



Supporting Information

Supplementary methods and results

**This appendix was part of the submitted manuscript and has been peer reviewed.
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Appendix to: Magliano DJ, Chen L, Morton JI, et al. Changes in the incidence of type 2 diabetes in Australia, 2005–2019, overall and by socio-demographic characteristics: a population-based study. *Med J Aust* 2024; doi: 10.5694/mja2.52461.

Supplementary methods

1. Classification of diabetes type in the National Diabetes Services Scheme (NDSS)

NDSS data were linked to Pharmaceutical Benefits Scheme (PBS) data to refine diabetes type. The PBS collects information on all prescriptions dispensed in Australia subsidised by the scheme, and includes all prescriptions for insulin. Data for 1 January 2005 to 31 December 2019 were available for this purpose.

Registrants were classified as having type 1 diabetes if they were assigned type 1 diabetes by the registering health care practitioner, and met any one of the following criteria: 1) less than one year between diagnosis of diabetes and their first prescription for insulin, 2) if the date of diagnosis was missing, evidence for insulin use at registration with the NDSS was available and the registrant was under 45 years of age at registration. Additionally, type 1 status was assigned to registrants whose original assignment was type 2, but were under 30 years of age at diabetes onset and evidence for insulin use within a year was available, a pattern more consistent with type 1 diabetes. An additional requirement for assigning type 1 was evidence of ongoing treatment with insulin (at least two PBS-subsidised prescriptions for insulin), except when time to census or death was less than two years. Registrants who satisfied none of these criteria were classified as having type 2 diabetes.

Table 1. Classification of country of birth

Country of birth	Minor group level, Standard Australian Classification of Countries (2016) ¹
Australia and New Zealand	Australia (includes External Territories); New Zealand
Other English-speaking background countries	United Kingdom, Channel Islands and Isle of Man; Ireland; Northern America (Canada, United States of America)
South Europe	Southern Europe; South Eastern Europe
Other Europe	Western Europe; Northern Europe; Eastern Europe
Other Asia	Mainland South-East Asia; Maritime South-East Asia; Chinese Asia (includes Mongolia); Japan and the Koreas; Central Asia
South Asia	Southern Asia
South and Central America	South America; Central America; Caribbean; Northern America (Bermuda, St Pierre and Miquelon)
North Africa and the Middle East	North Africa; Middle East
Sub-Saharan Africa	Central and West Africa; Southern and East Africa
Pacific Islands	Melanesia; Micronesia; Polynesia (excludes Hawaii)

2. Age–period–cohort modelling

We fitted age–period–cohort models to calculate incidence by age and sex. We tabulated the data into 5-year age-groups and calculated the number of incident cases of type 2 diabetes and the population at risk (people without diabetes) by age group, sex, and calendar year of follow-up (2005–2019). The data were modelled using Poisson regression based on the midpoint of each age group (and 90 years for people aged 85 years or older). The model also included spline effects for age, year, and cohort (year minus age), with the log of the number of people in the population without diabetes as the offset. Data for men and women were modelled separately. We then used these models to predict the incidence of type 2 diabetes for seven selected ages (20, 30, 40, 50, 60, 70 and 80 years) by time. Further, we modelled the incidence by single year ages and sex to calculate the overall age-standardised incidence by direct standardisation (to the population structure at the midpoint year, 2012).

We also fitted age–period–cohort models to calculate the age-standardised incidence of type 2 diabetes by country of birth and sex. Because age-specific counts for incident type 2 diabetes by socio-economic disadvantage quintile (IRSD)² and remoteness category³ were not available, we used Poisson regression with a spline effect for time to plot the incidence of type 2 diabetes by socio-economic disadvantage quintile and remoteness category.

3. Joinpoint trend analyses

Joinpoint Trend Analysis software (version 4.9) uses permutation tests to identify points of statistically significant change (in direction or magnitude) in a linear trend and calculates an annual percentage change (APC) for each segment and the average annual percentage change (AAPC) for the study period, with weights equal to the length of each segment. We specified a maximum of one joinpoint for the 14-year period 2005 to 2019; $P < 0.05$ was considered statistically significant.

References

1. Australian Bureau of Statistics. Standard Australian Classification of Countries (SACC), 2016. 27 June 2016. <https://www.abs.gov.au/statistics/classifications/standard-australian-classification-countries-sacc/latest-release> (viewed Nov 2022).
2. Australian Bureau of Statistics. Census of population and housing: Socio-economic indexes for areas (SEIFA), Australia, 2011 (2033.0.55.001). 28 Mar 2013. <https://www.abs.gov.au/ausstats/abs@.nsf/detailpage/2033.0.55.0012011> (viewed Nov 2022).
3. Australian Bureau of Statistics. Australian Statistical Geography Standard (ASGS): volume 5. Remoteness structure, July 2016 (1270.0.55.005). 16 Mar 2018. <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/1270.0.55.005July%202016?OpenDocument> (viewed Nov 2022).

Supplementary results

Table 2. Numbers of cases, and crude and standardised incidence of type 2 diabetes among people in the Australian Capital Territory, New South Wales, Queensland, and Victoria aged 20 years or older, 2005–2019

Year	Men					Women				
	Incident type 2 diabetes	Age at diagnosis (years), median (IQR)	Population free of prevalent diabetes	Crude incidence, per 1000 persons per year (95% CI)	Age-standardised incidence,* per 1000 persons per year (95% CI)	Incident type 2 diabetes	Age at diagnosis (years), median (IQR)	Population free of prevalent diabetes	Crude incidence, per 1000 persons per year (95% CI)	Age-standardised incidence,* per 1000 persons per year (95% CI)
2005	24,340	59.6 (51.0, 68.7)	5,480,660	4.44 (4.39, 4.50)	4.68 (4.62, 4.74)	20,420	60.8 (50.8, 71.4)	5,738,526	3.56 (3.51, 3.61)	3.60 (3.55, 3.65)
2006	24,027	59.9 (51.1, 68.9)	5,553,389	4.33 (4.27, 4.38)	5.01 (4.95, 5.07)	19,681	60.9 (50.8, 71.3)	5,814,355	3.38 (3.34, 3.43)	3.80 (3.74, 3.85)
2007	27,674	59.7 (50.9, 68.5)	5,657,979	4.89 (4.83, 4.95)	5.33 (5.27, 5.40)	21,992	60.6 (51.0, 71.0)	5,914,879	3.72 (3.67, 3.77)	3.98 (3.92, 4.03)
2008	32,185	60.0 (51.0, 68.7)	5,772,989	5.58 (5.51, 5.64)	5.58 (5.52, 5.65)	25,856	61.0 (51.4, 71.0)	6,026,207	4.29 (4.24, 4.34)	4.10 (4.05, 4.15)
2009	29,699	59.7 (50.8, 68.3)	5,895,782	5.04 (4.98, 5.09)	5.72 (5.66, 5.78)	23,631	60.7 (51.1, 70.6)	6,145,105	3.85 (3.80, 3.89)	4.15 (4.09, 4.20)
2010	30,815	59.7 (50.6, 68.2)	5,987,248	5.15 (5.09, 5.20)	5.73 (5.67, 5.79)	23,634	60.7 (51.0, 70.2)	6,247,278	3.78 (3.73, 3.83)	4.10 (4.05, 4.15)
2011	32,657	60.1 (51.0, 68.5)	6,063,424	5.39 (5.33, 5.44)	5.62 (5.56, 5.68)	25,482	60.9 (51.3, 70.4)	6,340,348	4.02 (3.97, 4.07)	3.97 (3.92, 4.02)
2012	30,713	59.7 (50.3, 68.1)	6,155,182	4.99 (4.93, 5.05)	5.41 (5.35, 5.47)	23,128	60.8 (51.1, 70.1)	6,446,117	3.59 (3.54, 3.63)	3.76 (3.71, 3.81)
2013	31,573	59.7 (50.3, 68.3)	6,253,589	5.05 (4.99, 5.10)	5.13 (5.08, 5.19)	23,208	60.7 (51.3, 69.9)	6,559,049	3.54 (3.49, 3.58)	3.52 (3.48, 3.57)
2014	28,054	59.6 (50.2, 67.9)	6,344,288	4.42 (4.37, 4.47)	4.85 (4.79, 4.90)	20,805	60.3 (50.8, 69.3)	6,673,531	3.12 (3.08, 3.16)	3.28 (3.23, 3.32)
2015	25,903	59.2 (49.5, 68.0)	6,443,408	4.02 (3.97, 4.07)	4.58 (4.52, 4.63)	19,055	60.2 (50.6, 69.2)	6,792,247	2.81 (2.77, 2.85)	3.05 (3.01, 3.09)
2016	27,818	60.5	6,555,426	4.24	4.32	20,341	61.5	6,926,420	2.94	2.84

Year	Men					Women				
	Incident type 2 diabetes	Age at diagnosis (years), median (IQR)	Population free of prevalent diabetes	Crude incidence, per 1000 persons per year (95% CI)	Age-standardised incidence,* per 1000 persons per year (95% CI)	Incident type 2 diabetes	Age at diagnosis (years), median (IQR)	Population free of prevalent diabetes	Crude incidence, per 1000 persons per year (95% CI)	Age-standardised incidence,* per 1000 persons per year (95% CI)
		(50.4, 69.6)		(4.19, 4.29)	(4.27, 4.38)		(51.3, 71.4)		(2.90, 2.98)	(2.80, 2.88)
2017	27,118	60.1 (50.0, 69.6)	6,679,147	4.06 (4.01, 4.11)	4.09 (4.04, 4.14)	19,277	61.5 (51.5, 70.7)	7,058,290	2.73 (2.69, 2.77)	2.65 (2.61, 2.69)
2018	25,673	59.8 (49.7, 69.0)	6,795,360	3.78 (3.73, 3.82)	3.88 (3.83, 3.92)	18,098	61.0 (51.4, 70.3)	7,179,421	2.52 (2.48, 2.56)	2.47 (2.43, 2.51)
2019	22,941	59.8 (49.6, 69.0)	6,909,683	3.32 (3.28, 3.36)	3.68 (3.63, 3.72)	15,737	61.2 (51.5, 70.3)	7,298,200	2.16 (2.12, 2.19)	2.31 (2.27, 2.34)

CI = confidence interval; IQR = interquartile range.

*Incidence was standardised to the age distribution of the 2012 estimated residential population in our four jurisdictions included.

Table 3. Annual percentage change in the incidence of type 2 diabetes, 2005-2019, by age

Sex/age	AAPC (95% CI), 2005-2019	APC (95% CI), 2005-2010	APC (95% CI) 2010-2019
Men			
20 years	2.5% (2.2%, 2.8%)	9.3% (8.4%, 10.2%)	-1.1% (-1.4%, -0.8%)
30 years	2.0% (1.7%, 2.3%)	8.1% (7.3%, 9.0%)	-1.3% (-1.5%, -1.0%)
40 years	0.4% (0.1%, 0.6%)	5.9% (5.2%, 6.6%)	-2.6% (-2.8%, -2.3%)
50 years	-1.5% (-1.8%, -1.3%)	4.0% (3.3%, 4.8%)	-4.5% (-4.7%, -4.2%)
60 years	-2.7% (-3.0%, -2.4%)	3.2% (2.4%, 4.0%)	-5.9% (-6.1%, -5.6%)
70 years	-2.9% (-3.2%, -2.5%)	3.7% (2.7%, 4.7%)	-6.4% (-6.7%, -6.0%)
80 years	-1.7% (-2.1%, -1.2%)	5.6% (4.5%, 6.8%)	-5.5% (-5.9%, -5.1%)
≥20 years*	-1.9% (-2.1%, -1.6%)	4.4% (3.6%, 5.2%)	-5.2% (-5.4%, -4.9%)
Women			
20 years	-3.5% (-3.8%, -3.3%)	2.7% (2.0%, 3.5%)	-6.9% (-7.1%, -6.6%)
30 years	-3.3% (-3.6%, -3.0%)	3.0% (2.1%, 3.9%)	-6.7% (-7.0%, -6.3%)
40 years	-2.7% (-3.0%, -2.3%)	4.0% (3.1%, 4.9%)	-6.2% (-6.5%, -5.8%)
50 years	-2.3% (-2.6%, -2.0%)	3.7% (2.9%, 4.5%)	-5.5% (-5.8%, -5.2%)
60 years	-3.3% (-3.5%, -3.0%)	2.1% (1.5%, 2.8%)	-6.2% (-6.4%, -5.9%)
70 years	-4.2% (-4.5%, -3.9%)	1.8% (1.0%, 2.6%)	-7.4% (-7.6%, -7.1%)
80 years	-3.5% (-3.9%, -3.2%)	3.3% (2.4%, 4.3%)	-7.1% (-7.5%, -6.7%)
≥20 years*	-3.2% (-3.5%, -3.0%)	2.9% (2.2%, 3.7%)	-6.5% (-6.8%, -6.2%)

AAPC = average annual percentage change; APC = annual percentage change; CI = confidence interval.

* Incidence was standardised to the age distribution of the 2012 estimated residential population in the Australian Capital Territory, New South Wales, Queensland, and Victoria.

Table 4. Annual percentage change in the incidence of type 2 diabetes, 2005-2019, by socio-economic disadvantage and remoteness

	AAPC (95% CI)	Time period 1	APC (95% CI)	Time period 2	APC (95% CI)
Men					
Socio-economic disadvantage (IRSD quintile)					
1 (most disadvantaged)	-1.8% (-2.2%, -1.4%)	2005-2010	4.1% (3.1%, 5.2%)	2010-2019	-5.0% (-5.3%, -4.6%)
2	-2.2% (-2.5%, -1.8%)	2005-2010	3.6% (2.6%, 4.5%)	2010-2019	-5.2% (-5.5%, -4.9%)
3	-1.6% (-1.9%, -1.4%)	2005-2011	3.4% (2.8%, 3.9%)	2011-2019	-5.2% (-5.5%, -4.9%)
4	-1.3% (-1.5%, -1.0%)	2005-2010	5.0% (4.3%, 5.7%)	2010-2019	-4.6% (-4.8%, -4.3%)
5 (least disadvantaged)	-1.3% (-1.7%, -1.0%)	2005-2010	4.9% (3.8%, 6.0%)	2010-2019	-4.7% (-5.0%, -4.3%)
Geographic remoteness					
Major city	-0.9% (-1.2%, -0.7%)	2005-2010	5.0% (4.2%, 5.8%)	2010-2019	-4.1% (-4.3%, -3.8%)
Inner regional	-4.0% (-4.3%, -3.6%)	2005-2011	1.3% (0.5%, 2.1%)	2011-2019	-7.7% (-8.2%, -7.3%)
Outer regional/remote/very remote	-2.8% (-3.3%, -2.3%)	2005-2011	3.0% (2.0%, 4.1%)	2011-2019	-7.0% (-7.6%, -6.4%)
Women					
Socio-economic disadvantage (IRSD quintile)					
1 (most disadvantaged)	-3.3% (-3.7%, -2.9%)	2005-2010	2.4% (1.3%, 3.6%)	2010-2019	-6.3% (-6.7%, -5.9%)
2	-3.3% (-3.7%, -3.0%)	2005-2010	3.2% (2.2%, 4.3%)	2010-2019	-6.8% (-7.2%, -6.4%)
3	-2.6% (-2.9%, -2.2%)	2005-2010	3.1% (2.2%, 4.0%)	2010-2019	-5.6% (-5.9%, -5.2%)
4	-2.9% (-3.2%, -2.6%)	2005-2011	2.5% (1.8%, 3.1%)	2011-2019	-6.7% (-7.0%, -6.3%)
5 (least disadvantaged)	-2.8% (-3.1%, -2.6%)	2005-2010	2.9% (2.2%, 3.6%)	2010-2019	-5.9% (-6.1%, -5.6%)
Geographic remoteness					
Major city	-2.4% (-2.7%, -2.1%)	2005-2010	3.3% (2.6%, 4.1%)	2010-2019	-5.5% (-5.7%, -5.2%)
Inner regional	-4.9% (-5.3%, -4.5%)	2005-2011	0.8% (-0.0%, 1.6%)	2011-2019	-9.0% (-9.5%, -8.5%)
Outer regional/remote/very remote	-4.2% (-4.9%, -3.5%)	2005-2011	1.3% (-0.2%, 2.8%)	2011-2019	-8.1% (-8.9%, -7.2%)

AAPC = average annual percentage change; APC = annual percentage change; CI = confidence interval; IRSD = Index of Relative Socioeconomic Disadvantage.

Table 5. Annual percentage change in the incidence of type 2 diabetes, 2011-2019, by country of birth

	AAPC (95% CI)	Time period 1	APC (95% CI)	Time period 2	APC (95% CI)
Men					
Australia and New Zealand	-6.6% (-6.7%, -6.5%)	2011-2015	-4.9% (-5.1%, -4.7%)	2015-2019	-8.2% (-8.4%, -8.0%)
Other English-speaking countries	-8.1% (-8.2%, -8.0%)	2011-2015	-9.6% (-9.8%, -9.4%)	2015-2019	-6.6% (-6.8%, -6.3%)
South Europe	-10.5% (-10.5%, -10.5%)	2011-2015	-11.2% (-11.3%, -11.2%)	2015-2019	-9.8% (-9.8%, -9.7%)
Other Europe	-9.2% (-9.4%, -9.1%)	2011-2015	-11.4% (-11.7%, -11.1%)	2015-2019	-6.9% (-7.3%, -6.6%)
Other Asia	2.1% (2.0%, 2.3%)	2011-2015	-0.7% (-1.1%, -0.3%)	2015-2019	5.1% (4.7%, 5.4%)
South Asia	2.3% (2.2%, 2.3%)	2011-2015	1.4% (1.3%, 1.5%)	2015-2019	3.1% (3.0%, 3.2%)
South and Central America	-7.5% (-7.9%, -7.0%)	2011-2015	-13.8% (-14.6%, -13.0%)	2015-2019	-0.6% (-1.7%, 0.4%)
North Africa and the Middle East	0.6% (0.3%, 0.8%)	2011-2015	-3.0% (-3.5%, -2.6%)	2015-2019	4.3% (3.8%, 4.8%)
Sub-Saharan Africa	-0.7% (-0.7%, -0.7%)	2011-2015	-0.6% (-0.6%, -0.6%)	2015-2019	-0.8% (-0.8%, -0.8%)
Pacific Islands	2.5% (2.2%, 2.7%)	2011-2015	-0.8% (-1.2%, -0.4%)	2015-2019	5.8% (5.4%, 6.3%)
Women					
Australia and New Zealand	-8.4% (-8.5%, -8.3%)	2011-2015	-6.7% (-6.9%, -6.5%)	2015-2019	-10.0% (-10.2%, -9.8%)
Other English-speaking countries	-9.9% (-10.0%, -9.8%)	2011-2015	-11.4% (-11.5%, -11.2%)	2015-2019	-8.5% (-8.7%, -8.2%)
South Europe	-9.9% (-10.0%, -9.8%)	2011-2015	-9.2% (-9.3%, -9.0%)	2015-2019	-10.7% (-10.8%, -10.5%)
Other Europe	-9.0% (-9.1%, -9.0%)	2011-2015	-10.0% (-10.1%, -9.9%)	2015-2019	-8.0% (-8.2%, -7.9%)
Other Asia	0.8% (0.6%, 1.0%)	2011-2015	-2.5% (-2.9%, -2.1%)	2015-2019	4.1% (3.7%, 4.6%)
South Asia	-0.2% (-0.3%, -0.1%)	2011-2015	-2.0% (-2.2%, -1.8%)	2015-2019	1.7% (1.5%, 1.9%)
South and Central America	-9.6% (-9.8%, -9.4%)	2011-2015	-12.7% (-13.0%, -12.3%)	2015-2019	-6.4% (-6.9%, -6.0%)
North Africa and the Middle East	0.2% (-0.0%, 0.4%)	2011-2015	-3.4% (-3.9%, -3.0%)	2015-2019	4.0% (3.5%, 4.5%)
Sub-Saharan Africa	-2.6% (-2.6%, -2.6%)	2011-2015	-2.7% (-2.7%, -2.7%)	2015-2019	-2.6% (-2.6%, -2.5%)
Pacific Islands	-0.7% (-1.1%, -0.4%)	2011-2015	-5.2% (-5.8%, -4.7%)	2015-2019	3.9% (3.3%, 4.6%)

AAPC = average annual percentage change; APC = annual percentage change; CI = confidence interval.

Table 6. Annual percentage change in the diabetes diagnostic tests, Australia, 2005-2019

	AAPC (95% CI)	Time period 1	APC (95% CI)	Time period 2	APC (95% CI)
Biochemistry panel tests (MBS 66500/66503/66506/66509/66512/66515 (MBS 66515 was discontinued in 2008))					
Men					
25-34 years	0.1% (-0.1%, 0.4%)	2005-2019	0.1% (-0.1%, 0.4%)		
35-44 years	0.2% (-0.0%, 0.5%)	2005-2019	0.2% (-0.0%, 0.5%)		
45-54 years	-0.2% (-0.9%, 0.5%)	2005-2007	2.2% (-3.1%, 7.7%)	2007-2019	-0.6% (-0.9%, -0.3%)
55-64 years	0.1% (-0.6%, 0.7%)	2005-2007	2.0% (-3.1%, 7.3%)	2007-2019	-0.2% (-0.5%, 0.0%)
65-74 years	0.6% (0.4%, 0.8%)	2005-2019	0.6% (0.4%, 0.8%)		
75-84 years	3.3% (2.8%, 3.8%)	2005-2012	5.3% (4.3%, 6.2%)	2012-2019	1.4% (0.6%, 2.1%)
≥85 years	7.9% (6.7%, 9.1%)	2005-2019	7.9% (6.7%, 9.1%)		
Women					
25-34 years	0.8% (0.5%, 1.1%)	2005-2019	0.8% (0.5%, 1.1%)		
35-44 years	0.7% (0.5%, 1.0%)	2005-2019	0.7% (0.5%, 1.0%)		
45-54 years	-0.3% (-0.5%, -0.1%)	2005-2019	-0.3% (-0.5%, -0.1%)		
55-64 years	-0.2% (-0.9%, 0.4%)	2005-2007	1.9% (-2.9%, 7.0%)	2007-2019	-0.6% (-0.8%, -0.3%)
65-74 years	0.5% (0.3%, 0.7%)	2005-2019	0.5% (0.3%, 0.7%)		
75-84 years	2.6% (2.1%, 3.1%)	2005-2015	3.2% (2.7%, 3.6%)	2015-2019	1.1% (-0.5%, 2.7%)
≥85 years	3.6% (2.8%, 4.4%)	2005-2010	2.1% (-0.1%, 4.3%)	2010-2019	4.4% (3.7%, 5.1%)
Oral glucose tolerance tests					
Men					
25-34 years	-1.2% (-2.9%, 0.6%)	2005-2011	10.2% (6.2%, 14.4%)	2011-2019	-8.9% (-11.0%, -6.8%)
35-44 years	-2.1% (-3.7%, -0.5%)	2005-2011	8.2% (4.7%, 11.8%)	2011-2019	-9.1% (-11.1%, -7.1%)
45-54 years	-4.5% (-6.3%, -2.8%)	2005-2011	6.8% (3.2%, 10.6%)	2011-2019	-12.3% (-14.5%, -10.0%)
55-64 years	-5.1% (-7.1%, -3.0%)	2005-2011	5.7% (1.5%, 10.1%)	2011-2019	-12.4% (-15.0%, -9.8%)
65-74 years	-5.3% (-7.5%, -3.1%)	2005-2011	5.0% (0.3%, 9.8%)	2011-2019	-12.4% (-15.0%, -9.7%)
75-84 years	-5.0% (-7.2%, -2.8%)	2005-2012	4.7% (1.0%, 8.5%)	2012-2019	-13.8% (-17.1%, -10.4%)

	AAPC (95% CI)	Time period 1	APC (95% CI)	Time period 2	APC (95% CI)
≥85 years	-3.6% (-5.0%, -2.2%)	2005-2014	4.4% (2.8%, 6.1%)	2014-2019	-16.5% (-19.5%, -13.4%)
Women					
25-34 years	3.9% (2.7%, 5.2%)	2005-2014	10.1% (8.5%, 11.7%)	2014-2019	-6.3% (-8.9%, -3.6%)
35-44 years	3.8% (3.0%, 4.6%)	2005-2014	7.6% (6.6%, 8.6%)	2014-2019	-2.7% (-4.5%, -0.9%)
45-54 years	-3.7% (-5.2%, -2.2%)	2005-2011	6.6% (3.4%, 9.9%)	2011-2019	-10.8% (-12.7%, -8.9%)
55-64 years	-5.1% (-6.8%, -3.3%)	2005-2011	6.0% (2.3%, 9.8%)	2011-2019	-12.7% (-14.8%, -10.4%)
65-74 years	-5.4% (-7.4%, -3.3%)	2005-2011	5.3% (0.9%, 9.8%)	2011-2019	-12.7% (-15.1%, -10.2%)
75-84 years	-5.1% (-7.2%, -3.0%)	2005-2012	3.9% (0.5%, 7.5%)	2012-2019	-13.4% (-16.7%, -10.0%)
≥85 years	-7.5% (-9.8%, -5.1%)	2005-2013	0.4% (-2.6%, 3.4%)	2013-2019	-17.1% (-21.4%, -12.5%)
HbA_{1c} tests					
Men					
25-34 years	5.5% (4.2%, 6.8%)	2005-2013	0.6% (-1.2%, 2.6%)	2013-2019	12.3% (9.8%, 14.8%)
35-44 years	4.4% (3.2%, 5.5%)	2005-2012	-0.5% (-2.4%, 1.4%)	2012-2019	9.5% (7.8%, 11.2%)
45-54 years	2.1% (1.2%, 3.0%)	2005-2012	-1.2% (-2.6%, 0.3%)	2012-2019	5.5% (4.1%, 6.9%)
55-64 years	1.2% (0.6%, 1.8%)	2005-2013	-0.5% (-1.3%, 0.3%)	2013-2019	3.5% (2.3%, 4.6%)
65-74 years	1.1% (0.4%, 1.8%)	2005-2012	-0.8% (-2.0%, 0.3%)	2012-2019	3.1% (2.1%, 4.0%)
75-84 years	4.0% (3.6%, 4.3%)	2005-2019	4.0% (3.6%, 4.3%)		
≥85 years	7.6% (3.5%, 11.9%)	2005-2008	-2.1% (-19.6%, 19.3%)	2008-2019	10.5% (8.6%, 12.4%)
Women					
25-34 years	8.0% (5.8%, 10.1%)	2005-2012	2.2% (-1.5%, 6.0%)	2012-2019	14.0% (11.1%, 17.0%)
35-44 years	6.5% (4.9%, 8.2%)	2005-2012	1.3% (-1.5%, 4.1%)	2012-2019	12.1% (9.7%, 14.6%)
45-54 years	3.0% (2.0%, 4.0%)	2005-2013	-0.6% (-1.9%, 0.8%)	2013-2019	7.9% (5.9%, 9.9%)
55-64 years	1.1% (0.3%, 1.8%)	2005-2013	-1.3% (-2.3%, -0.3%)	2013-2019	4.3% (2.9%, 5.8%)
65-74 years	0.5% (-0.1%, 1.2%)	2005-2013	-1.7% (-2.6%, -0.8%)	2013-2019	3.6% (2.3%, 4.9%)
75-84 years	2.9% (2.1%, 3.7%)	2005-2012	1.4% (0.1%, 2.7%)	2012-2019	4.4% (3.2%, 5.6%)
≥85 years	4.7% (3.5%, 5.9%)	2005-2011	0.4% (-2.2%, 3.1%)	2011-2019	8.0% (6.6%, 9.4%)

AAPC = average annual percentage change; APC = annual percentage change; CI = confidence interval; HbA_{1c} = glycated haemoglobin; OGTT = oral glucose tolerance test.