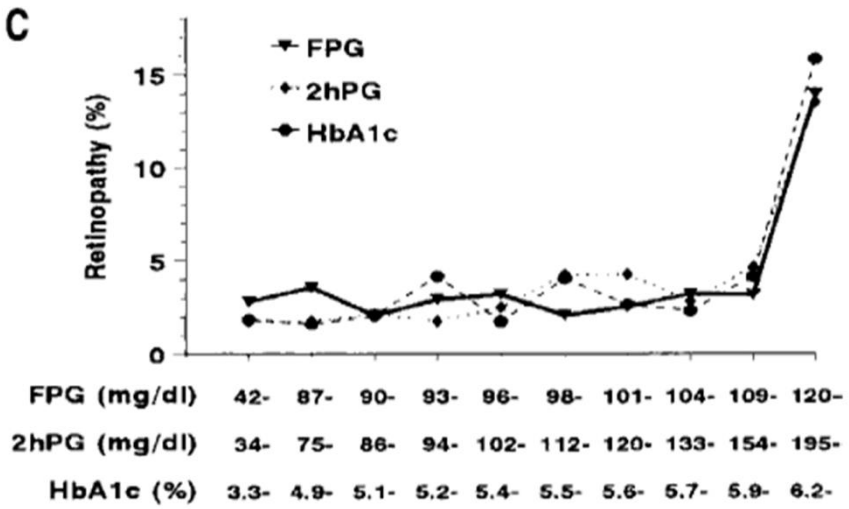
Glycaemia and Risk for Retinopathy

Pima Indian



Egyptians





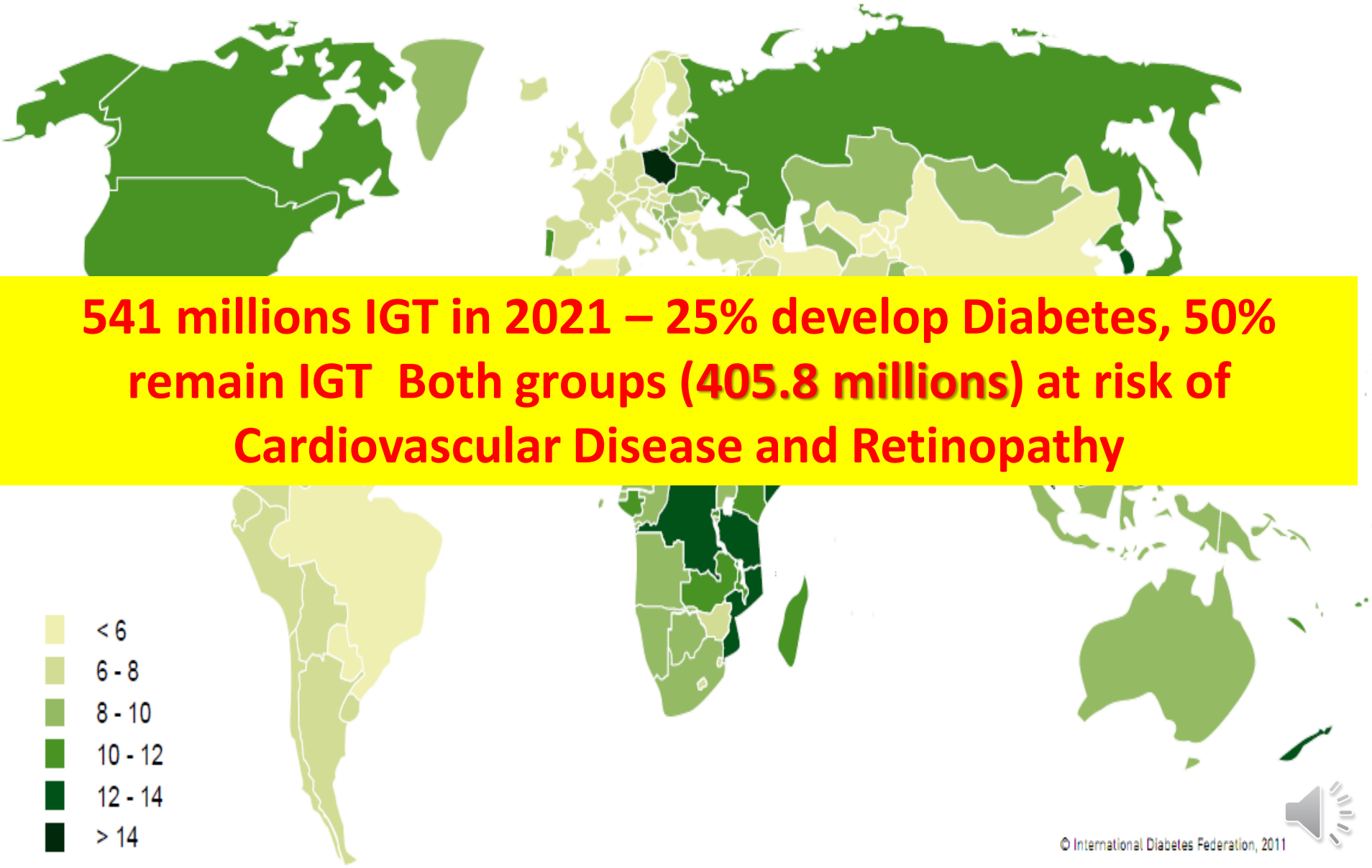
Americans (NHANES)

Cheng YJ et al Diab Care 2009

International Diabetes Federation

IDF Diabetes Atlas, 5

Prevalence (%) of IGT in adults (20-79 years) i



541 millions IGT in 2021 – 25% develop Diabetes, 50% remain IGT Both groups (405.8 millions) at risk of Cardiovascular Disease and Retinopathy

Screening for Diabetes

- Proposed Strategy for Screening:

- Symptomatic individuals
- Asymptomatic individuals
  - Specific high risk population
  - General population for at risk individuals

Screening for Diabetes

- Symptomatic individuals

- Any individual who has symptoms suggestive of diabetes (tiredness, lethargy, polyuria, polydipsia, polyphagia, weight loss, pruritus vulvae, balanitis) **MUST** be screened.

Screening for Diabetes

Asymptomatic individuals- High Risk Population

Adults -overweight or obese with (BMI >23 kg/m2 or waist circumference >80 cm (F) >90 cm (M), **and** have ≥ 1of the following additional risk factors for diabetes:

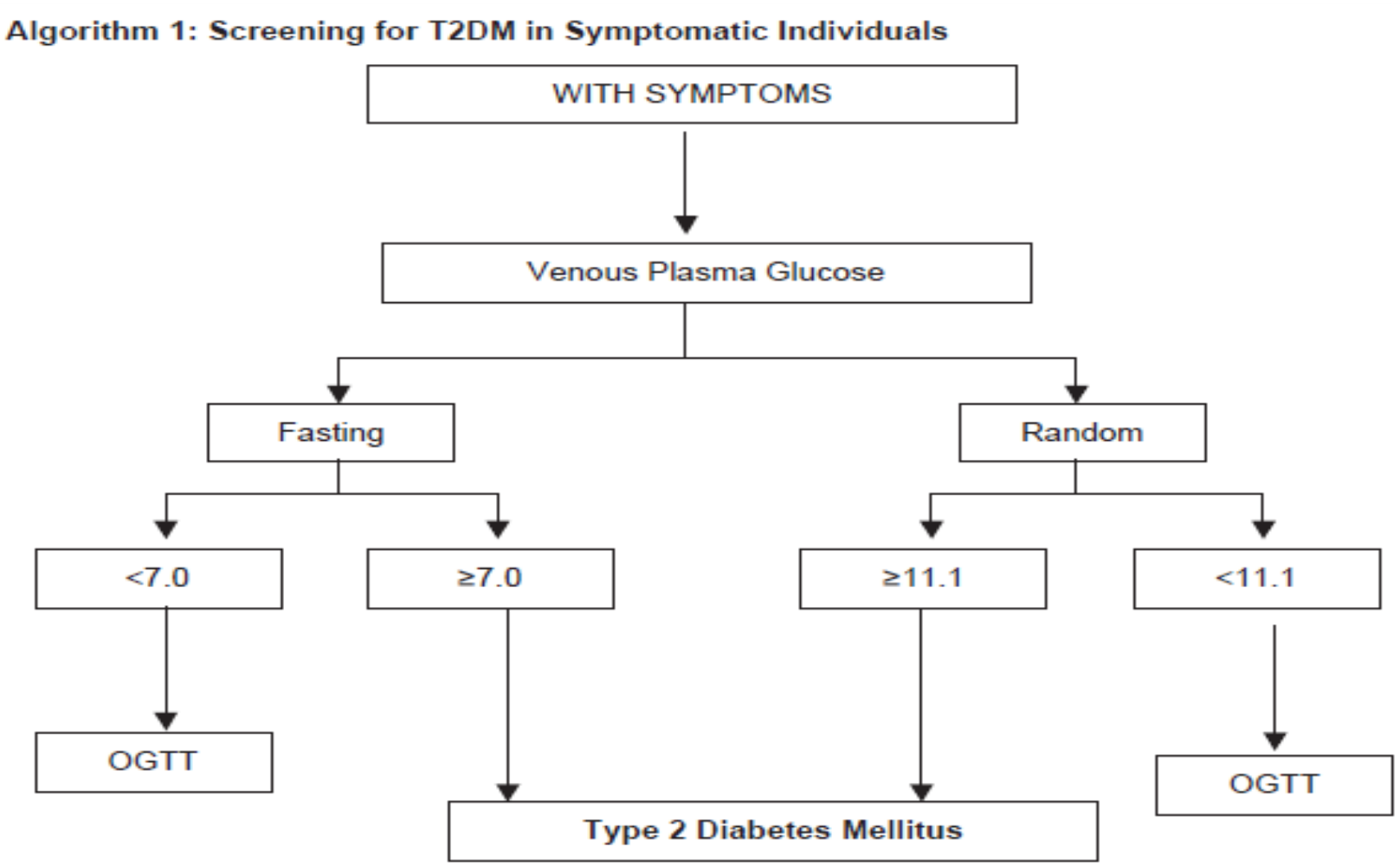
- First-degree relative with diabetes
- History of cardiovascular disease (CVD)
- Hypertension (BP >140/90 mm Hg/ therapy for hypertension)
- Previous Impaired glucose tolerance (IGT) or impaired fasting glucose (IFG)
- High density lipoprotein (HDL) cholesterol <0.9 mmol/L or triglycerides (TG) >2.8 mmol/L
- Other clinical conditions associated with insulin resistance (e.g. severe obesity and acanthosis nigricans)
- Women who delivered a baby weighing >4 kg or previous history of gestational diabetes mellitus (GDM)
- Women with polycystic ovarian syndrome (PCOS)
- Physical inactivity
- Special populations (those who are receiving antiretroviral therapy or atypical antipsychotic drugs)

CPG T2DM 2020

What tests can be done for Screening

- Capillary blood glucose- fasting or random
- Plasma glucose – fasting or Random
- OGTT
- HbA1c
- Diabetes Risk Score

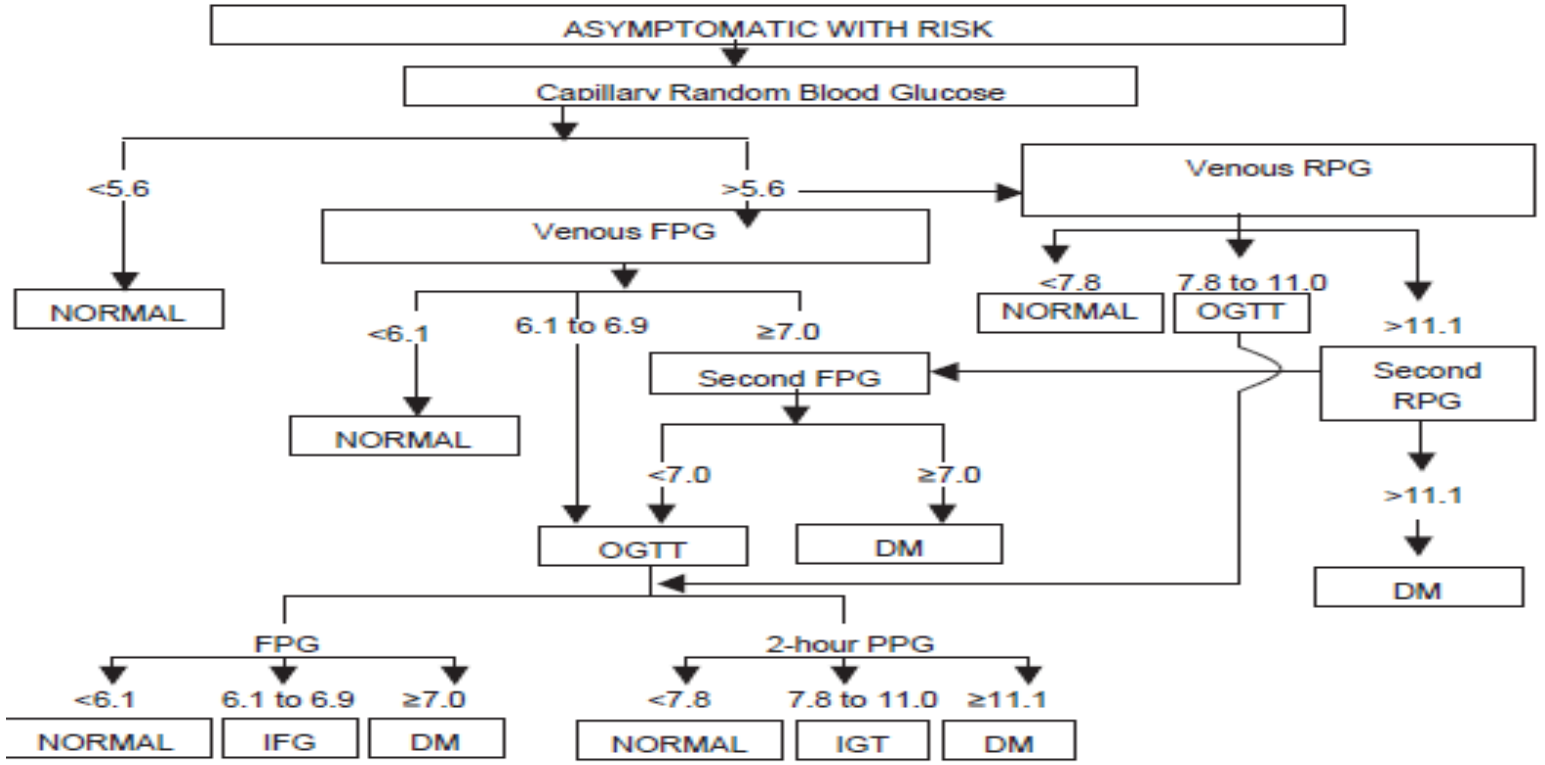
Screening Algorithm –Symptomatic Individuals



Adapted from CPG T2DM 2020

Screening Algorithm –Asymptomatic Individuals

Algorithm 2: Screening for T2DM in Asymptomatic Individuals



* All values are in mmol/L.

** FPG = fasting plasma glucose; RPG = random plasma glucose; OGTT = oral glucose tolerance test; IGT = impaired glucose tolerance; IFG = impaired fasting glucose; DM = diabetes mellitus.

- If FPG ≥7.0 mmol/L or 2-hour PPG ≥11.1 mmol/L, a repeat glucose value (fasting or random) or A1c can be used to make the diagnosis of diabetes.
- For diagnosis of T2DM, venous plasma glucose value is required.

Adapted CPG T2 DM 2020

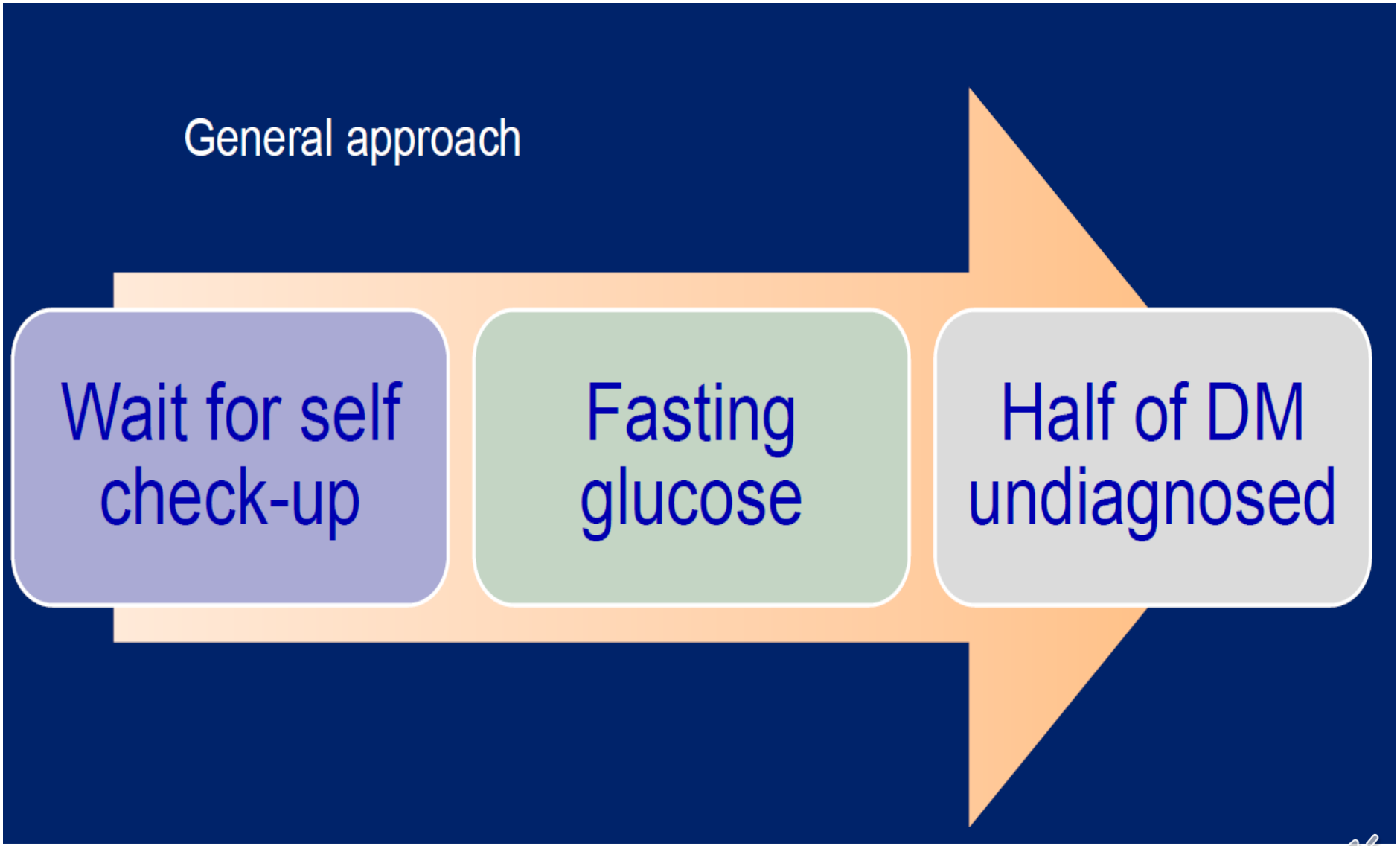
Screening for Diabetes

- Frequency of screening

- High risk individuals – annually
- Individuals without risk factors, testing should begin at the age of 30 years. If tests are normal, screening should be done annually

CPG T2DM 2020

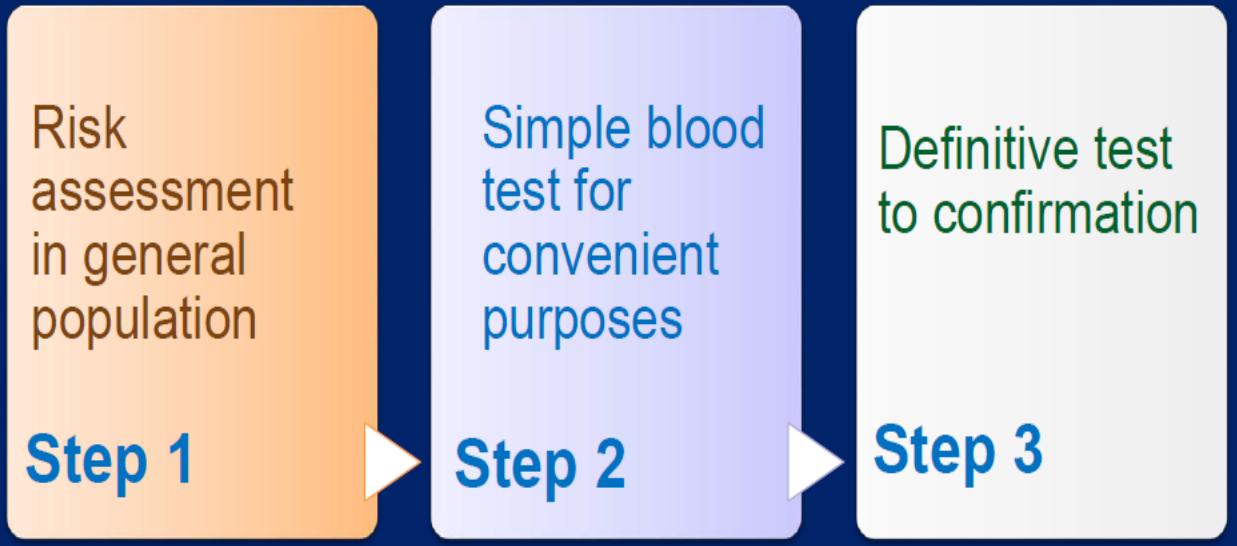
Challenges of Diabetes Screening



Acknowledged from Dr. Ekgaluck Wanothayaroj, Thailand

How to achieve effective screening for DM ?

Proposed systematic screening model



Acknowledged from Dr. Ekgaluck Wanothayaroj, Thailand

Step 1: Diabetes Risk Score

- For “mass” population
- Require most simple method
- No blood test required
- Can do at any time, any place
- More convincing power for the next step

ARE YOU AT RISK FOR

TYPE 2 DIABETES?

American Diabetes Association.

Diabetes Risk Test

1. **How old are you?**
   Less than 40 years (0 points)
   40—49 years (1 point)
   50—59 years (2 points)
   60 years or older (3 points)

2. **Are you a man or a woman?**
   Man (1 point) Woman (0 points)

3. **If you are a woman, have you ever been diagnosed with gestational diabetes?**
   Yes (1 point) No (0 points)

4. **Do you have a mother, father, sister, or brother with diabetes?**
   Yes (1 point) No (0 points)

5. **Have you ever been diagnosed with high blood pressure?**
   Yes (1 point) No (0 points)

6. **Are you physically active?**
   Yes (0 points) No (1 point)

7. **What is your weight status?** *(see chart at right)*

Write your score in the box.

Height	Weight (lbs.)		
4' 10"	119-142	143-190	191+
4' 11"	124-147	148-197	198+
5' 0"	128-152	153-203	204+
5' 1"	132-157	158-210	211+
5' 2"	136-163	164-217	218+
5' 3"	141-168	169-224	225+
5' 4"	145-173	174-231	232+
5' 5"	150-179	180-239	240+
5' 6"	155-185	186-246	247+
5' 7"	159-190	191-254	255+
5' 8"	164-196	197-261	262+
5' 9"	169-202	203-269	270+
5' 10"	174-208	209-277	278+
5' 11"	179-214	215-285	286+
6' 0"	184-220	221-293	294+
6' 1"	189-226	227-301	302+
6' 2"	194-232	233-310	311+
6' 3"	200-239	240-318	319+
6' 4"	205-245	246-327	328+
	(1 Point)	(2 Points)	(3 Points)

You weigh less than the amount in the left column (0 points)

Add up your score.

If you scored 5 or higher:
You are at increased risk for having type 2 diabetes. However, only your doctor can tell for sure if you do have type 2 diabetes or prediabetes (a condition that precedes type 2 diabetes in which blood glucose levels are higher than normal). Talk to your doctor to see if additional testing is needed.

Type 2 diabetes is more common in African Americans, Hispanics/Latinos, American Indians, and Asian Americans and Pacific Islanders.

Higher body weights increase diabetes risk for everyone. Asian Americans are at increased diabetes risk at lower body weights than the rest of the general public (about 15 pounds lower).

For more information, visit us at diabetes.org or call 1-800-DIABETES (1-800-342-2383)

Adapted from Bang et al., Ann Intern Med 151:775-783, 2009.
Original algorithm was validated without gestational diabetes as part of the model.

Lower Your Risk

The good news is that you can manage your risk for type 2 diabetes. Small steps make a big difference and can help you live a longer, healthier life.

If you are at high risk, your first step is to see your doctor to see if additional testing is needed.

Visit diabetes.org or call 1-800-DIABETES (1-800-342-2383) for information, tips on getting started, and ideas for simple, small steps you can take to help lower your risk.

Visit us on Facebook
Facebook.com/AmericanDiabetesAssociation

Finnish Diabetes Association

TYPE 2 DIABETES RISK ASSESSMENT FORM

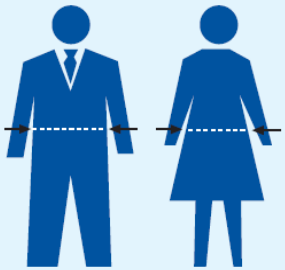
Circle the right alternative and add up your points.

1. Age
0 p. Under 45 years
2 p. 45–54 years
3 p. 55–64 years
4 p. Over 64 years

2. Body-mass index
(See reverse of form)
0 p. Lower than 25 kg/m²
1 p. 25–30 kg/m²
3 p. Higher than 30 kg/m²

3. Waist circumference measured below the ribs (usually at the level of the navel)

	MEN	WOMEN
0 p.	Less than 94 cm	Less than 80 cm
3 p.	94–102 cm	80–88 cm
4 p.	More than 102 cm	More than 88 cm



4. Do you usually have daily at least 30 minutes of physical activity at work and/or during leisure time (including normal daily activity)?
0 p. Yes
2 p. No

5. How often do you eat vegetables, fruit or berries?
0 p. Every day
1 p. Not every day

6. Have you ever taken medication for high blood pressure on regular basis?
0 p. No
2 p. Yes

7. Have you ever been found to have high blood glucose (eg in a health examination, during an illness, during pregnancy)?
0 p. No
5 p. Yes

8. Have any of the members of your immediate family or other relatives been diagnosed with diabetes (type 1 or type 2)?
0 p. No
3 p. Yes: grandparent, aunt, uncle or first cousin (but no own parent, brother, sister or child)
5 p. Yes: parent, brother, sister or own child

Total Risk Score

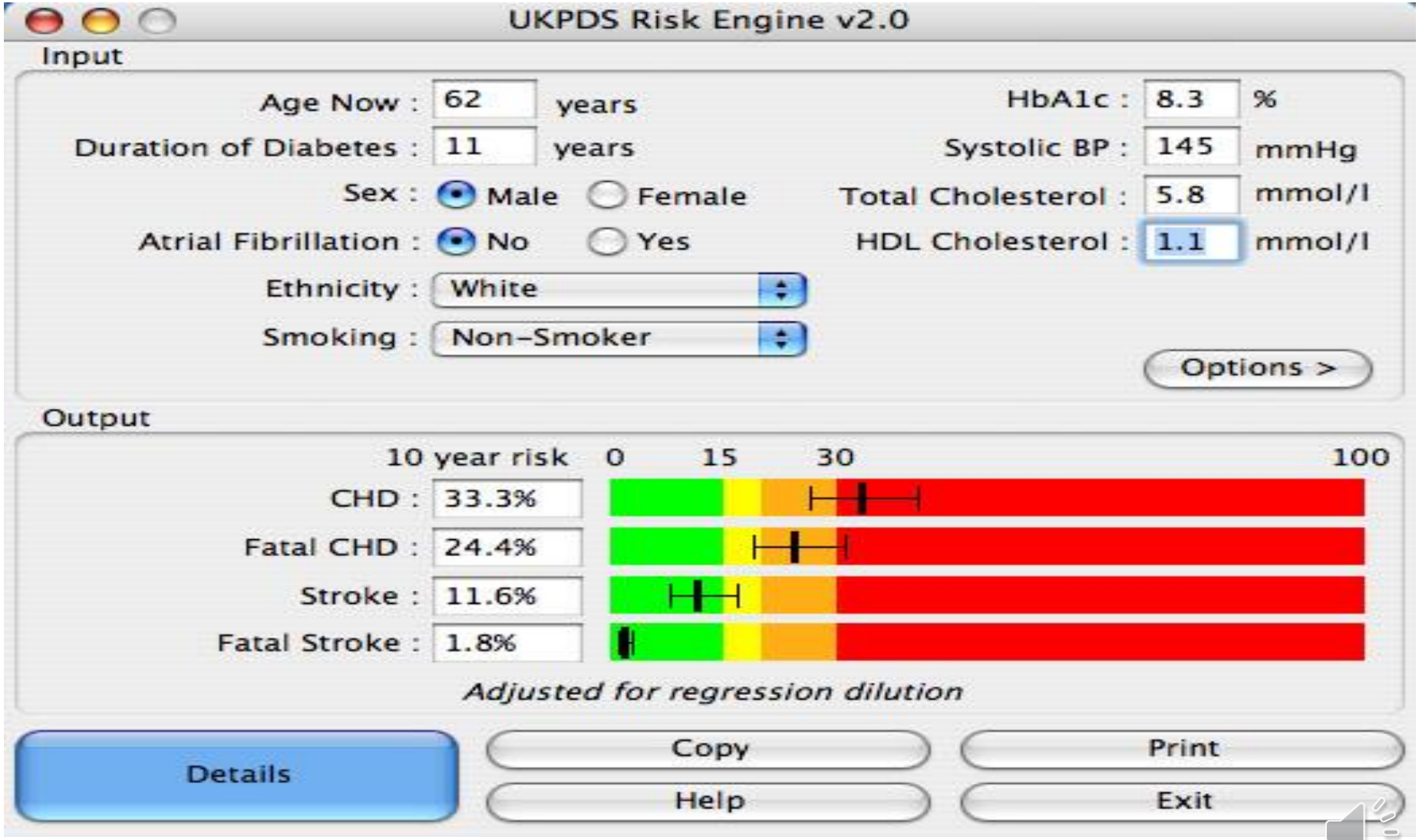
The risk of developing type 2 diabetes within 10 years is

Lower than 7	Low: estimated 1 in 100 will develop disease
7–11	Slightly elevated: estimated 1 in 25 will develop disease
12–14	Moderate: estimated 1 in 6 will develop disease
15–20	High: estimated 1 in 3 will develop disease
Higher than 20	Very high: estimated 1 in 2 will develop disease

Please turn over

Test designed by Professor Jaakko Tuomilehto, Department of Public Health, University of Helsinki, and Jaana Lindström, MFS, National Public Health Institute.

Diabetes Risk Score Engine



Step 2: Simple Blood Glucose Test

- ✓ Random capillary blood glucose is preferred due to convenience, can do anytime
- ✓ Testing capillary blood glucose using certified meter and strips is accurate enough for screening
- ✓ Higher sensitivity compared with fasting

Step 3: Confirmation Test

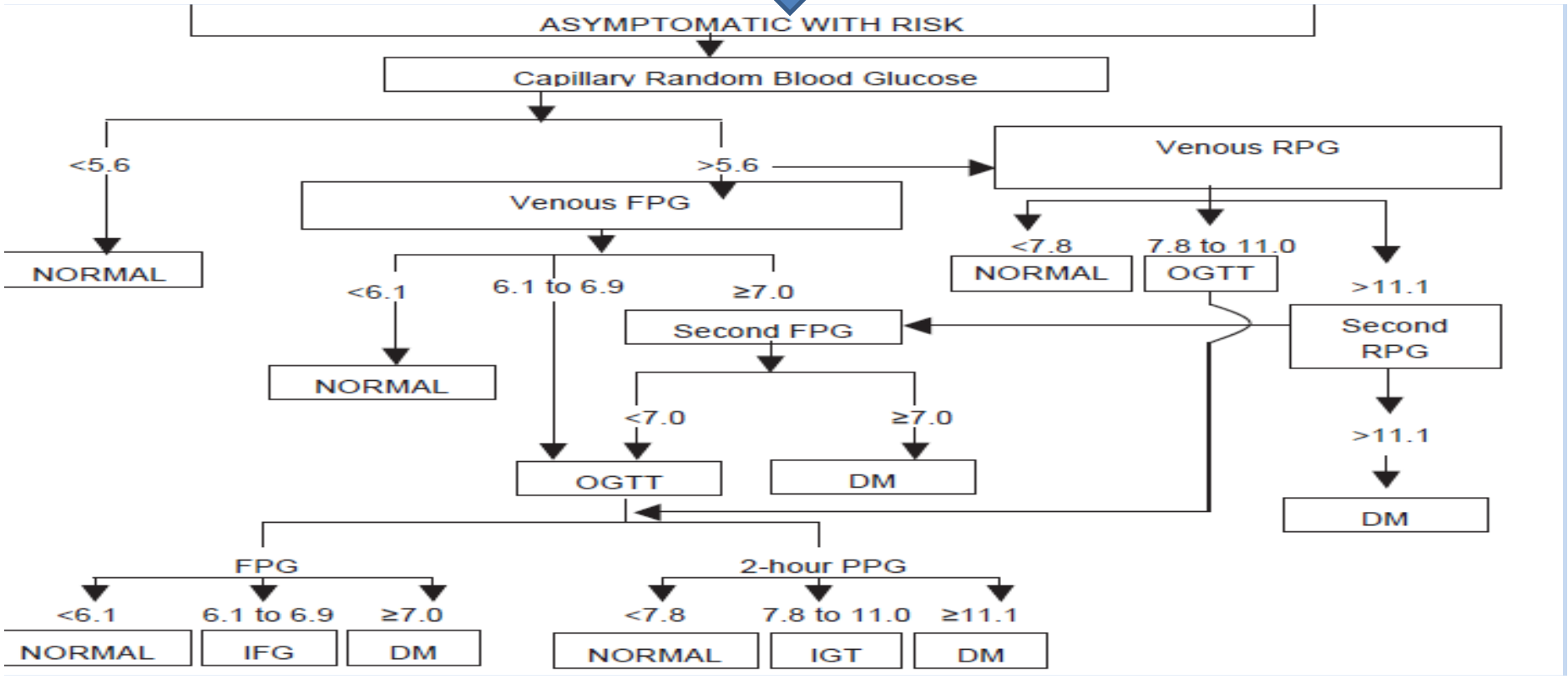
Tests	Results	
Fasting blood glucose Must be 8 hours fast	≥ 7 mmol/L or 126mg/dl	Repeat if equivocal
Oral Glucose Tolerance Test	≥ 11.1 mmol/L or 200mg/dl (at 2 hours)	Repeat if equivocal
Random blood glucose With classic symptoms	≥ 11.1 mmol/L or 200mg/dl	
A1c NGSP-certified with DCCT standardised	≥ 6.3% (Malaysian) ≥ 6.5% (WHO)	Repeat if equivocal

Diagnosis required 2 abnormal blood results from the same samples or 2 separate samples.

ADA 2020, CPG T2DM 2020

Proposed Model of Screening and Action

Diabetes Risk Score- (High Risk)



Pre-Diabetes/Diabetes

Refer for Behaviour Modification

Collaboration

+

Activity 2

Collaboration to Promote Health

Collaboration of Diabetes Awareness Prevention and Education programs at **EVERY AVAILABLE OPPORTUNITIES**

- Healthcare setting
- Government Agencies
  e.g. education sites
  Government office
- Non-government organizations
  e.g. senior citizen,
  Diabetes Association

- Private organizations
- Community setting
  e.g. faith healing centre,
  peer support groups,
  YMCA
- Pharmaceutical companies
- Worksite Wellness programs

Adapting the Diabetes Prevention Program Lifestyle Intervention for Delivery in the Community : The YMCA Model

Objective: YMCA staff deliver lifestyle DPP intervention in Community
Target to achieve 5-7% weight loss and physical activity 150 mins/ week

Method: RCT 12 mths, 2 YMCA facilities in US N=92
Intervention- Group Education intervention on diet, exercise, overcome barriers

Result: 6 mth – Weight reduction 6% (I) Vs 2% (C) ($p<0.001$)
12 mths –Weight reduction 6% (I) Vs 2% (C) ($p<0.001$)
intervention group had significant reduced estimated 10-yr risk of coronary heart disease (based on blood pressure, lipid levels and A1c)

First year cost per participant YMCA model Vs DPP US $275-$325 VS US $1400

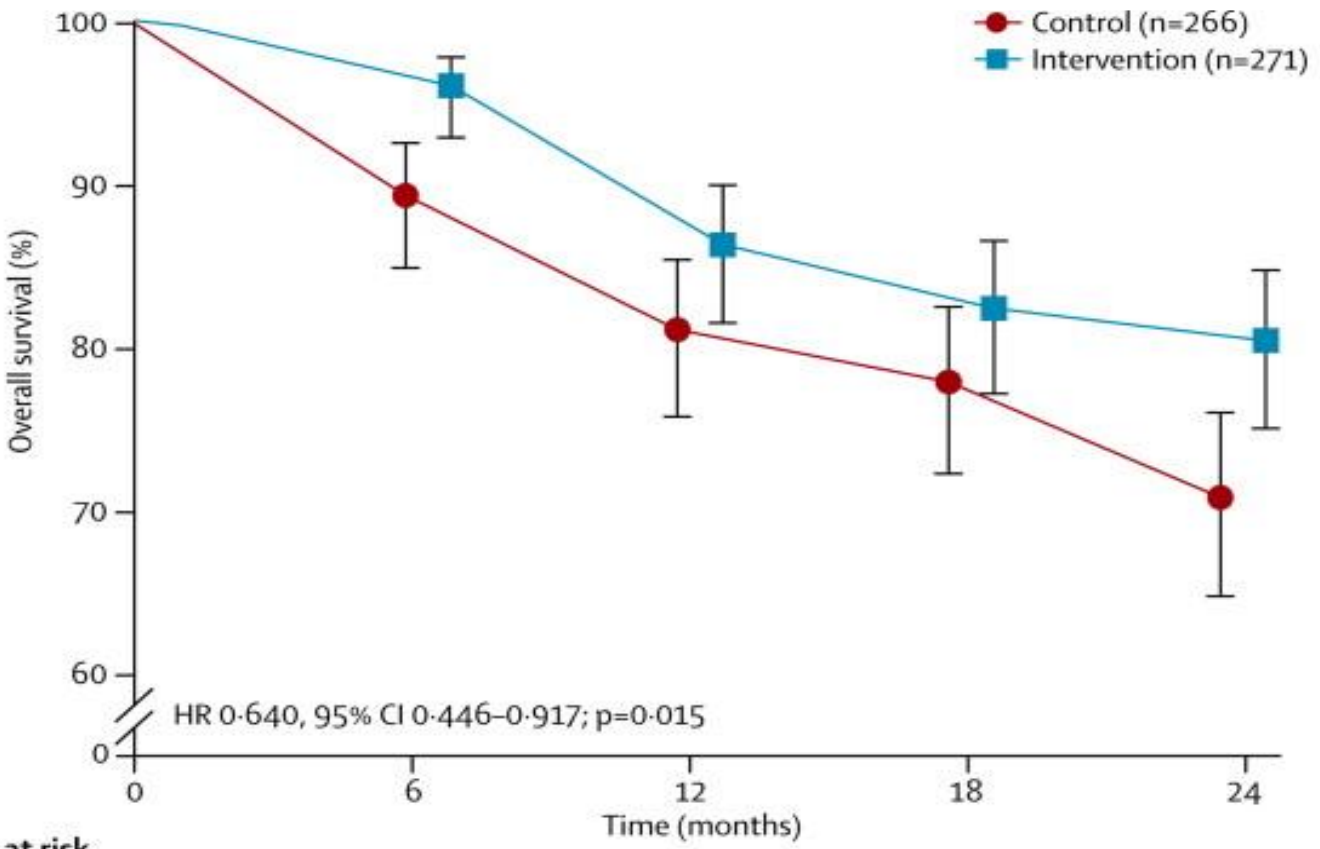
Ackermann et al The Diabetes Educator 2007

Effectiveness of Mobile Phone Messaging in PREVENTION of TYPE 2 DM by lifestyle modification in men in India:a prospective parallel-group, randomised controlled

N= 537
All men
35-55yrs

Duration
=2yrs

10 sites



Number at risk					
Control	266	228	215	176	187
Intervention	271	245	240	196	209
Cumulative incidence of diabetes					
Control	..	27 (10%)	48 (18%)	56 (21%)	73 (27%)
Intervention	..	10 (4%)	35 (13%)	45 (17%)	50 (18%)

Ramachandran et al 2013 The Lancet Diabetes & Endocrinology

Worksite Wellness Program

Workplaces are to adults

as

School are to children

The workplace presents a useful setting for introducing and maintaining health-promotion programs for working adults

Healthy People in Healthy Places Initiative
CDC , USA

Improving Employee Health: Evaluation of a Worksite Lifestyle Change Program to Decrease Risk Factors for Diabetes and Cardiovascular Disease

Method: Randomised 6 month control designed:

Wkly intervention at workplace x 3 mths follow by mthly targeting weight loss and increase physical activities

CAD risk factors measured.

Result: N=89 participants. (60 intervention 29 delayed control group)
At 6 mths Intervention group greater weight loss vs delayed control group. (p=0.001), greater improvement in HbA1c and other risk factors. The delayed group experience similar improvement after completing the intervention program.

Conclusion. A worksite Lifestyle change programme is feasible to decrease risks factors for diabetes and cardiovascular disease.

Kramer M et al. Journal of Occupational Environmental Medicine 2015; 57: 284-291.

Workplace Diabetes Prevention

- IMU –wellness programme was launched in May 2017 to promote overall wellness amongst the staff and students of IMU.

The Third National Plan of Action for Nutrition of Malaysia (NPANM III), 2016-2025

NPANM III 2016-2025

ENABLING STRATEGIES

ES 1: Promoting Maternal, Infant and Young Child Nutrition

ES 2: Promoting Healthy Eating and Active Living

ES 3: Preventing and Controlling Nutritional Deficiencies

ES 4: Preventing and Controlling Obesity and Other Diet Related NCD

ES 5: Sustaining Food Systems for Healthy Diets

ES 6: Supporting Efforts to Promote Food Safety and Quality

http://nutrition.moh.gov.my
Twitter :@Bahagian PemakananKKM
Facebook: Bahagian Pemakanan, Kementerian Kesihatan Malaysia
Youtube: Bahagian Pemakanan

Official Website
LEMBAGA PROMOSI KESIHATAN MALAYSIA
Unit No. 13-4, Aras 4, Galleria Cyberjaya
Jalan Teknokrat 6, Cyber 5
63000 Cyberjaya, Selangor Darul Ehsan.
www.mysihat.gov.my | Tel : 03-8311 9300 | Fax : 03-8322 5959
(Statutory Body placed under the Ministry of Health)

As a grant provider, the Board gives priority to the following areas for health promotion:

1. Prevention and control of tobacco and alcohol consumption
2. Promotion of healthy lifestyles, including promotion of exercise/ physical activity and healthy eating
3. Environmental health including healthy settings
4. Mental health
5. Cancer prevention
6. **Diabetes prevention**
7. Cardiovascular disease prevention
8. Prevention of obesity
9. Sexual health (including HIV/AIDS)
10. Research in health promotion
11. Promoting health through sport, cultural and arts activities

KOSPEN

- "KOSPEN" is an acronym for 'Komuniti Sihat Perkasa Negara' which means 'Healthy community, empowers the nation'
- It is a non-communicable disease (NCD) intervention programme started by Ministry of Health Malaysia (MOH) in October 2013

KOMUNITI SIHAT PERKASA NEGARA

- MOH collaborated with other government Ministries and existing programs and activities at grass-root levels to establish

➢ KOSPEN-KEMAS with Department of Community Development (KEMAS)

➢ KOSPEN-RT with Community Watch (Rukun Tetangga/ under Department of National Unity and Integration)

Kospen report 2015

KOSPEN

KOMUNITI SIHAT PERKASA NEGARA

KOSPEN focuses 5 scoops of NCD Risk factors:

- Healthy eating
- Active lifestyle
- Body weight management
- No smoking
- Regular screening of blood pressure, blood glucose and body mass index

- KOSPEN health volunteers are trained to perform health advocacy, health promotion and conduct BMI, Blood Pressure and Capillary Blood Glucose measurement in the community

Kospen report 2015

IMU News 28th Februry 2019

National Health and Morbidity Survey 2019

Recommendations

Non-Communicable Diseases and Risk Factors

- Dual prong approach in to tackle the current diabetes epidemic

➢Primary Health Care

- **Strengthen the primary care** to improve management of diagnosed patients
- Expand **multidisciplinary effort** towards management of all patients with NCDs
- Focus on **risk reduction** of NCDs for all patients
- **Self empowerment** of patients

➢Community Intervention

- **Health education and promotion** to reinforce the benefits of healthier choices, and to make these choices **available, accessible and affordable (supportive environment)**.
- Early detection needs to be focused towards **all layers and age groups** within community
- Improve **screening, detection** and find innovative ways to encourage public to come forward

- Strengthen Health-in-All policies to leverage the NCD agenda amongst agencies outside of health.

Acknowledgement -Dr. Feisul Idzwan Mustapha

Collaboration in Secondary Prevention

1. Improving Care and Promoting Health in Populations: *Standards of Care in Diabetes—2023*

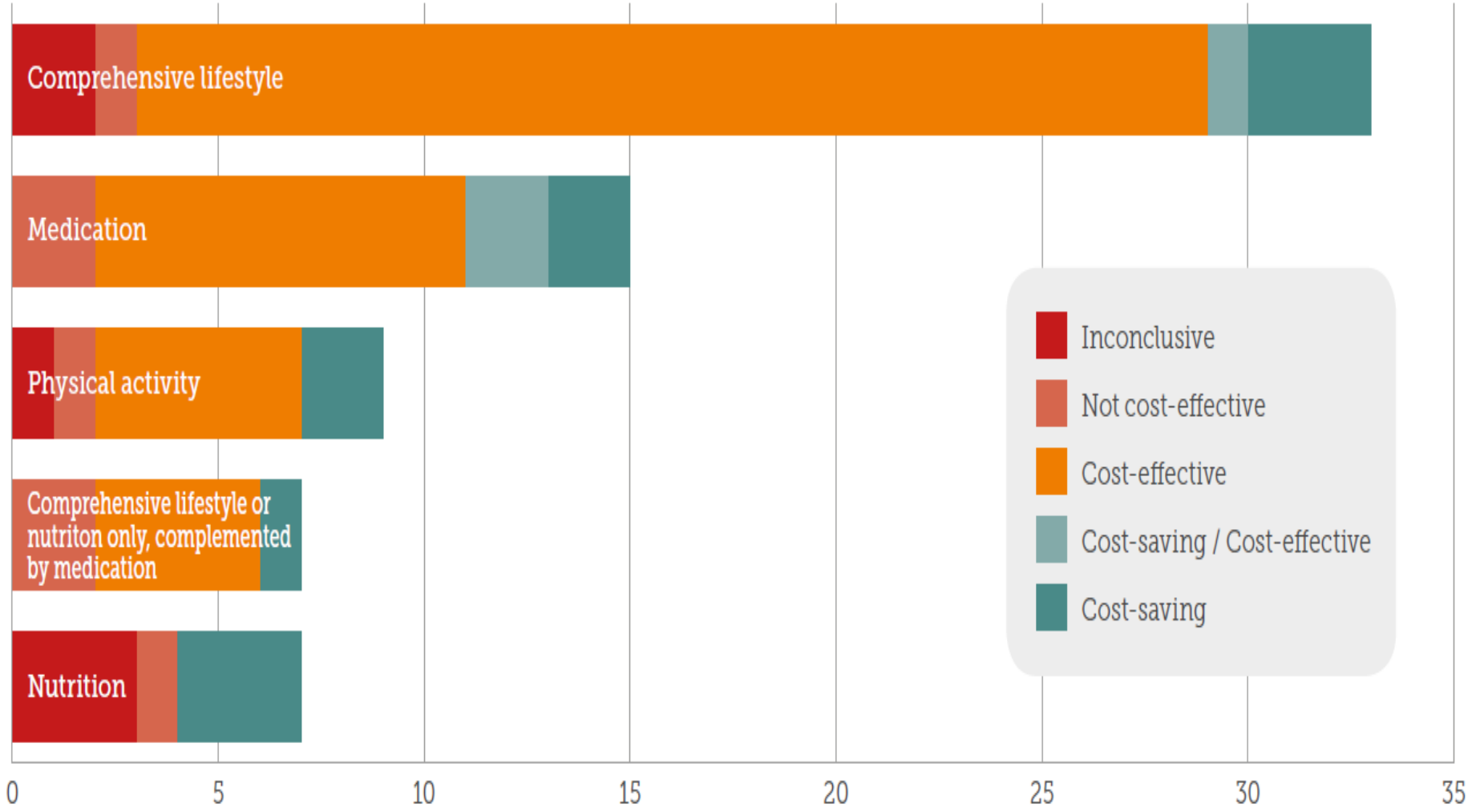
Diabetes Care 2023;46(Suppl. 1):S10–S18 | https://doi.org/10.2337/dc23-S001

Recommendation

- Ensure treatment are timely, collaborated with individual with diabetes and guided by evidence-based treatment guideline (Level B)
- Aligned approaches to diabetes management with Chronic care model (Level A)
- Care system should facilitate team based care and utilization of patient registries, decision support tools and community involvement (Level B)
- Assess diabetes healthcare maintainace with reliable and relevant health metrics to improve health outcomes and emphasize on care cost (Level B)

https://www.idf.org/our-activities/care-prevention/prevention.html

Figure 16 Cost-effectiveness by type of intervention, based on ID 50,000 acceptance threshold



Adapted from. Cost-effective solutions for the prevention of type 2 diabetes. 2016.

Table 7 Cost per QALY gained from various nutrition policies, from a health system perspective

Intervention	Cost per QALY gained	
Sugar-sweetened beverage ban	- ID 2 900	Cost saving
Tax on sugar-sweetened beverages	- ID 513 000	Cos saving
Subsidy on vegetables	+ ID 880 000	Not cost effective
Monetary reward on purchase of vegetables	Not significant	
Budget increase	Not significant	

Adapted from. Cost-effective solutions for the prevention of type 2 diabetes. 2016.

Research

- Research is important in every level of Diabetes Prevention
- Outcomes of research help:

❑identify gaps

❑guide development strategy for future direction in primary, secondary and tertiary diabetes prevention

Summary

- Implementation of diabetes awareness and health promotion have to involve all levels of care for effectiveness
- Diabetes prevention challenge goes beyond the healthcare system
- Diabetes Prevention could be cost effective

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Thank you for listening