

# Diabetes prevalence in Denmark: Current state and prediction for 2030

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From /home/bendix/sdc/conf/DES2018/BxC.tex

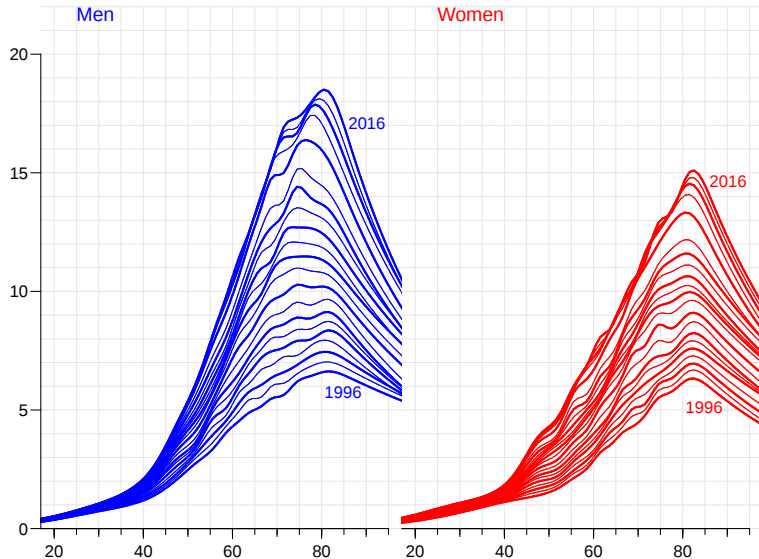


**Steno Diabetes Center  
Copenhagen**

# DM in Denmark

- ▶ Diabetes register for the entire Danish population ( $\approx 5.5$  mil.)
- ▶ Constructed from other registers:
  - ▶ National Patient register
  - ▶ Prescription register
  - ▶ Health Services register
  - ▶ Clinical quality database (DVDD, DiaBase)
- ▶ Covers 1996–2015 incl.:
  - ▶ Prevalence
  - ▶ DM incidence rates (new cases/PY in non-DM)
  - ▶ Mortality rates for DM persons
  - ▶ Mortality rates for non-DM persons

# Changing prevalence of DM in Denmark



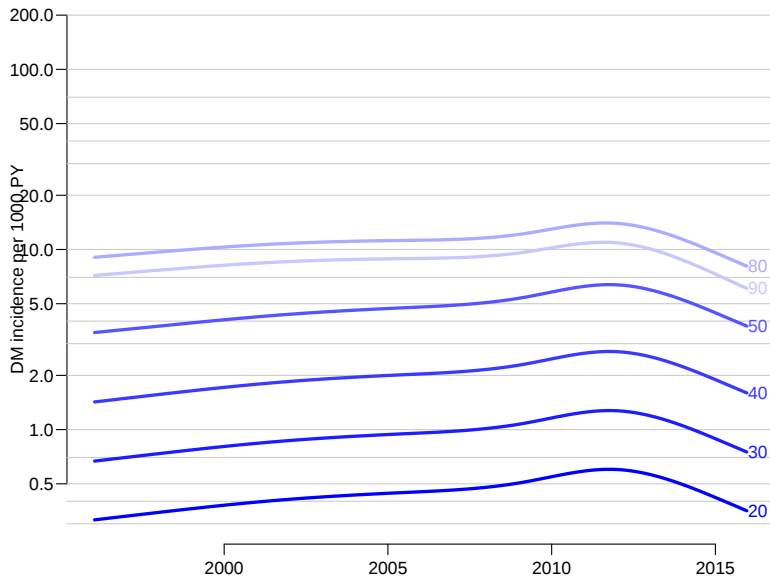
## Changing incidence and mortality (%/year)

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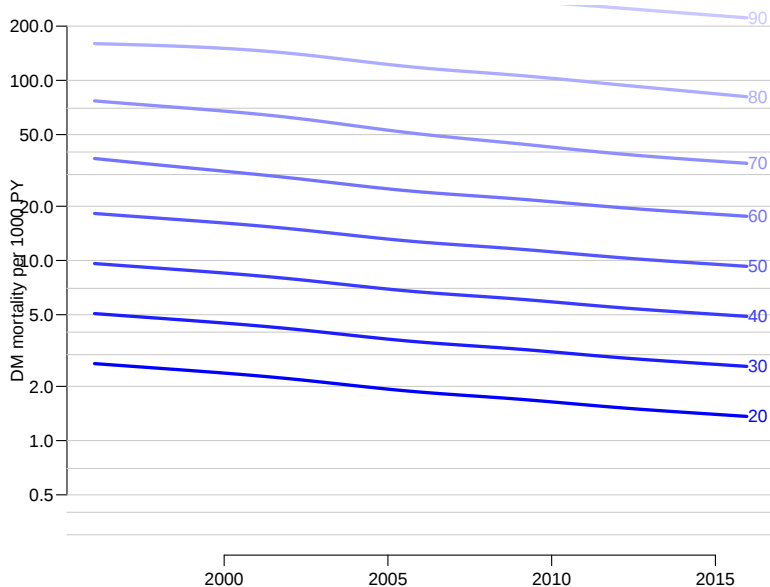
|                          |       |                     |
|--------------------------|-------|---------------------|
| DM incidence change      | Men   | 2.0 ( 1.9; 2.1)     |
|                          | Women | 2.2 ( 2.1; 2.3)     |
| < 2012                   | Men   | 3.6 ( 3.5; 3.7)     |
|                          | Women | 3.5 ( 3.4; 3.7)     |
| > 2012                   | Men   | -11.1 (-11.6;-10.6) |
|                          | Women | -12.3 (-12.9;-11.8) |
| Mortality change, DM:    | Men   | -3.7 ( -3.8; -3.5)  |
|                          | Women | -3.3 ( -3.4; -3.2)  |
| Mortality change, no DM: | Men   | -2.9 ( -2.9; -2.8)  |
|                          | Women | -2.4 ( -2.5; -2.4)  |

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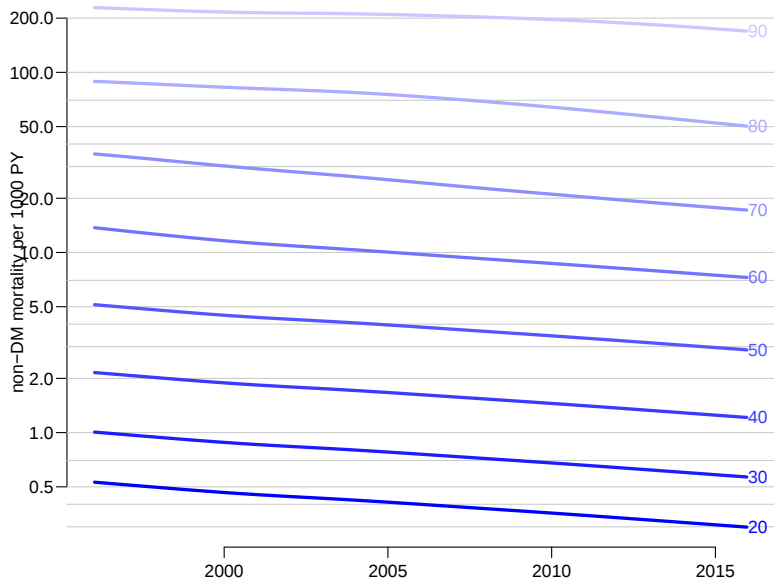
# Changing incidence of DM in Denmark



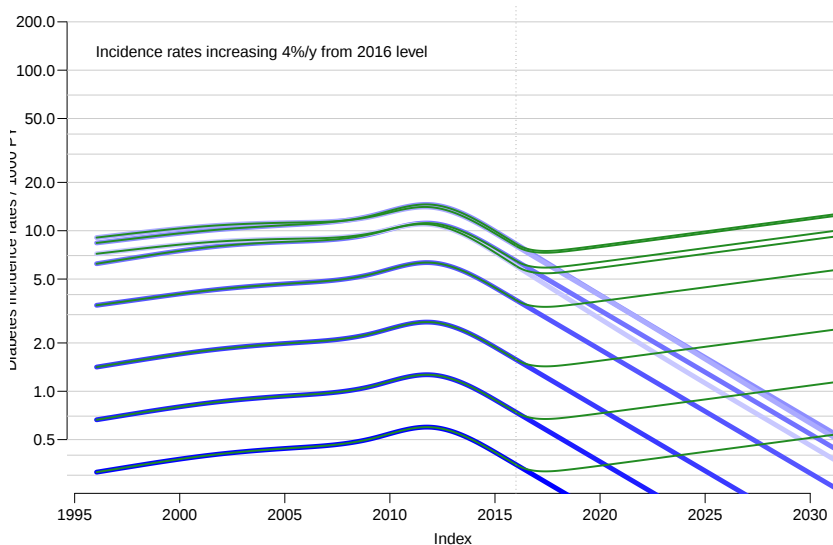
# Changing mortality in DM ptt. in Denmark



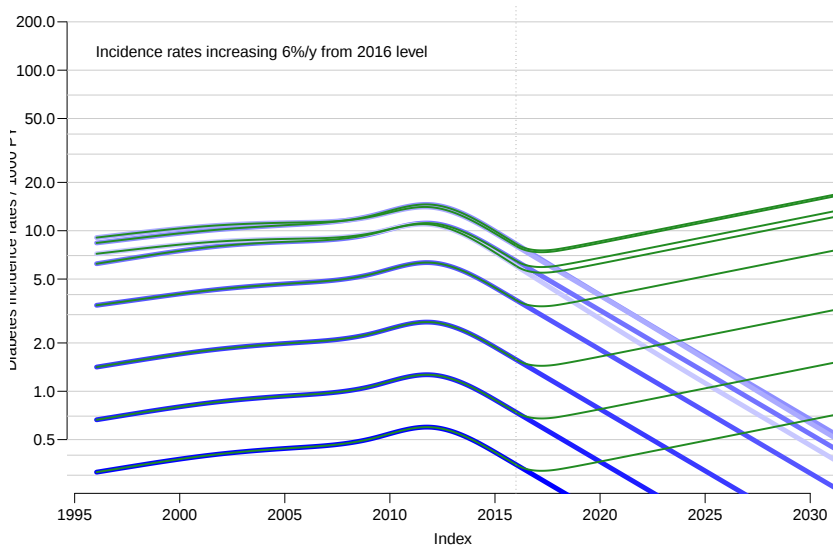
# Changing mortality among non-DM persons



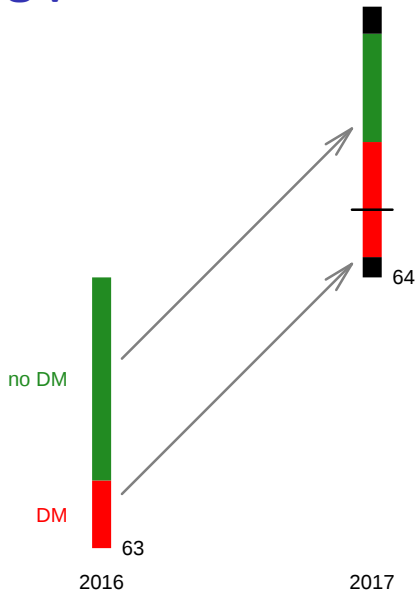
# Predicting DM incidence till 2030



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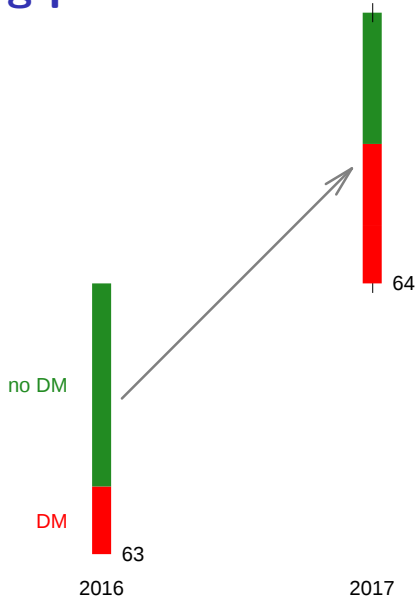


# Predicting prevalence in small steps



Using:  
Incidence rates of DM  
Mortality rates for DM ptt.  
Mortality rates for non-DM

# Predicting prevalence in small steps

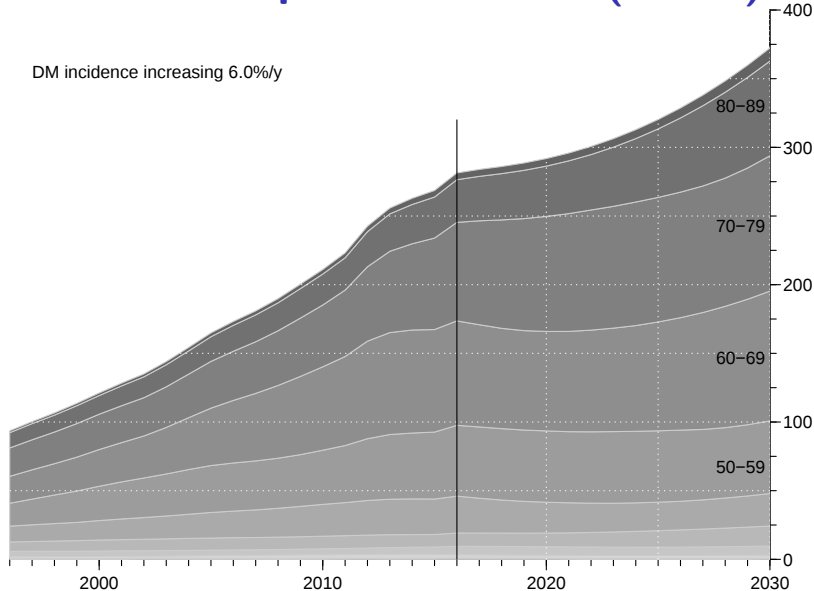


Using:  
Incidence rates of DM  
Mortality rates for DM ptt.  
Mortality rates for non-DM

## Predicting prevalence

- ▶ Age-specific prevalences each year
- ▶ Multiply with population forecast from Statistics Denmark
- ▶ → the **number** of diabetes patients
- ▶ We make the prediction under different incidence scenarios:
  - ▶ rates are as in 2016
  - ▶ increase 2% per year
  - ▶ increase 4% per year
  - ▶ increase 6% per year
- ▶ Assume mortality decrease 2.5% in non-DM persons
- ▶ Assume mortality decrease 3.5% in DM patients

# Number of DM patients in DK (1000s)



# Summary

- ▶ Mortality decreasing stably:
  - ▶ 2.5% / y for non-DM
  - ▶ 3.5% / y for DM ptt.
- ▶ Incidence rates
  - ▶ increasing till 2012 (3.5% / y)
  - ▶ then decreasing (12% / y)
- ▶ no good explanation (HbA<sub>1c</sub>-criteria?)
- ▶ Prediction is **very** much guesswork.
- ▶ Total no. DM ptt. in 2030: **370,000**

# Thanks for your attention.