

# Steno Diabetes Center Aarhus

**Seminarios de Epidemiología de Diabetes**

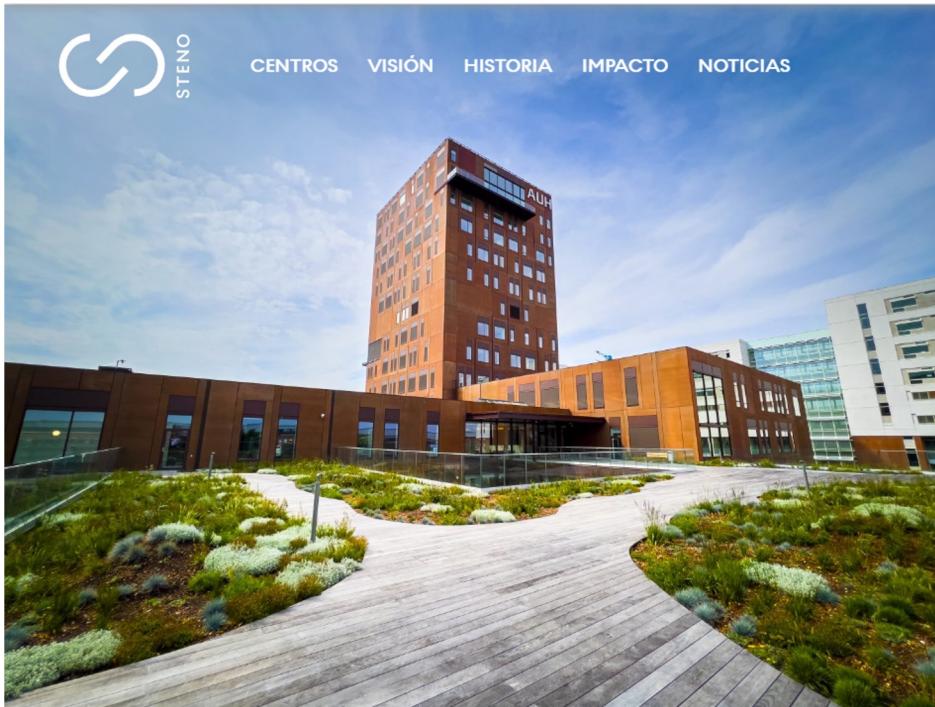


## Hay siete centros Steno Diabetes en Dinamarca, Groenlandia y las Islas Feroe.

Juntos, han tratado a más de 30.000 personas con diabetes y han beneficiado a miles más a través de investigación, educación e intervenciones preventivas. La configuración y los servicios de cada centro se adaptan a las necesidades específicas de la región o país. Algunos se centran en desarrollar competencias y colaboraciones para crear un mejor camino para el paciente, otros en generar nuevos conocimientos o abordar la inequidad en salud en la diabetes.



CENTROS   VISIÓN   HISTORIA   IMPACTO   NOTICIAS



# Centro de Diabetes Steno Aarhus

Colaboración entre sectores para mejorar la atención

## Áreas de investigación



Nutrición, obesidad y  
metabolismo lipídico.



Fisiopatología y  
farmacología de la diabetes.



Complicaciones diabéticas



Niños, jóvenes y embarazo.

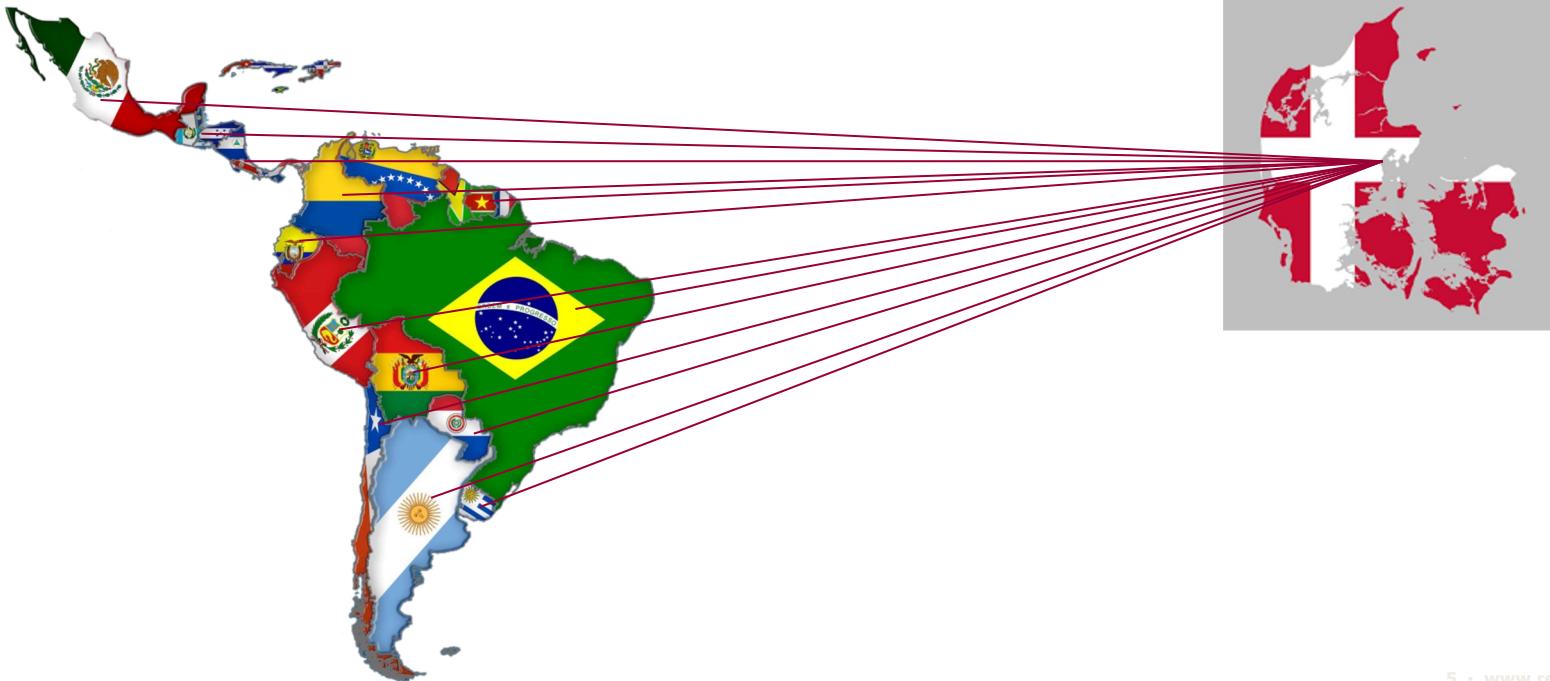


Epidemiología



Intersectorial (danés)

# Internacionalización de la estrategia de investigación del SDCA



# Internacionalización de la estrategia de investigación del SDCA



Daniel Witte



Annelli Sandbæk



Omar Silverman

# Antecedentes

 **537 million adults** (20-79 years) are living with diabetes worldwide – 1 in 10.

 The total number of people with diabetes is predicted to rise to **643 million** (1 in 9 adults) by 2030 and **784 million** (1 in 8 adults) by 2045.

 **4 in 5** people with diabetes (81%) live in low income and middle-income countries.

 Diabetes caused **6.7 million** deaths in 2021 – 1 every 5 seconds.

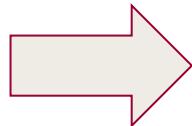
 An estimated **44%** of adults living with diabetes (**240 million** people) are undiagnosed. Almost **90%** of these people live in low income and middle-income countries.

 Diabetes was responsible for an estimated **USD 966 billion** in global health expenditure in 2021. This represents a **316%** increase over the last 15 years.

 **541 million** adults worldwide, or **1 in 10**, have impaired glucose tolerance, placing them at high risk of developing type 2 diabetes.

 **68%** of adults with diabetes live in the **10 countries** with the highest number of people with diabetes.

## Brechas en el conocimiento local



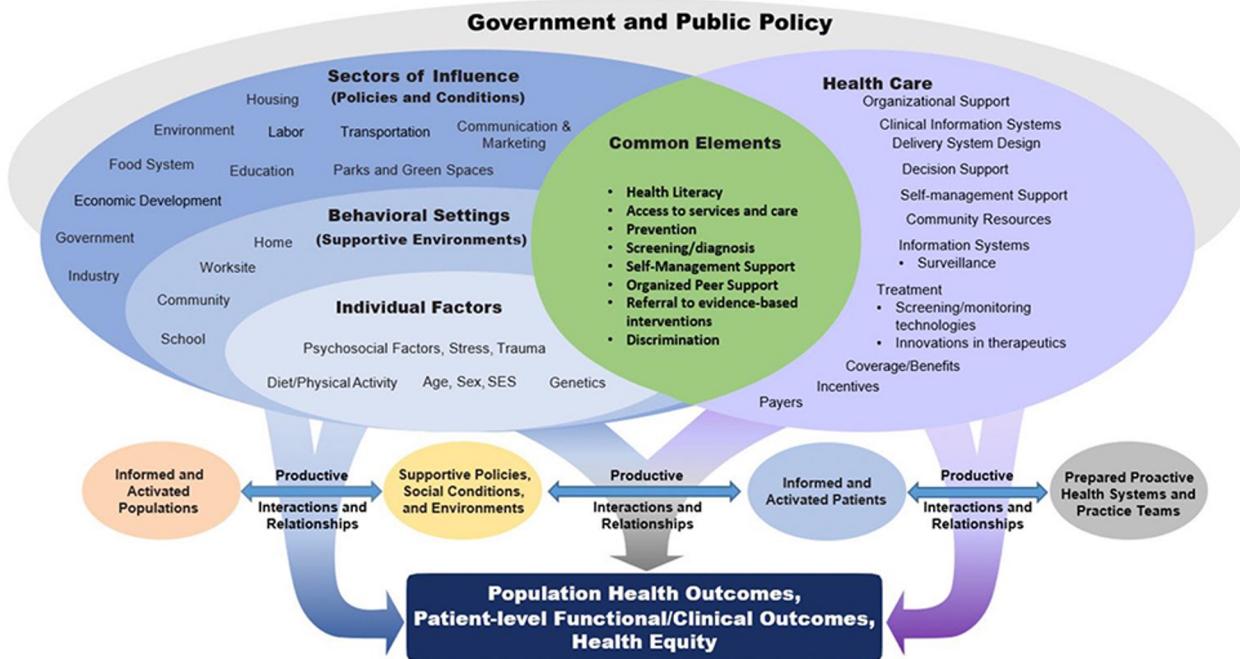
- Estimaciones precisas sobre la prevalencia e incidencia de diabetes y sus complicaciones
- Experiencia en la organización de estrategias prevención adaptadas localmente, así como en el procesamiento, manejo y análisis de datos complejos almacenados en grandes repositorios de datos



# Antecedentes

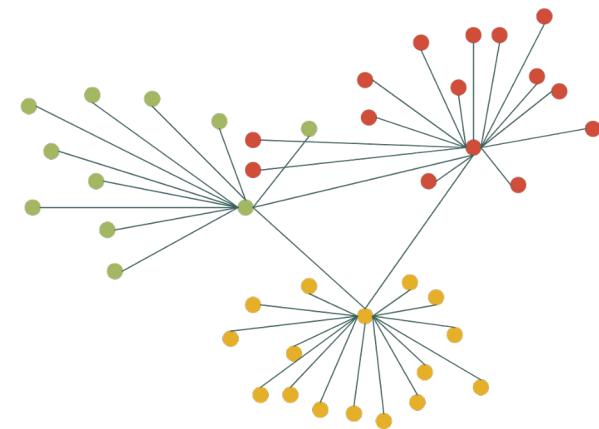


Añaden una capa extra de complejidad en la implementación de soluciones para mitigar la carga de diabetes en países de AL



# Objetivo

Establecer y ampliar la red de colaboradores del SDCA con investigadores de instituciones en países de América Latina



# La estrategia

## Reunir a la gente

Establecer la red de colaboradores con intereses en común mediante la organización de seminarios en línea



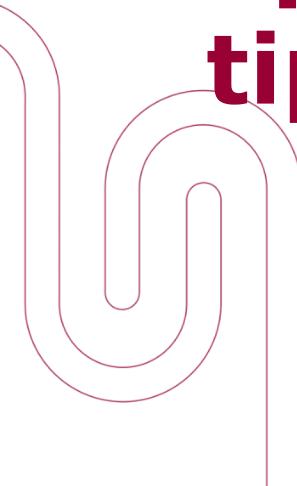
## Proyectos colaborativos y co-aplicación a fondos

Aplicar a fondos e implementar los proyectos

## Desarrollo de proyectos

Establecer las bases de proyectos y acuerdos sobre co-autorías, co-supervisión de alumnos

# Epidemiología de diabetes tipo 2



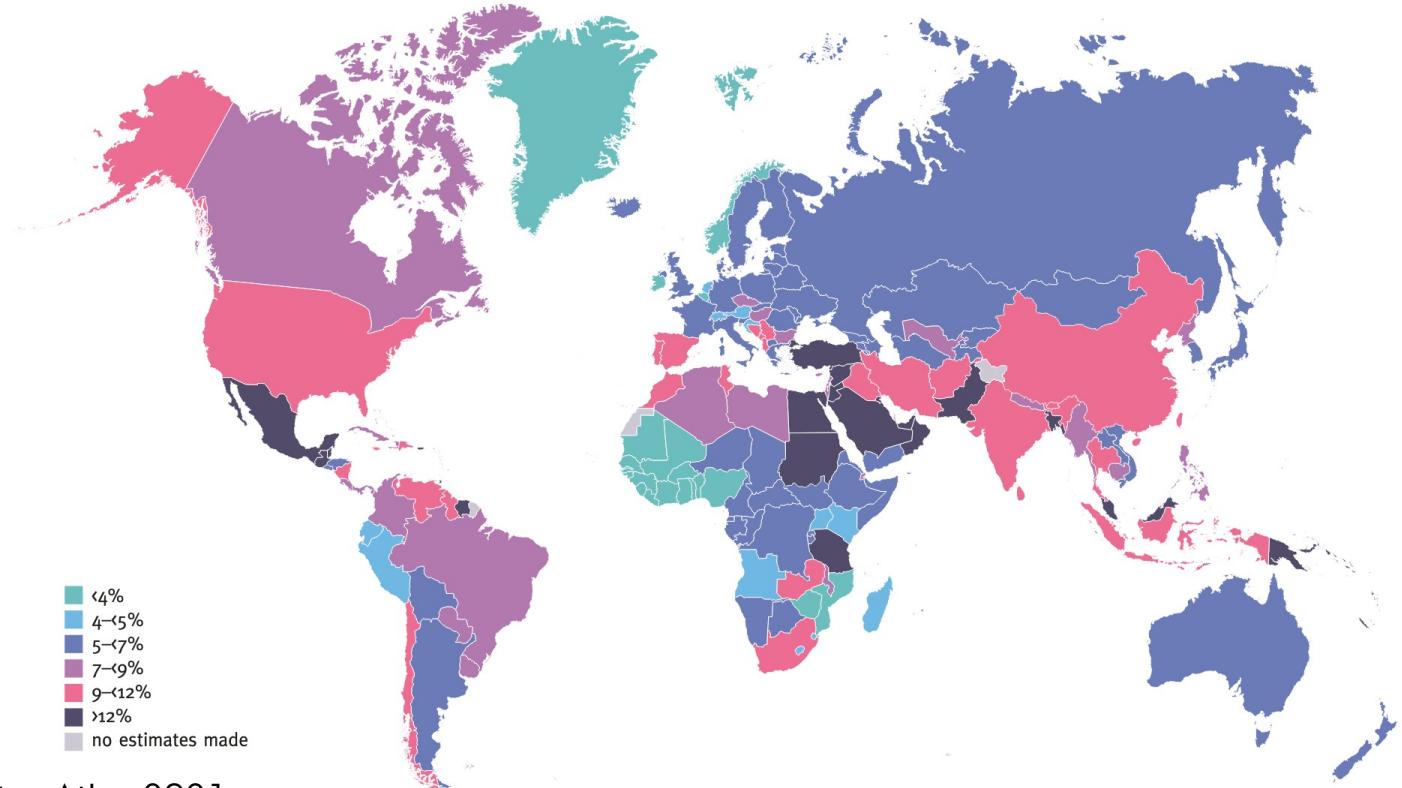
# EPIDEMIOLOGÍA DE DIABETES

- ▶ Prevalencia actual
- ▶ Opciones diagnósticas
- ▶ ¿Cuales son las fuentes de prevalencia?
- ▶ ¿De donde provienen los datos?



# PREVALENCIA A NIVEL GLOBAL: DIABETES

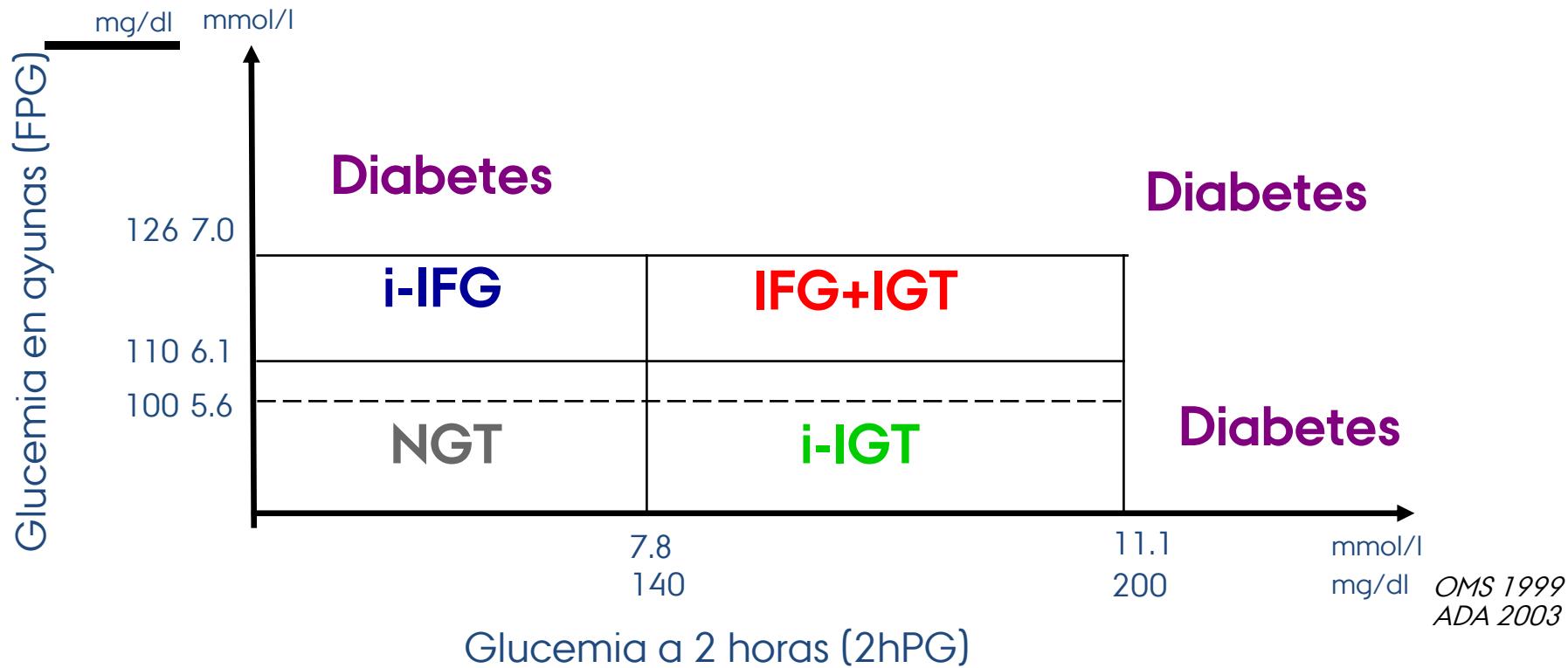
Map 3.2 Estimated age-adjusted comparative prevalence of diabetes in adults (20–79 years) in 2021



IDF Diabetes Atlas 2021.

[https://diabetesatlas.org/idfawp/resource-files/2021/07/IDF\\_Atlas\\_10th\\_Edition\\_2021.pdf](https://diabetesatlas.org/idfawp/resource-files/2021/07/IDF_Atlas_10th_Edition_2021.pdf)

# Matriz Diagnóstica (OMS 1999)



IFG: alteración de la glucemia en ayunas

IGT: intolerancia a la glucosa

# Matriz diagnóstica Hemoglobina Glicosilada (HbA1c)

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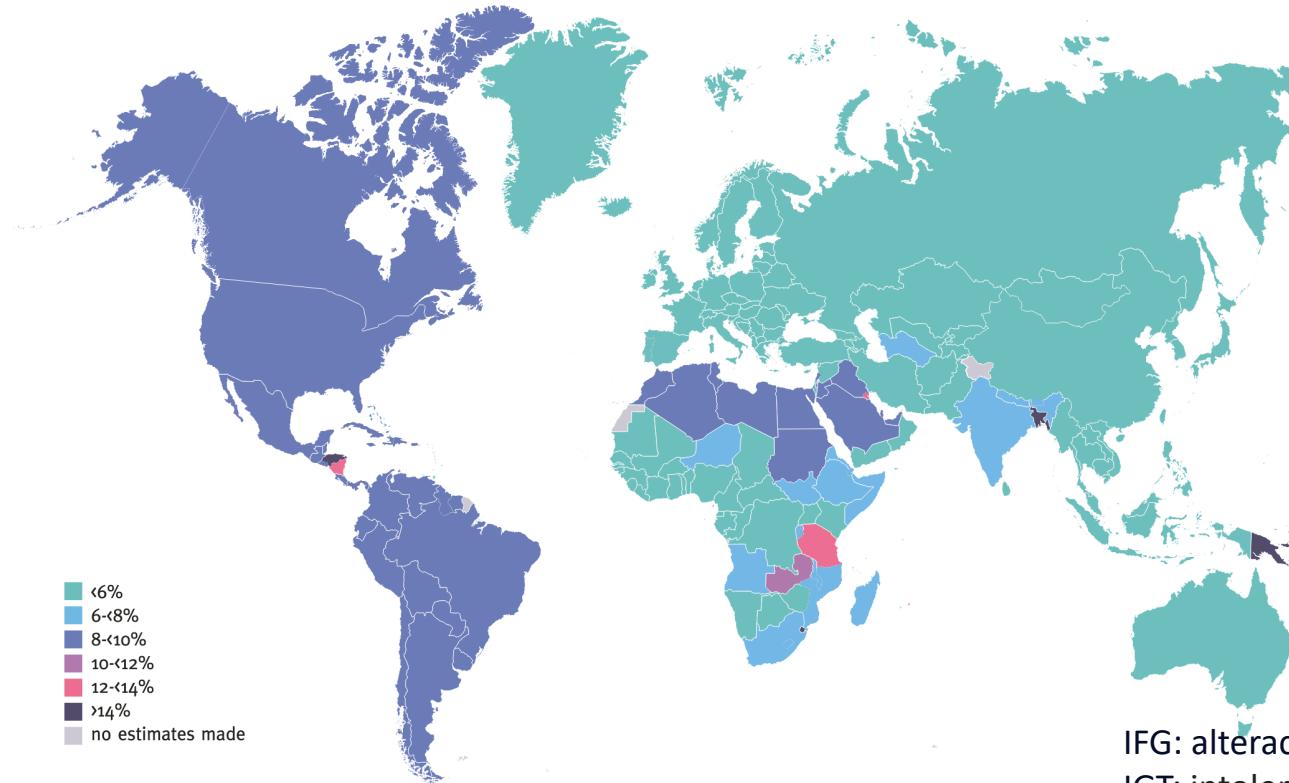
Normoglucemia		Pre-diabetes	Diabetes
5.7	6.0	6.5	6.5
39	42	49	49

%  
mmol/mol

ADA 2010  
WHO 2011

# PREVALENCIA A NIVEL GLOBAL : IFG

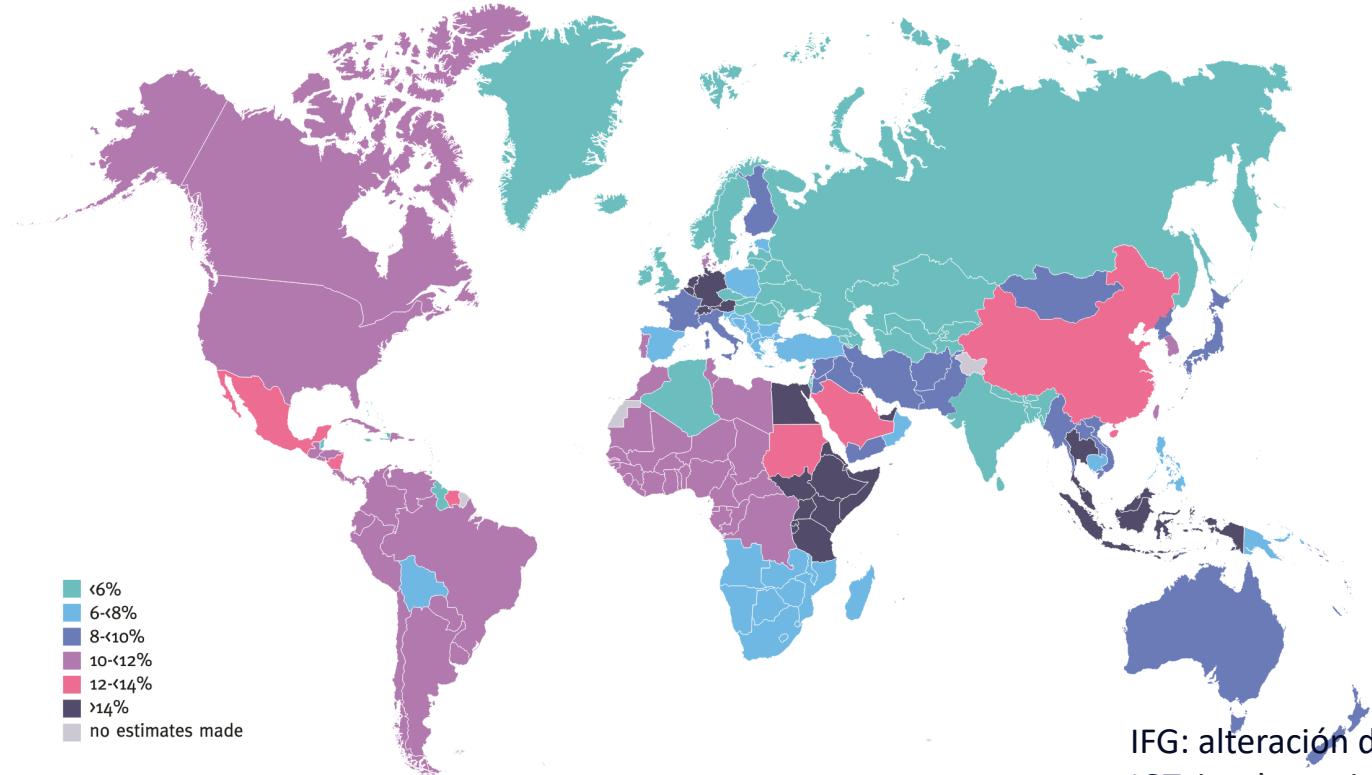
Map 3.6 Age-adjusted comparative prevalence of impaired fasting glucose in adults in 2021



IFG: alteración de la glucemia en ayunas  
IGT: intolerancia a la glucosa

# PREVALENCIA A NIVEL GLOBAL : IGT

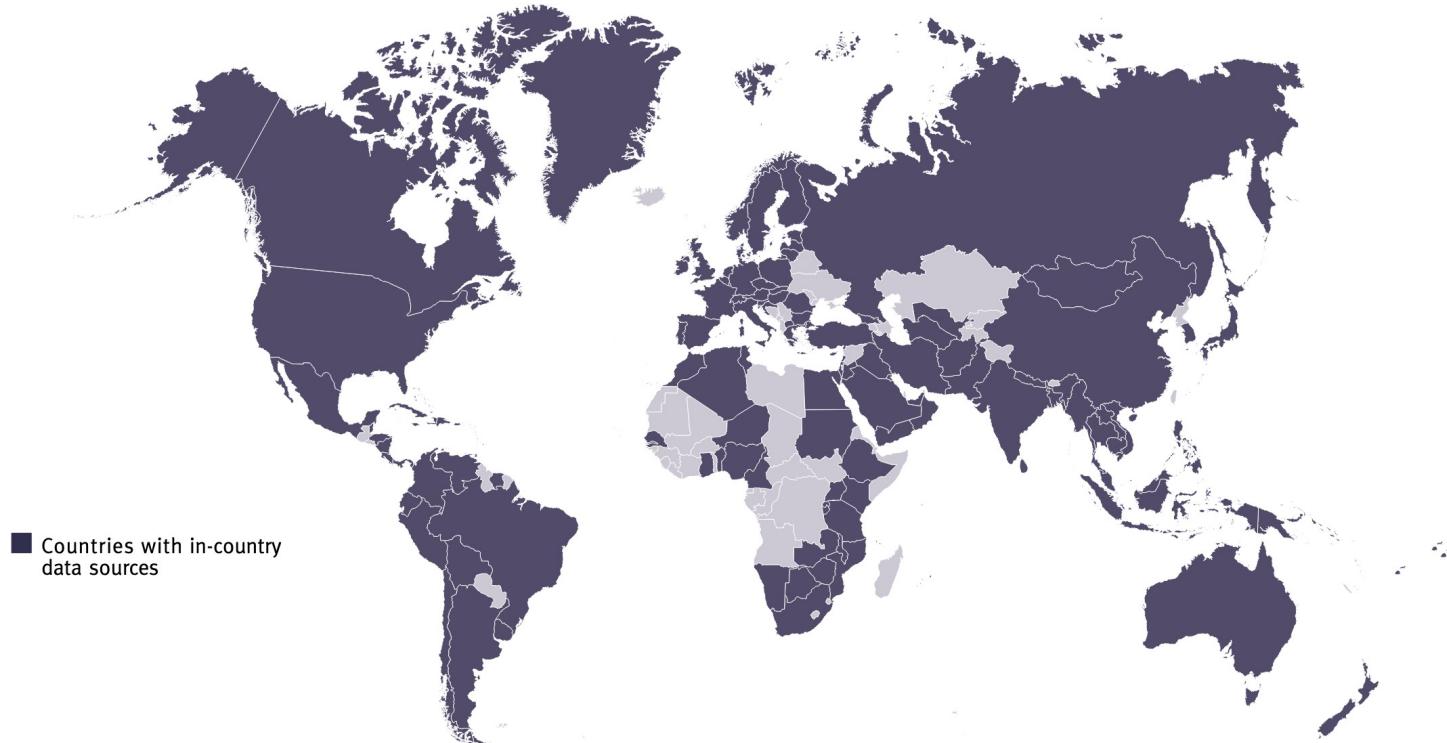
Map 3.7 Age-adjusted comparative prevalence of impaired glucose tolerance in adults in 2021



IFG: alteración de la glucemia en ayunas  
IGT: intolerancia a la glucosa

# FUENTES DE DATOS 2021: DIABETES

**Map 2.1** Countries and territories with in-country data sources on diabetes

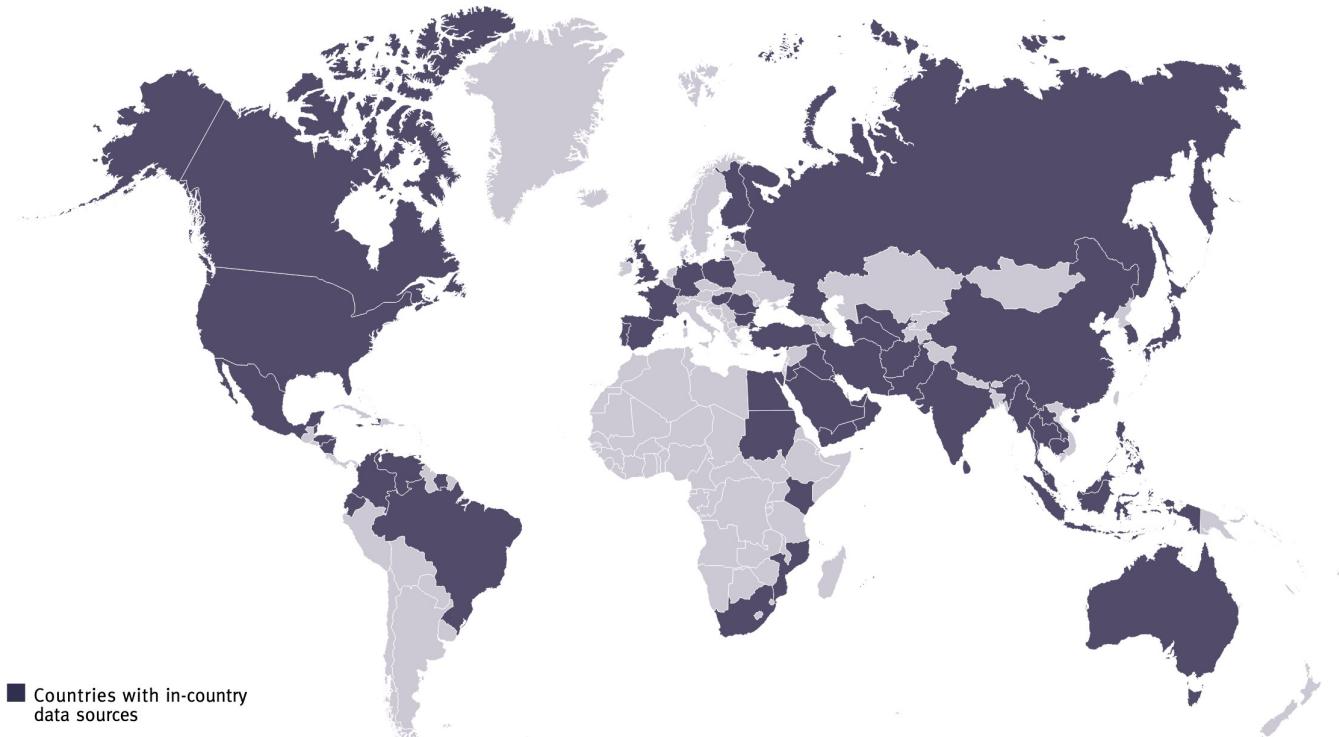


IDF Diabetes Atlas 2021.

[https://diabetesatlas.org/idfawp/resource-files/2021/07/IDF\\_Atlas\\_10th\\_Edition\\_2021.pdf](https://diabetesatlas.org/idfawp/resource-files/2021/07/IDF_Atlas_10th_Edition_2021.pdf)

# FUENTES DE DATOS 2021: DIABETES NO DIAGNOSTICADA

**Map 2.2** Countries and territories with data sources on the proportion of adults (20–79 years) with previously undiagnosed diabetes

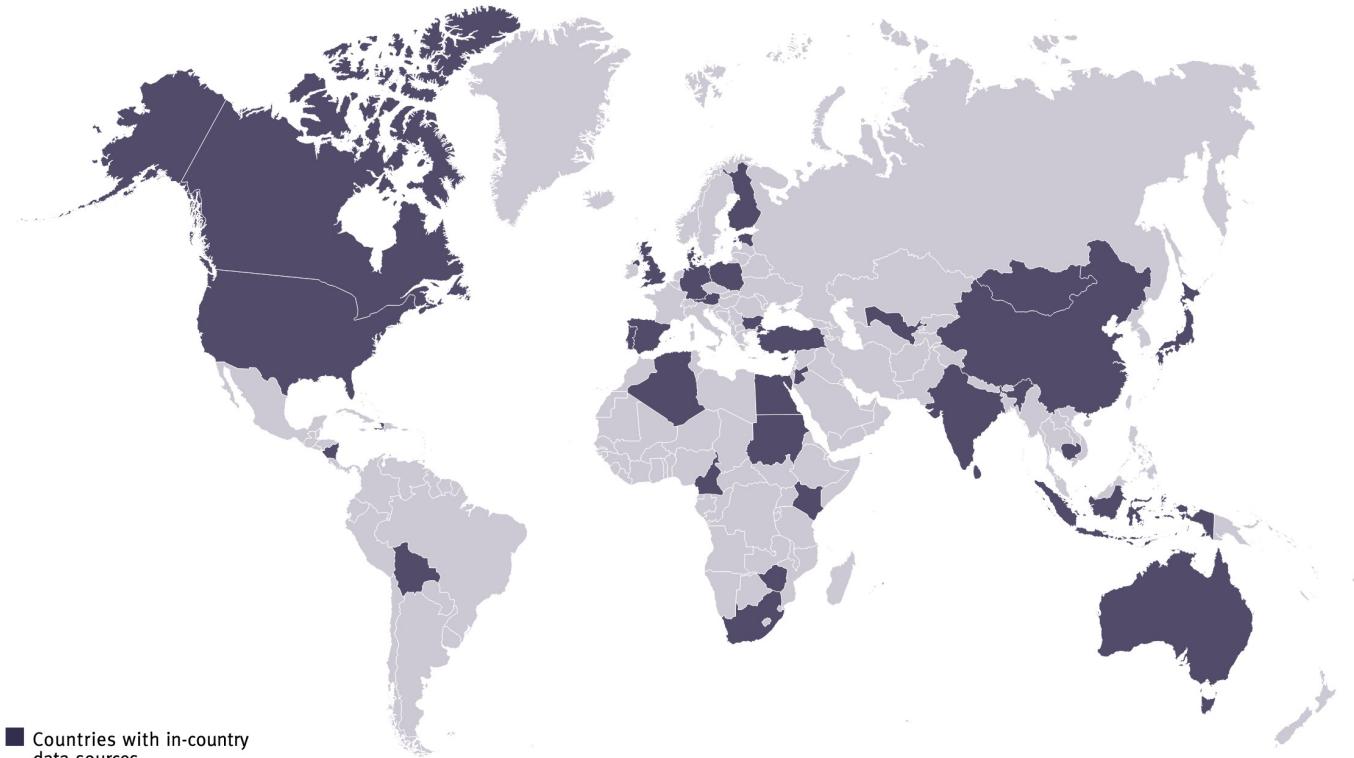


IDF Diabetes Atlas 2021.

[https://diabetesatlas.org/idfawp/resource-files/2021/07/IDF\\_Atlas\\_10th\\_Edition\\_2021.pdf](https://diabetesatlas.org/idfawp/resource-files/2021/07/IDF_Atlas_10th_Edition_2021.pdf)

# FUENTES DE DATOS 2021: IGT

Map 2.3 Countries and territories with data sources on impaired glucose tolerance in adults (20–79 years)



IDF Diabetes Atlas 2021.

[https://diabetesatlas.org/idfawp/resource-files/2021/07/IDF\\_Atlas\\_10th\\_Edition\\_2021.pdf](https://diabetesatlas.org/idfawp/resource-files/2021/07/IDF_Atlas_10th_Edition_2021.pdf)

## DM\_selected\_studies\_10th\_edition

Country	Authors	Study year	Study sample	Study Design	Diagnostic method	PUBMED ID	Publication year	DOI	Publication type	Study representation
Argentina	de Sereday MS, Gonzalez C, Giorgini D, et al	1995	1794	population-based	OGTT	15525876	2004	Diabetes Metab. 2004 Sep;30(4):335-9.	Peer-reviewed	regional
Aruba	Aruba Department of Public Health and Central Bureau of Statistics	2006	674	population-based	FBG		2006	STEPS Aruba 2006: Chronic Disease Risk Factor Surveillance Data Book	WHO STEPS survey	national
Belize	Barcelo A, Gregg EW, Gerzoff RB, Wong R, Perez Flores E, Ramirez-Zea M, Cafiero E, Altamirano J, et al	2006	1622	population-based	OGTT	22323417	2012	Diabetes Care. 2012 Apr;35(4):738-40. doi: 10.2337/dc11-1614	Peer-reviewed	national
Belize	PAHO, CDC, MoH, CAMDI Report	2009	2441	population-based	OGTT	No PubMed	2009	CAMDI Survey of Diabetes, Hypertension and Chronic Disease Risk Factors	National Health Survey	national
Bolivia	Barcelo A, Daroca M, Ríbera R, et al	1998	2533	population-based	OGTT	11774803	2001	Rev Panam Salud Pública. 2001 Nov;10(5):318-23.	Peer-reviewed	regional
Brazil	Schmidt MI, Duncan BB, Hoffmann JF, et al	2006	54369	population-based	adjusted SR	19936501	2006	Rev Saude Publica. 2009 Nov;43 Suppl 2:74-82.	Peer-reviewed	national
Brazil	Luisa Sorio Flori , Monica Rodrigues Campos	2008	12423	population-based	adjusted SR	28513791	2017	Rev Bras Epidemiol. 2017;20(1):16-29. doi: 10.1590/1980-5497201700010002.	Peer-reviewed	national
Brazil	Iser BP, Claro RM, de Moura EC, Malta DC, Morais Neto OL.	2009	54367	population-based	adjusted SR	22002146	2011	Rev Bras Epidemiol. 2011; 14(3):90-102	Peer-reviewed	national
Brazil	Malta DC, Duncan BB, Schmidt MI, et al.	2015	8528	population-based	HbA1c	31596377	2019	Rev Bras Epidemiol. 2019 Oct 7;22Suppl 02(Epub 2019 Oct 7):E190006.SUPPL_2.	Peer-reviewed	national
Brazil	Brazilian Health Ministry and Brazilian Institute of Geography and Statistics	2019	155633541	population-based	adjusted SR		2020		National Health Survey	national
Chile	Petermann-Rocha F, Ulloa N., Adela M., et al.	2017	13025	population-based	FBG	32847773	2020	Nutrition . Nov-Dec 2020;79-80:110932. doi: 10.1016/j.nut.2020.110932. Epub 2020 Oct 10.	Peer-reviewed	national
Colombia	Escobedo L., Buitron M, Velasco JC, et al	2005	1553	population-based	FBG	19719706	2009	Diabet Med. 2009 Sep;26(9):864-71.	Peer-reviewed	regional
Colombia	Secretaría de salud, Santander	2010	1575	population-based	FBG	none	2010	Factores de riesgo para enfermedades crónicas en Santander, metodo STEPwise	National Health Survey	regional
Costa Rica	Rosello M, Arauz G, Padilla G, et al	1998	43953	population-based	adjusted SR	NoID	2004	Acta médica Costarricense, Oct-Dec, 46(4), 195-95.	Peer-reviewed	national
Costa Rica	Barcelo A, Gregg EW, Gerzoff RB, Wong R, Perez Flores E, Ramirez-Zea M, Cafiero E, Altamirano J, et al	2006	1139	population-based	OGTT	22323417	2012	Diabetes Care. 2012 Apr;35(4):738-40. doi: 10.2337/dc11-1614	Peer-reviewed	local
Costa Rica	Wong-McClure RA, Gregg EW, Barcelo A, et al.	2010	3653	population-based	FBG	26516694	2011	J Diabetes. 2016 Sep;8(5):686-92. doi: 10.1111/1753-0407.12348. Epub 2015 Dec 1.	Peer-reviewed	national
Cuba	Gorbea M B, Varona P	2011	9273849	population-based	FBG		2018	Editorial de Ciencias Médicas SBN: 978959212894-1	National Health Survey	national
Dominican Republic	Ministry of Health Dominican Republic	2007	55170	population-based	adjusted SR	NoID	2007	National Health Survey República Dominicana	National Health Survey	national
Dominican Republic	Peguero P.M., Collado D., Warden F., Almonte C., Suero M.,	2011	3526	population-based	FBG	no ID	2012	REVISTAARCHIVOS DOMINICANOS DE CARDIOLOGÍA	Peer-reviewed	national
Ecuador	Escobedo L., Buitron M, Velasco JC, et al	2005	1638	population-based	FBG	19719706	2009	Diabet Med. 2009 Sep;26(9):864-71.	Peer-reviewed	regional
Haiti	Ministry of Health Haiti	2017	2404	population-based	HbA1c		2018	Haiti Enquête Mortalité, Morbidité et Utilisation des Services(EMMUS-VI 2016-2017)	National Health Survey	national
Honduras	PAHO, CAMDI	2004	1696	population-based	OGTT	NoID	2009	CAMDI Report Honduras	National Health Survey	local
Honduras	Barcelo A, Gregg EW, Gerzoff RB, Wong R, Perez Flores E, Ramirez-Zea M, Cafiero E, Altamirano J, et al	2006	1237	population-based	OGTT	22323417	2012	Diabetes Care. 2012 Apr;35(4):738-40. doi: 10.2337/dc11-1614	Peer-reviewed	regional
Jamaica	Ferguson TS, Francis DK, Tulloch-Reid MK, Younger NO, McFarlane SR, Wilks RJ.	2008	2848	population-based	FBG	22097672	2011	West Indian Med J. 2011 Jul;60(4):422-8.	Peer-reviewed	national
Jamaica	Cunningham-Myrie C, Younger-Coleman N, Tulloch-Reid M, McFarlane S, Francis D, Ferguson TS, et al	2008	2848	population-based	FBG	24128301	2013	Trop Med Int Health. 2013 Nov; 18(11):1365-78. doi: 10.1111/tmi.12190. Epub 2013 Oct 22.	Peer-reviewed	national
Mexico	Jiménez-Corona A, Rojas R, Gómez-Pérez FJ, et al	2006	6006	population-based	FBG	20585726	2010	Salud Pública Mex. 2010;52 Suppl 1:S27-35.	Peer-reviewed	national
Mexico	Encuesta Nacional de Salud y Nutrición	2012	696159000	population-based	adjusted SR	n/a	2012	Encuesta Nacional de Salud y Nutrición 2012. Resultados nacionales Primera Encuesta	National Health Survey	national
Mexico	Kumar A, Wong R, Ottenbacher Kj, et al.	2012	2012	population-based	HbA1c	26872919	2016	Ann Epidemiol. 2016 Mar;26(3):163-70. doi: 10.1016/j.annepidem.2015.12.006.	Peer-reviewed	national
Nicaragua	Barcelo A, Gregg EW, Gerzoff RB, Wong R, Perez Flores E, Ramirez-Zea M, Cafiero E, Altamirano J, et al	2006	1694	population-based	OGTT	22323417	2012	Diabetes Care. 2012 Apr;35(4):738-40. doi: 10.2337/dc11-1614	Peer-reviewed	regional
Nicaragua	PAHO, CAMDI	2010	1993	population-based	OGTT	NoID	2010	CAMDI Report, Nicaragua	National Health Survey	local
Panama	Anselmo J. Mc Donald Posso, MD, MSc, Ryan A. Bradshaw Meza, MD,Enrique A. Mendoza	2011	3497	population-based	FBG	27108143	2015	Ann Glob Health. 2015 Nov-Dec;81(6):754-64. doi: 10.1016/j.aogh.2015.12.014. Epub 2015 Oct 20.	Peer-reviewed	national
Peru	Segundo Seelen, Moisés Rosas,Arturo Arias, Ernesto Huayta	2010	1677	population-based	FBG		2014	Prevalence of diabetes and impaired fasting glucose in Peru: report from PERU	Peer-reviewed	national
Puerto Rico	Ho G, Qian H, Kim M, et al	1999	3052	population-based	adjusted SR	16805975	2006	Rev Panam Salud Pública. 2006 May;19(5):331-9.	Peer-reviewed	national
Suriname	Janna Minderhoud, Jerrel C Pawiroedjo, Anne-Marie T Bueno de Mesquita-Voigt, Herman C	2014	2806	population-based	Random BG	26486418	2015	Minderhoud J,Pawiroedjo JC, Bueno deMesquita-Voigt A-MT, et al.Br J Ophthalmol. 2015;99(10):1230-35.	Peer-reviewed	national
Uruguay	Ministry of Health	2013		population-based	FBG		2013		WHO STEP study	national
Uruguay	Ministerio de Salud Pública	2014	2462	population-based	FBG		2013	National health survey	National Health Survey	national
Venezuela	Nieto-Martínez, R., Mechanick, J. I., Brajkovich, I., Ugel, E., Risques, A., Florez, H., & González, J.	2010	1334	population-based	FBG	29249672	2018	Prevalence of diabetes in three regions of Venezuela. The VEMSOLS study results	Peer-reviewed	national

# DATA SOURCES: DIABETES

Figure 2.1 Classification of diabetes data sources



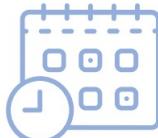
## Method of diabetes diagnosis

- Oral glucose tolerance test (OGTT)
- Fasting blood glucose (FBG)
- Self-reported diabetes
- Medical record or clinical diagnosis
- Haemoglobin A1c (HbA1c)<sup>i</sup>



## Sample size

- Equal to or greater than 5000 people
- 1500 to 4999 people
- 700 to 1499 people
- Less than 700 people



## Age of the data source (i.e. time since study conducted)

- Less than 5 years
- 5 to 9 years
- 10 to 19 years
- 20 or more years



## Representativeness of study sample

- Nationally representative
- Regionally representative
- Locally representative
- Ethnic (or other) specific group representative



## Type of publication

- Peer-reviewed publication
- National health survey
- Other official report or publication by a health regulatory body
- Unpublished study

<sup>i</sup> HbA1c is classified as least preferred because quality-assured HbA1c measurement is not available on a global scale.

# OTRAS FUENTES DE DATOS DE PREVALENCIA

Articles



## Global, regional, and national burden of diabetes from 1990 to 2021, with projections of prevalence to 2050: a systematic analysis for the Global Burden of Disease Study 2021



GBD 2021 Diabetes Collaborators\*



### Summary

**Background** Diabetes is one of the leading causes of death and disability worldwide, and affects people regardless of country, age group, or sex. Using the most recent evidentiary and analytical framework from the Global Burden of Diseases, Injuries, and Risk Factors Study (GBD), we produced location-specific, age-specific, and sex-specific estimates of diabetes prevalence and burden from 1990 to 2021, the proportion of type 1 and type 2 diabetes in 2021, the proportion of the type 2 diabetes burden attributable to selected risk factors, and projections of diabetes prevalence through 2050.

*Lancet* 2023; 402: 203-34

Published Online

June 22, 2023

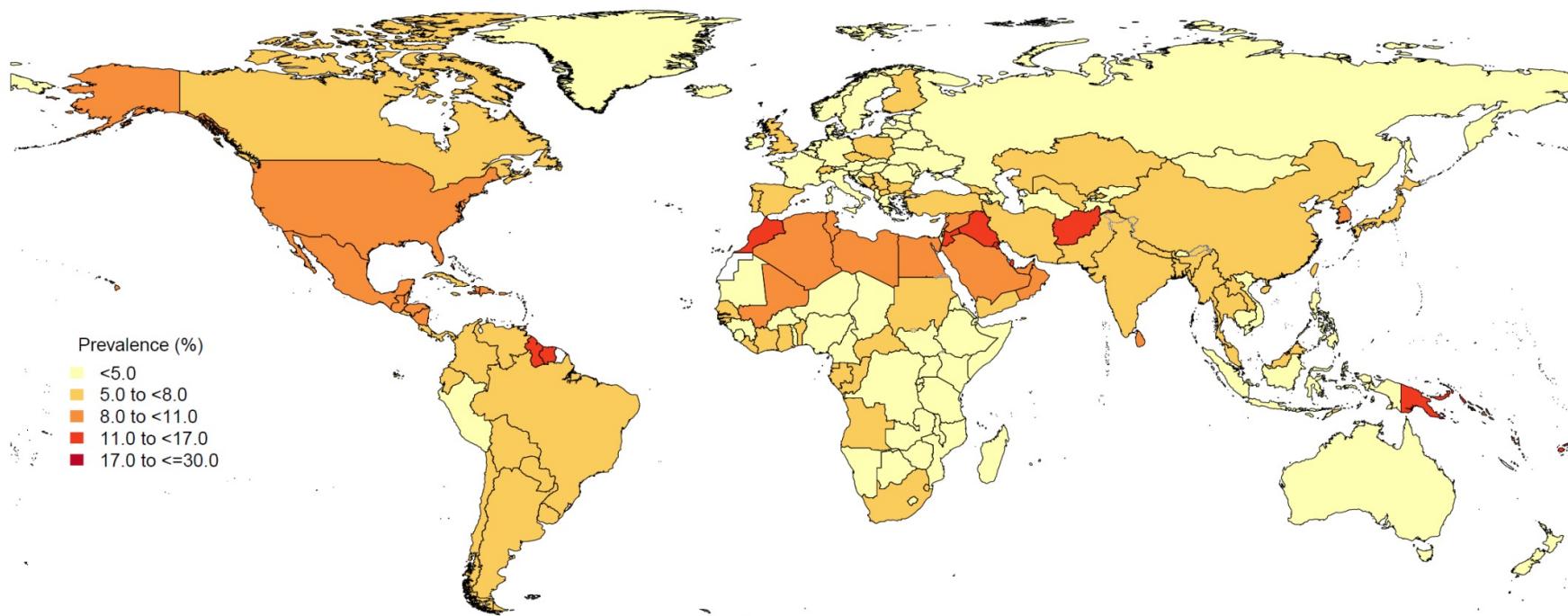
[https://doi.org/10.1016/S0140-6736\(23\)01301-6](https://doi.org/10.1016/S0140-6736(23)01301-6)

This online publication has been corrected. The corrected version

# ESTUDIO ‘GLOBAL BURDEN OF DISEASE’: 2021

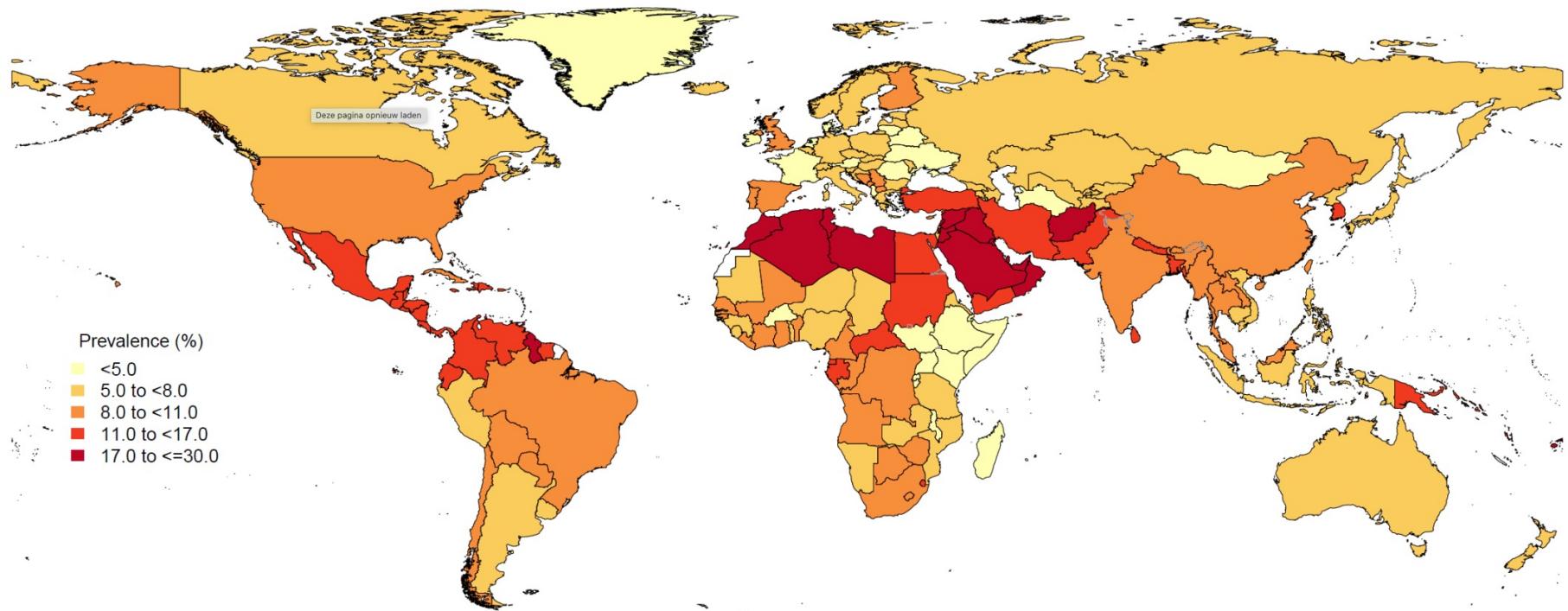
Figure S22. Type 2 diabetes age-standardised prevalence for both sexes combined in 2021 (A) and 2050 (B)

A.

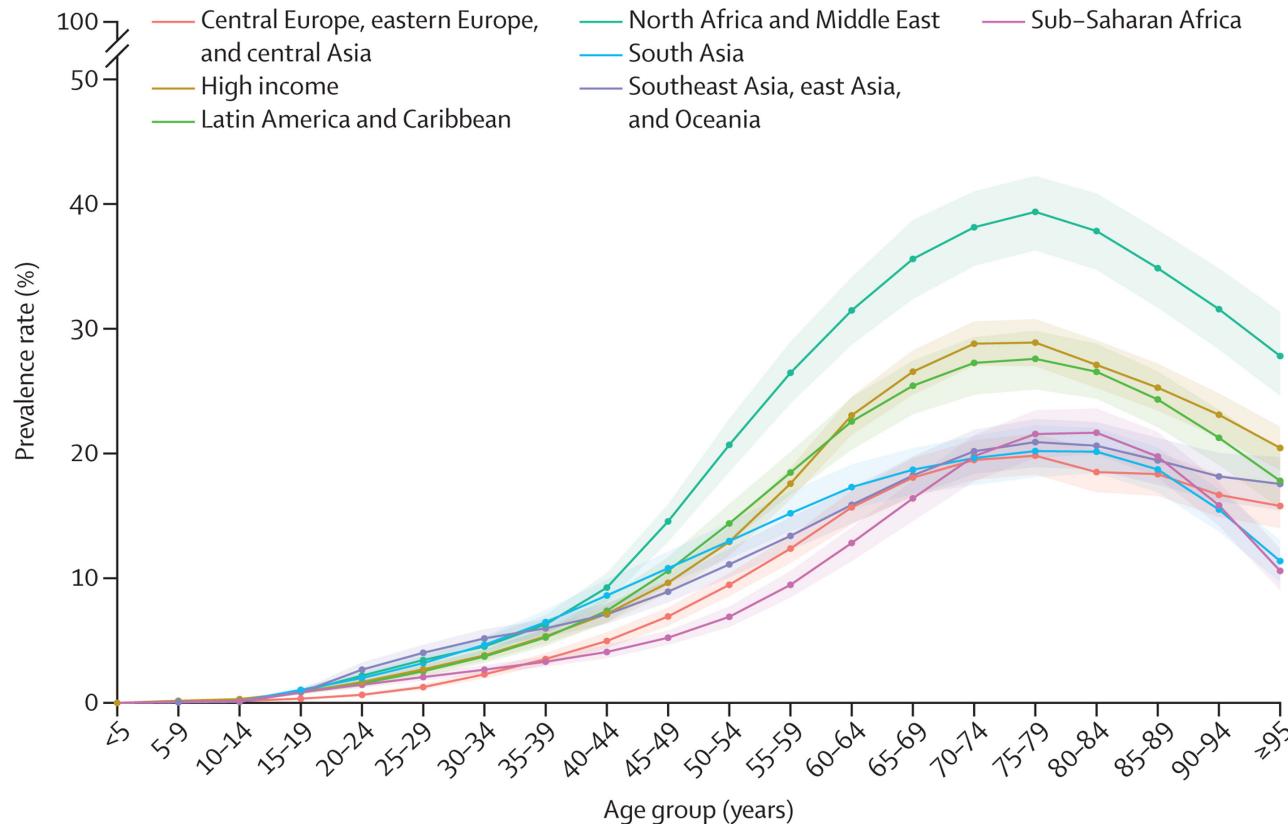


# ESTUDIO 'GLOBAL BURDEN OF DISEASE': 2050

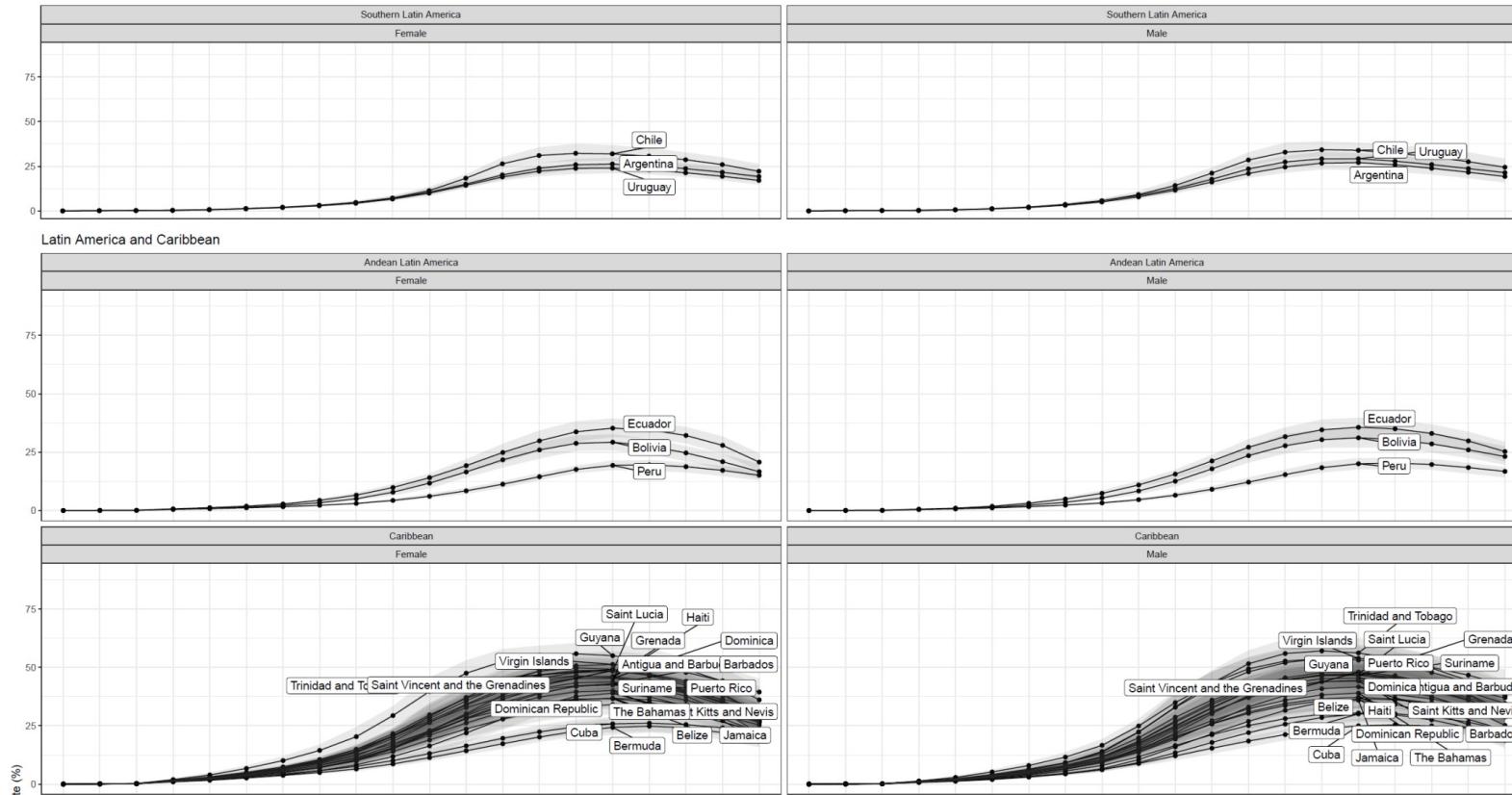
B.



# ESTUDIO 'GLOBAL BURDEN OF DISEASE'

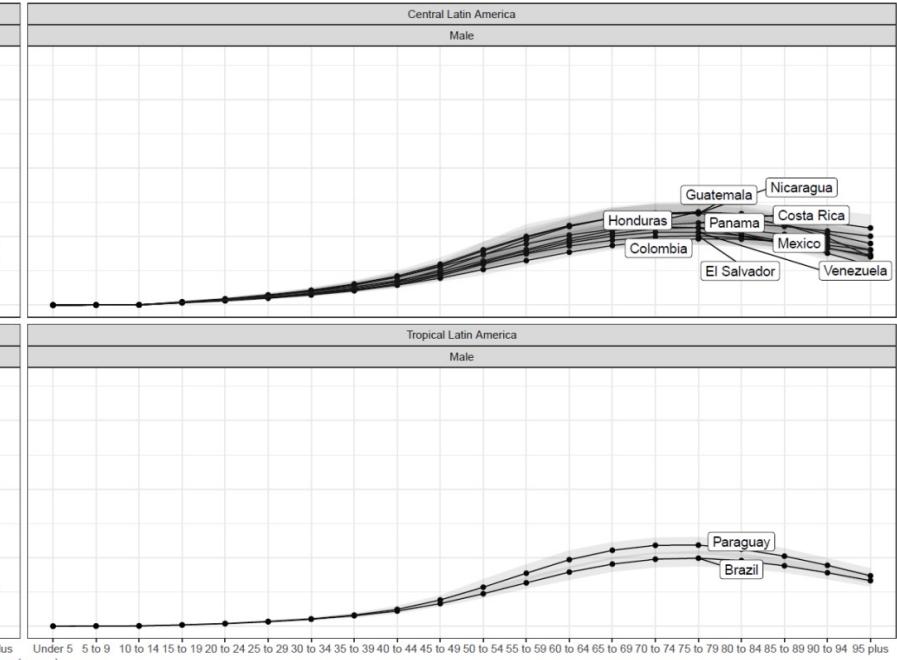
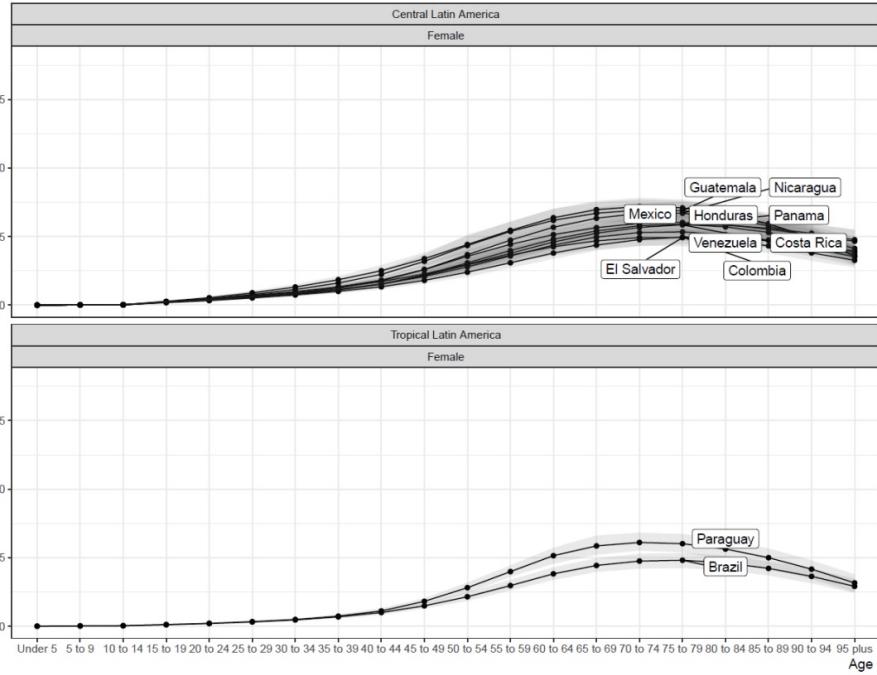


# ESTUDIO 'GLOBAL BURDEN OF DISEASE'



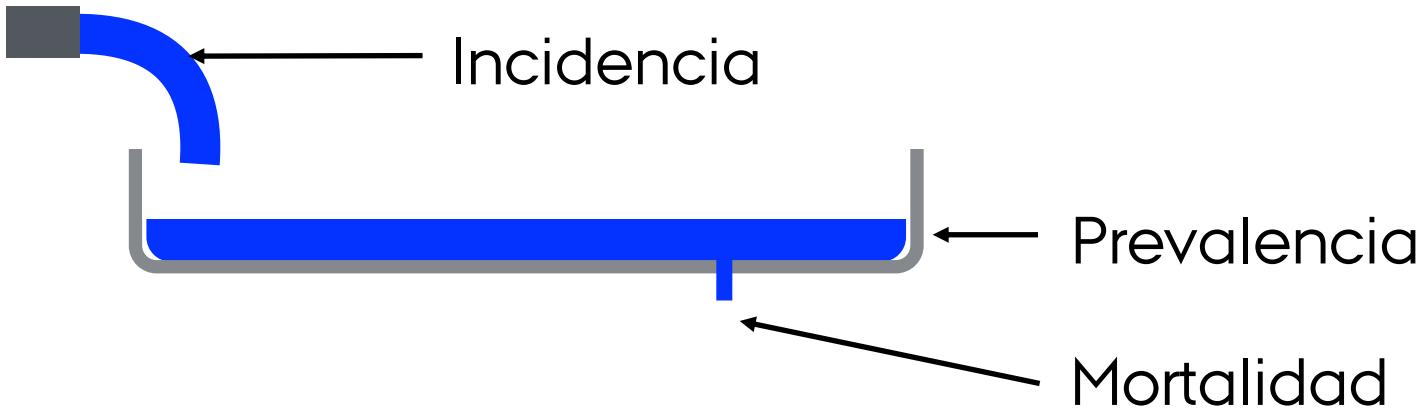
# ESTUDIO ‘GLOBAL BURDEN OF DISEASE’

Prevalence rate



# **¿A QUE SE DEBE EL ALZA EN LA PREVALENCIA DE DIABETES?**

# PREVALENCIA: PRINCIPIOS

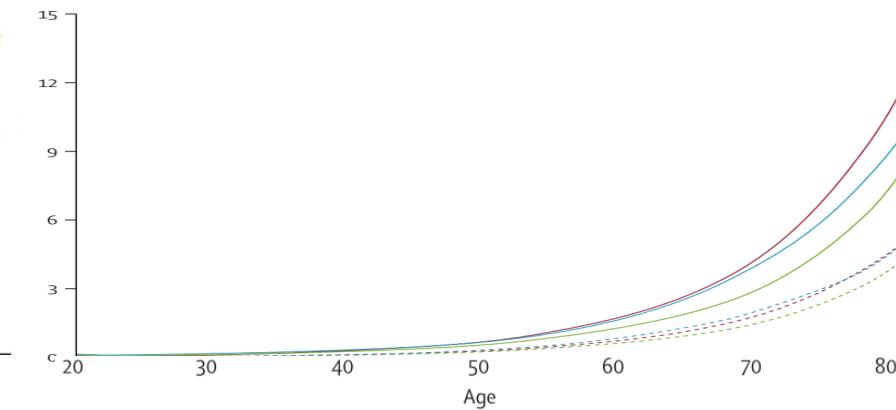
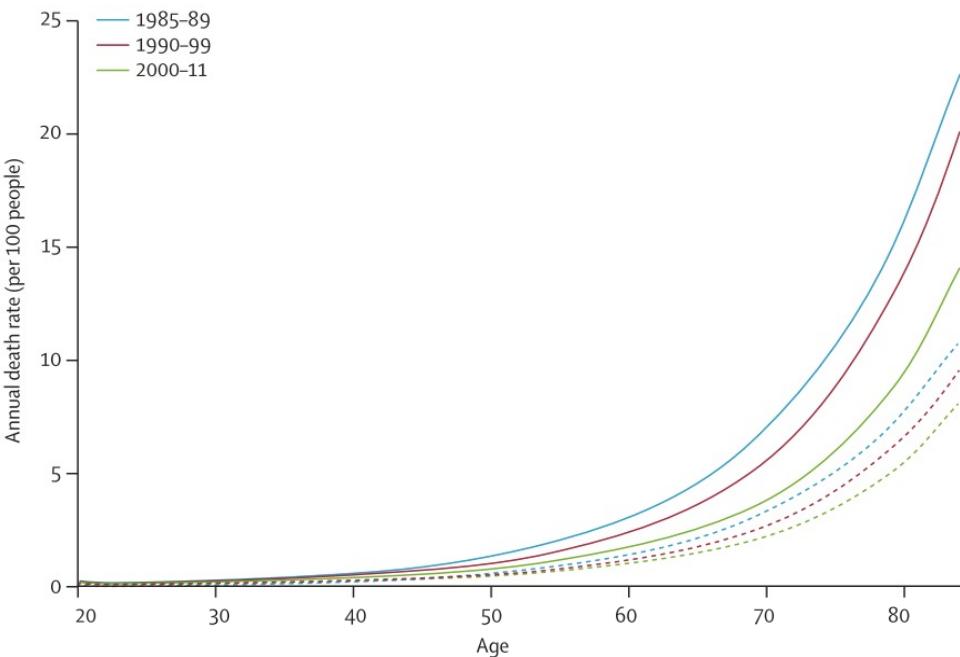


# ¿A QUE SE DEBE EL ALZA EN LA PREVALENCIA DE DIABETES?

- ▶ Reducción de la mortalidad
- ▶ Cambios demográficos: edades de alto riesgo
- ▶ Proporción de casos diagnosticados/no diagnosticados
- ▶ Alza de la incidencia en estratos etarios (menor edad al diagnóstico)

Colagiuri et al. Diabetologia. 2005 Aug;48(8):1459-63

# REDUCCIÓN DE LA MORTALIDAD

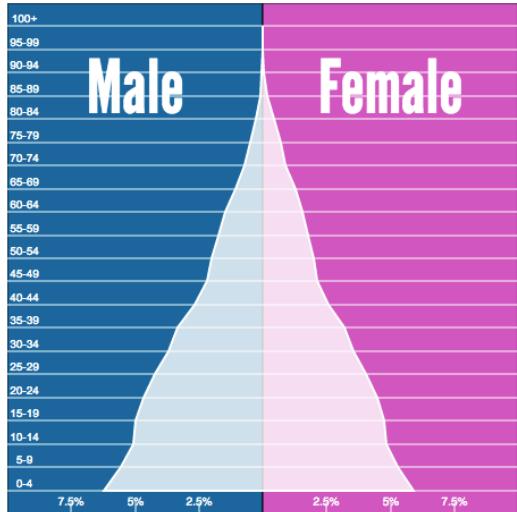


Gregg. Lancet Diabetes Endocrinol. 2014 Nov;2(11):867-74.

# CAMBIOS DEMOGRÁFICOS

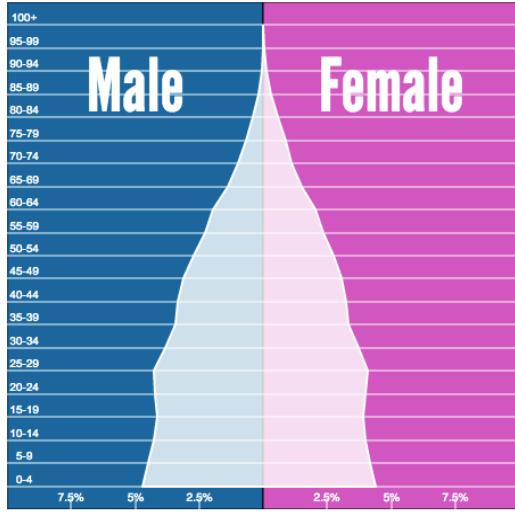
WORLD  
1990

Population: 5.320.816.000



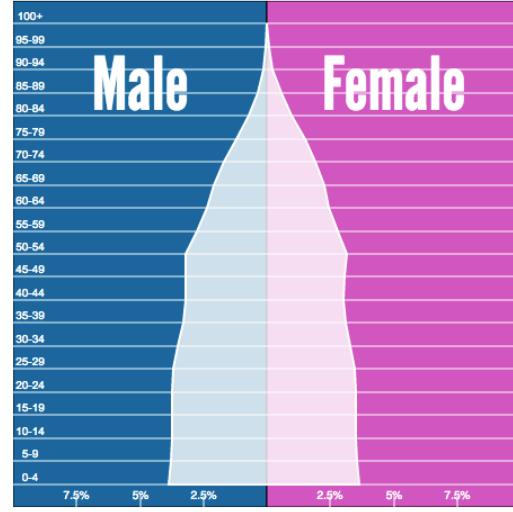
WORLD  
2015

Population: 7.324.782.000



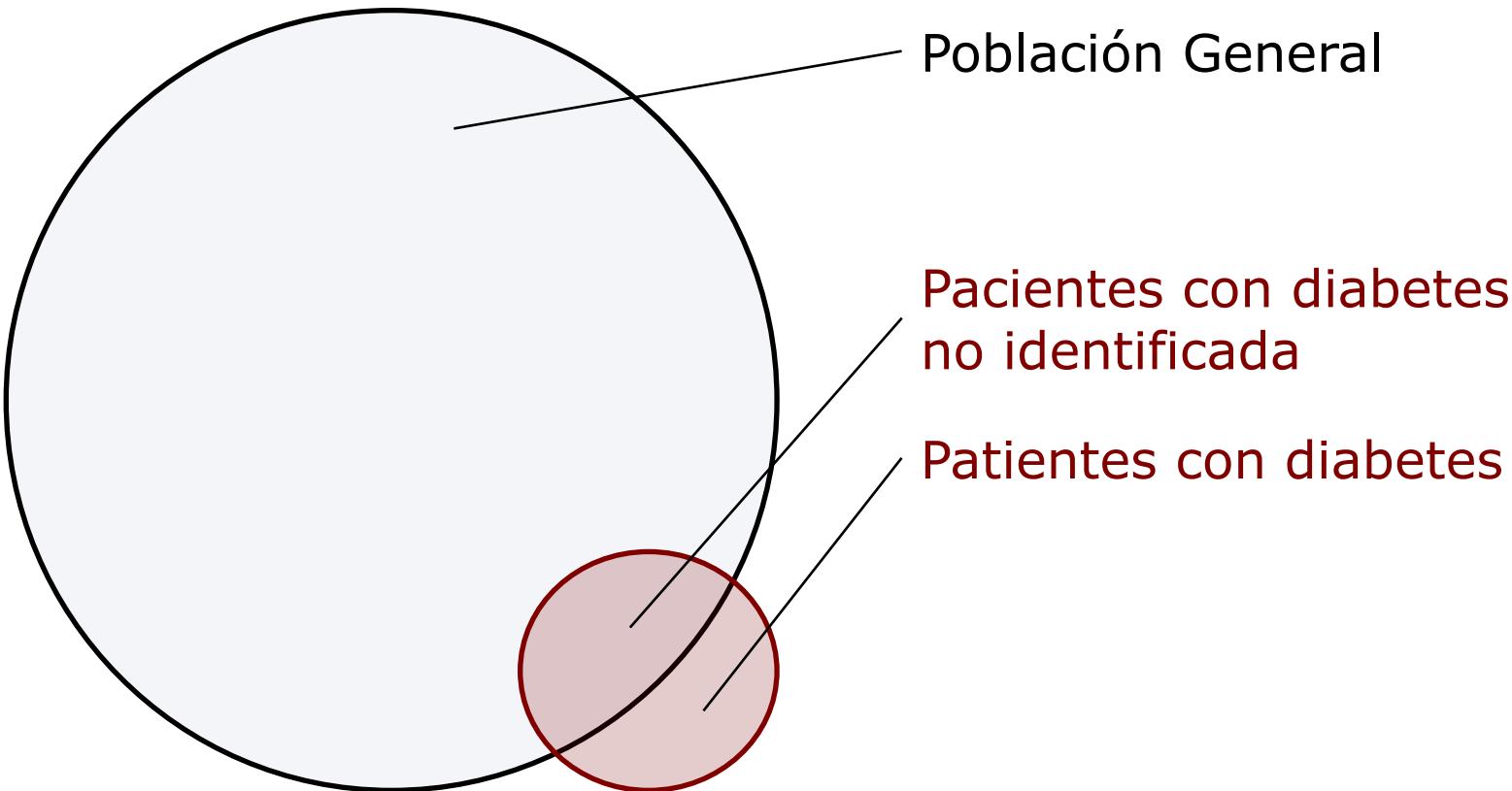
WORLD  
2040

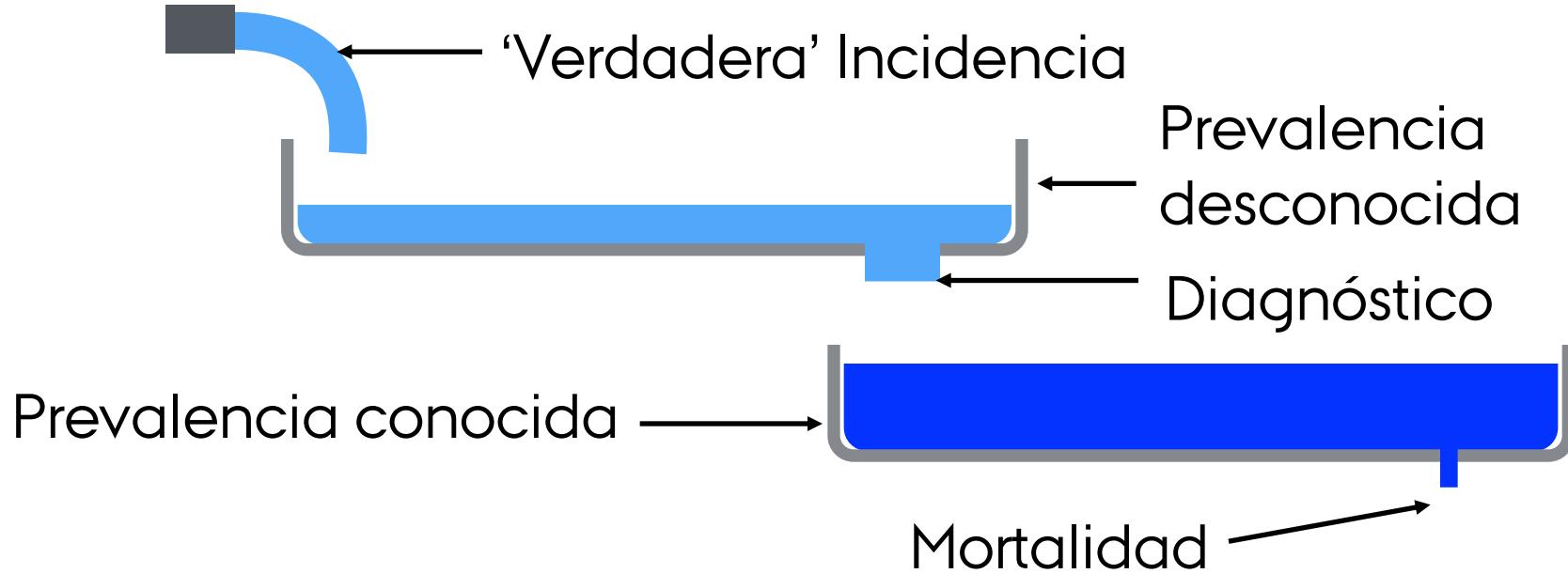
Population: 9.038.687.000



<http://populationpyramid.net/>

## PROPORCIÓN DE CASOS DIAGNOSTICADOS / NO DIAGNOSTICADOS







OPEN ACCESS



Check for updates

## Trends in incidence of total or type 2 diabetes: systematic review

Dianna J Magliano,<sup>1,2</sup> Rakibul M Islam,<sup>1,2</sup> Elizabeth L M Barr,<sup>1</sup> Edward W Gregg,<sup>3,4</sup> Meda E Pavkov,<sup>3</sup> Jessica L Harding,<sup>3</sup> Maryam Tabesh,<sup>1,2</sup> Digsu N Koye,<sup>1,2</sup> Jonathan E Shaw,<sup>1,2</sup>

<sup>1</sup>Baker Heart and Diabetes Institute, Melbourne, VIC 3004, Australia

<sup>2</sup>School of Public Health and Preventive Medicine, Monash University, Melbourne, VIC 3004, Australia

<sup>3</sup>Centres for Diseases Control and Prevention, Division of Diabetes Translation, Atlanta, GA, USA

<sup>4</sup>School of Public Health, Epidemiology and Biostatistics, Imperial College London, London, UK

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(ORCID 0000-0002-9507-6096)

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### ABSTRACT

#### OBJECTIVE

To assess what proportions of studies reported increasing, stable, or declining trends in the incidence of diagnosed diabetes.

#### DESIGN

Systematic review of studies reporting trends of diabetes incidence in adults from 1980 to 2017 according to PRISMA guidelines.

#### DATA SOURCES

Medline, Embase, CINAHL, and reference lists of relevant publications.

#### ELIGIBILITY CRITERIA

Studies of open population based cohorts, diabetes registries, and administrative and health insurance databases on secular trends in the incidence of total diabetes or type 2 diabetes in adults were included. Poisson regression was used to model data by age group and year.

and 36% (12/33) had stable or declining incidence, respectively.

#### CONCLUSIONS

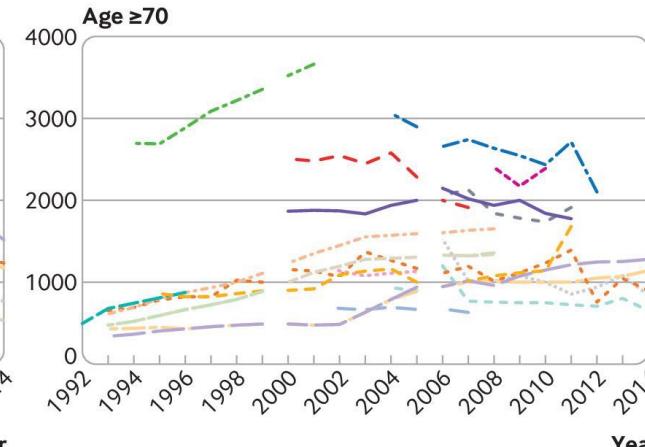
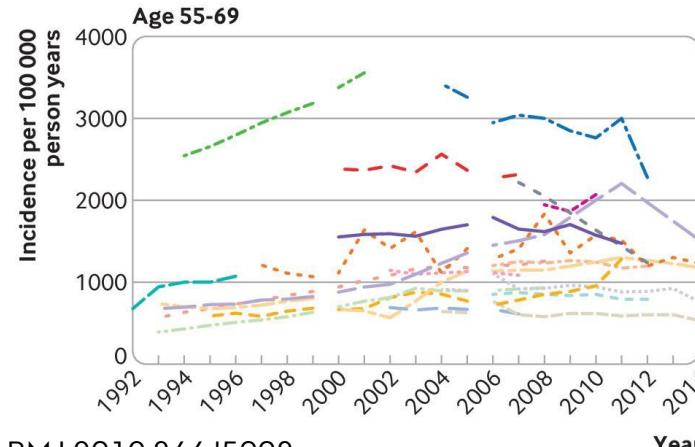
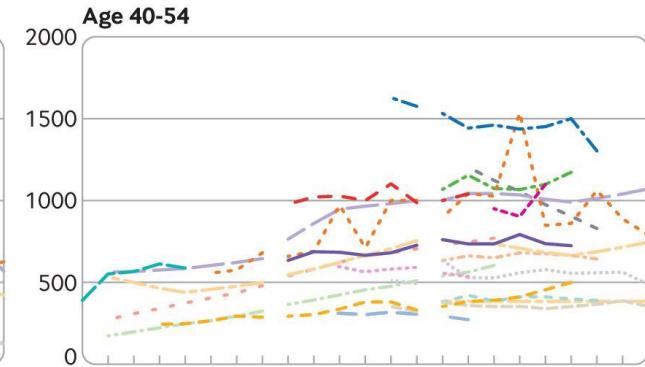
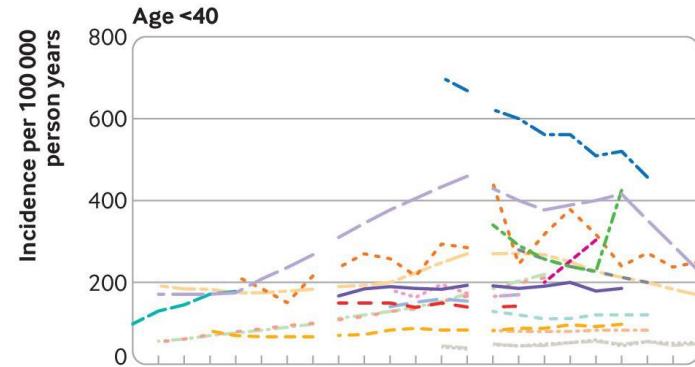
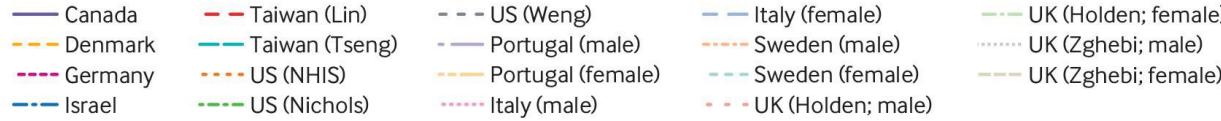
The incidence of clinically diagnosed diabetes has continued to rise in only a minority of populations studied since 2006, with over a third of populations having a fall in incidence in this time period. Preventive strategies could have contributed to the fall in diabetes incidence in recent years. Data are limited in low and middle income countries, where trends in diabetes incidence could be different.

#### SYSTEMATIC REVIEW REGISTRATION

Prospero CRD42018092287.

#### Introduction

Over the past few decades, the prevalence of diabetes in developed and developing countries has risen substantially, making diabetes a key health priority globally.<sup>1</sup> Examination of trends in total burden of



## Trends in incidence of total or type 2 diabetes: systematic review

Dianna J Magliano,<sup>1,2</sup> Rakibul M Islam,<sup>1,2</sup> Elizabeth L M Barr,<sup>1</sup> Edward W Gregg,<sup>3,4</sup> Meda E Pavkov,<sup>3</sup> Jessica L Harding,<sup>3</sup> Maryam Tabesh,<sup>1,2</sup> Digsu N Koye,<sup>1,2</sup> Jonathan E Shaw,<sup>1,2</sup>

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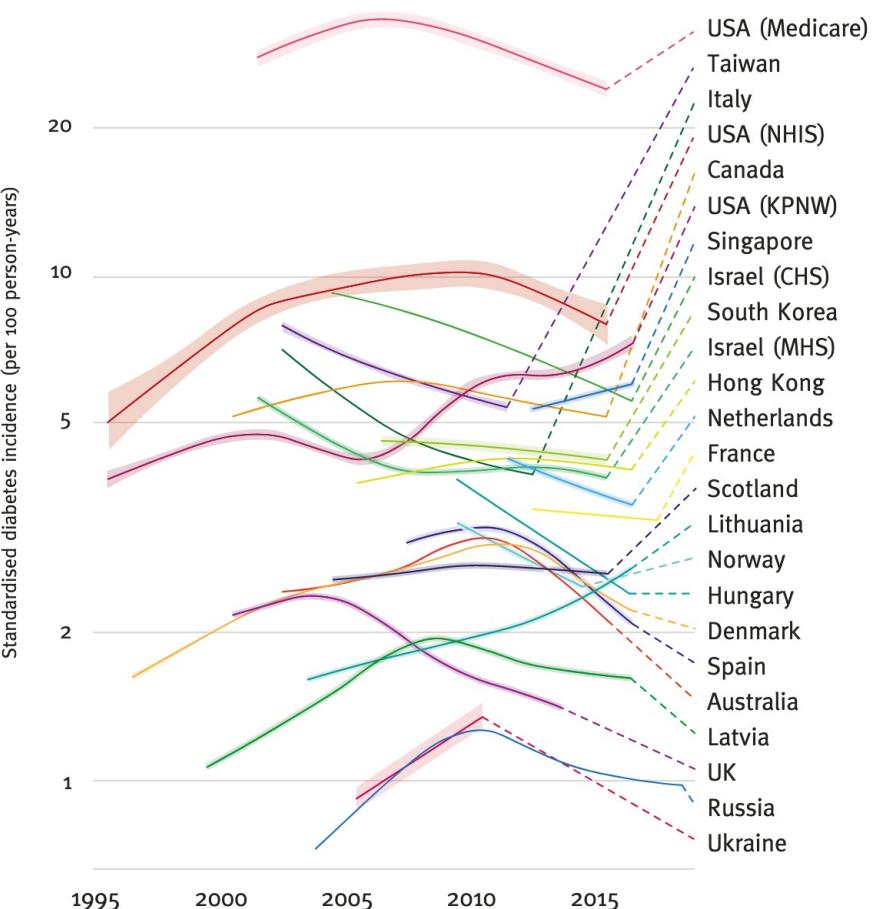
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**Figure 3.4 Trends in annual incidence of diagnosed diabetes, adapted from Magliano *et al*<sup>6</sup>**



# Components of diabetes prevalence in Denmark 1996–2016 and future trends until 2030

Bendix Carstensen,<sup>1</sup> Pernille Falberg Rønn,<sup>1</sup> Marit Eika Jørgensen  <sup>1,2</sup>

## Principales contribuidores al alza en prevalencia:

- Desequilibrio epidemiológico entre incidencia y mortalidad (27%)
- Mayor incidencia (22%)
- Menor taza de mortalidad (9%)

# RESUMEN

- ▶ La prevalencia de diabetes está subiendo a nivel mundial
- ▶ Estos cambios deben a una variedad de factores; algunos positivos y algunos negativos (incidencia)
- ▶ Hay importantes brechas de datos
- ▶ Es difícil estimar incidencia

# GRACIAS

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# Seminarios en línea

Frecuencia: Mensual

Duración: una hora

Conferencia seguida por actividades de networking

A las:

20:00 Copenhague

16:00 Buenos Aires

15:00 Santiago / La Paz

14:00 Lima / Bogotá

13:00 Ciudad de México

# Programa 1er semestre 2024

## Epidemiología de diabetes tipo 2

**Objetivo:** Revisar la evidencia actual sobre la epidemiología de diabetes tipo 2, compartir conocimiento sobre estudios realizados en países de América Latina y promover redes de investigación colaborativas entre los participantes

<b>Fecha</b>	<b>Tema</b>	<b>Presenta</b>
Febrero 7	Carga global de diabetes tipo 2. Prevalencia, incidencia y mortalidad	Daniel Witte & Omar Silverman
Marzo 6	Epidemiología de las complicaciones de diabetes tipo 2	TBC
Abril 10	Atención primaria de diabetes tipo 2. Guías, calidad y estándares en la atención	TBC
Mayo 22	Buenas prácticas en el análisis de datos. Reproducibilidad y ciencia abierta para la investigación en epidemiología de diabetes	Omar Silverman
Junio 26	Prevención de diabetes tipo 2. Ensayos clínicos emblemáticos, estrategias de prevención innovadoras y el rol de la tecnología en la prevención de diabetes. Prediabetes	Daniel Witte