

Is the increase in diabetes levelling off?

– Use of oral antidiabetic drugs in Norway 2005–2014

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Background

Diabetes constitutes a major public health challenge and numerous studies suggest that the prevalence is increasing in most countries. National estimates for the occurrence of diabetes are difficult to obtain, particularly time trends in incidence.

Aim

To analyse time trends in prevalent and incident use of oral antidiabetic drugs by age groups and gender.

Method

The Norwegian Prescription Database (NorPD) contains data on all drugs dispensed from pharmacies in Norway. Users of blood glucose-lowering drugs (ATC group A10) were extracted for the period 2005–2014. Prevalence (%) and incidence rate were calculated according to gender and age groups.

The following definitions were applied:

- Prevalent users of oral antidiabetic drugs (A10B*) were individuals having at least one prescription dispensed during a calendar year
- Incident users of oral antidiabetic drugs (A10B) required no blood glucose-lowering drugs (A10) in the previous 24 months

Time trends and changes in time trends were estimated using regression models with calendar periods as linear splines.

* including GLP-1 analogues

Results

The prevalent use of oral antidiabetic drugs increased annually on average by 5.7% from 2005 to 2010. A significant change in the prevalence trend was observed, and from 2010 to 2014 the annually increase dropped to 1.8% (figure 1).

The overall incidence rate of oral antidiabetic drugs declined from 291 per 100,000 person years in 2006 to 275 in 2014. Figure 2 shows the incidence rate according to age groups and gender in the period. There was a decline in incident rate in the age groups 50–59 and 70+. Table 1 shows the incidence rate ratio per 8 years (2006 to 2014).

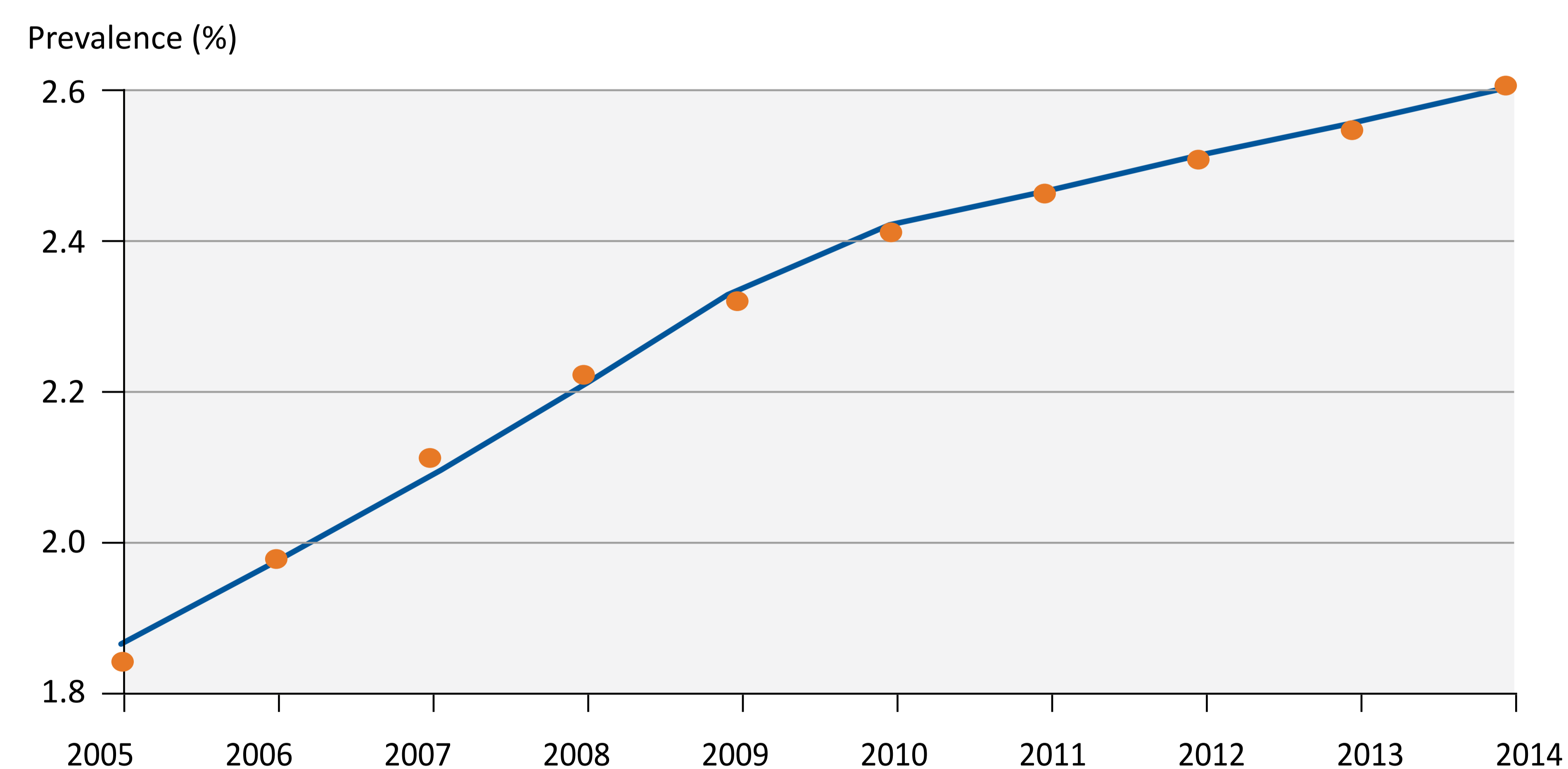


Figure 1: Use of oral antidiabetic drugs, prevalence (%) 2005–2014

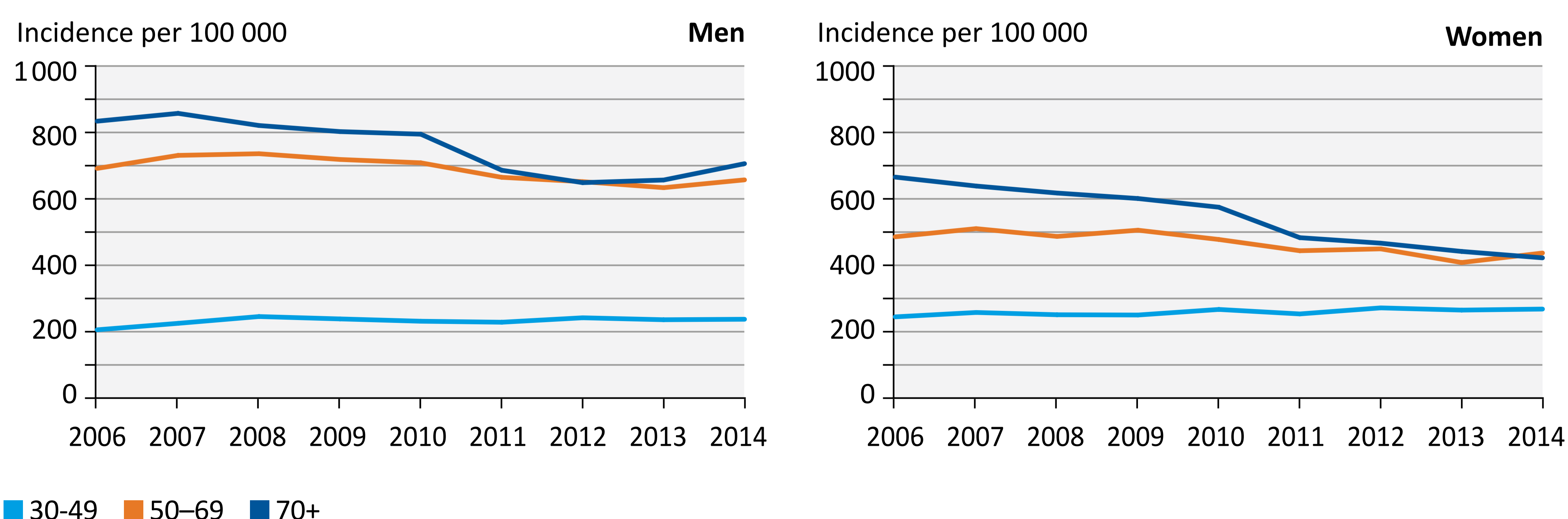


Figure 2: Use of oral antidiabetic drugs (A10B), incidence rate (per 100 000) by age groups and gender 2005–2014.

Incidence rate ratio per 8 years

Age groups	95% CI		
Men 70 +	0.76	0.72	0.79
Men 50–59	0.87	0.84	0.90
Men 30–49	1.04	0.99	1.09
Women 70 +	0.61	0.58	0.64
Women 50–59	0.82	0.79	0.85
Women 30–49	1.08	1.02	1.13

Table 1: Incidence rate ration for use of oral antidiabetic drugs (A10B) per 8 years (2006 to 2014)

Conclusion

A significant change in trend of prevalent use of oral antidiabetic drugs was observed. From 2010 the annually increase dropped to 1.8%. Incidence rate did not increase in the period, and a significant decline was observed in the age groups 50 years and older.

This may signal that the increase in diabetes in Norway is levelling off, at least temporarily.