

Sex differences in (the prognosis of) DM (patients)

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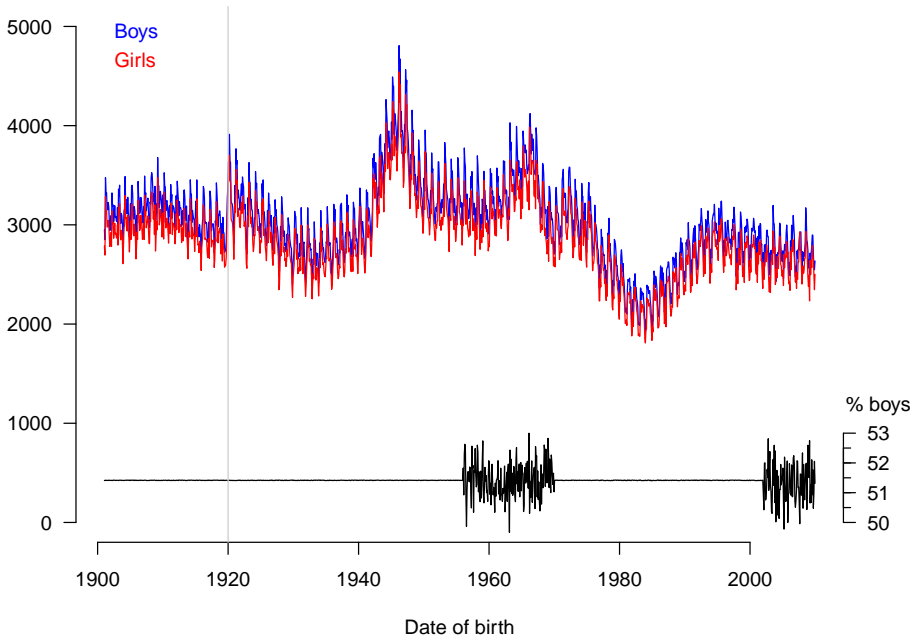
SDC research & development seminar

SDC, February 2014

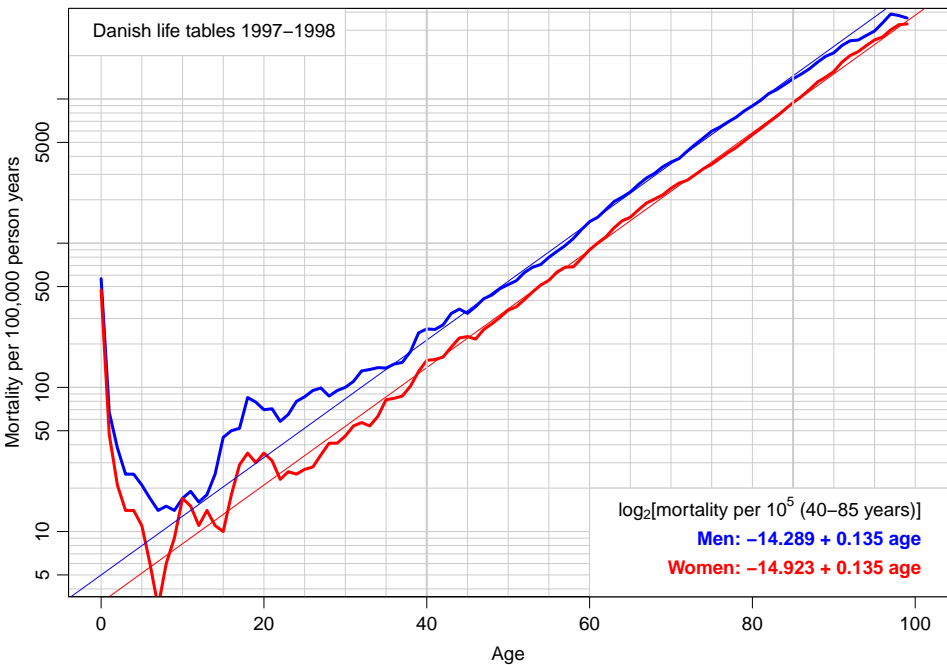
Overview

- ▶ Boys and girls / men and women
- ▶ Diabetes in men and women
- ▶ Mortality in diabetic men and women

Monthly no. births in Denmark



Danish life tables 1997–1998



Mortality patterns

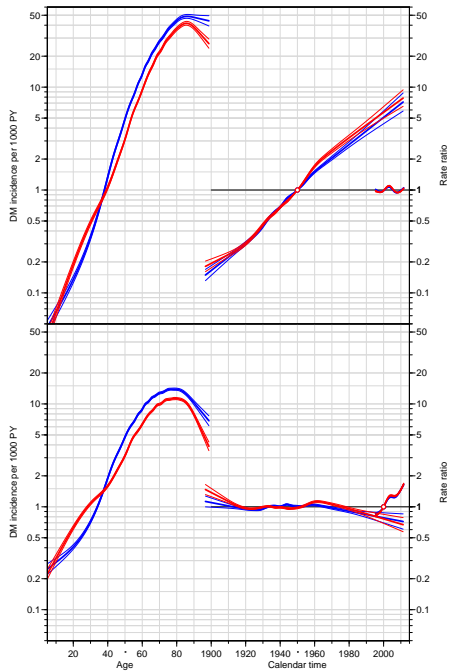
- ▶ 51.4% of newborns are boys

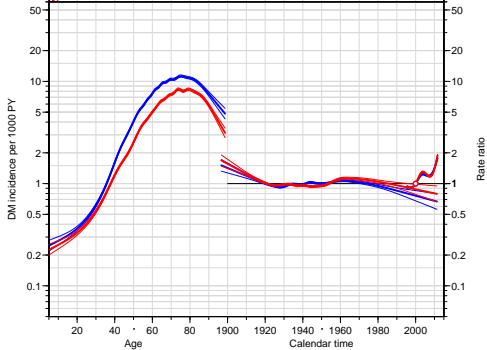
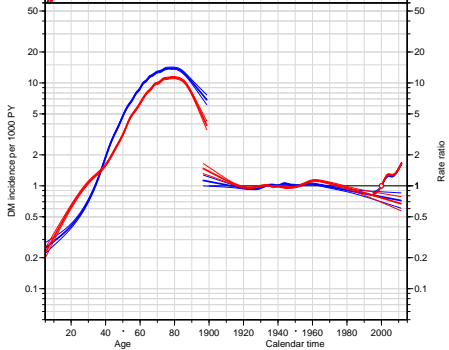
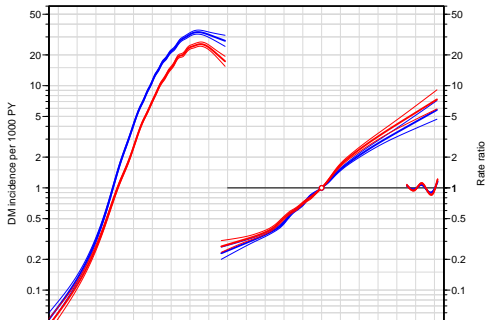
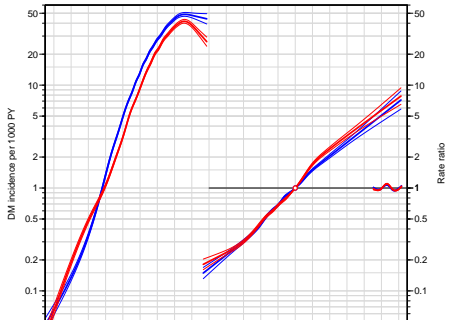
Mortality patterns

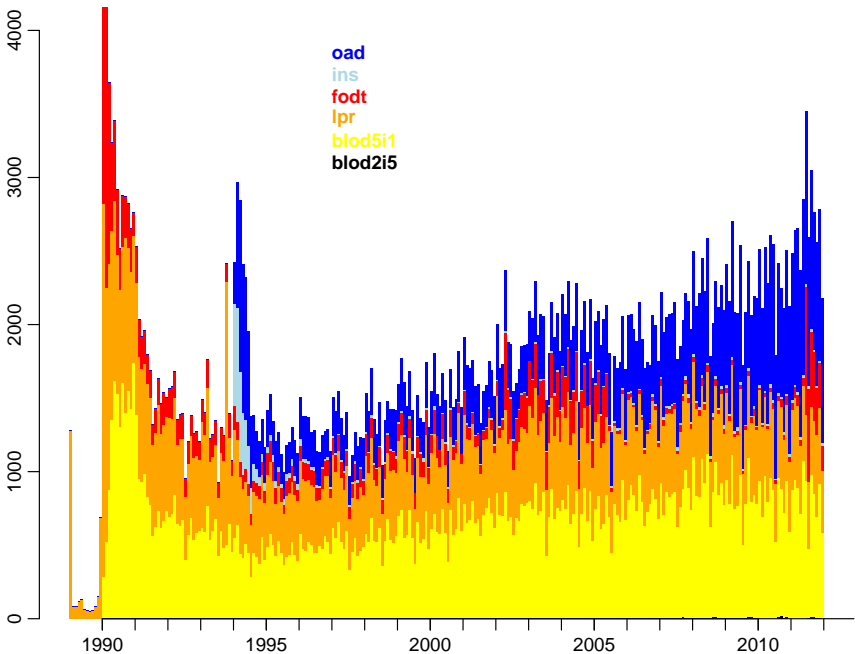
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- ▶ After age 40, mortality doubles every 7.4 years

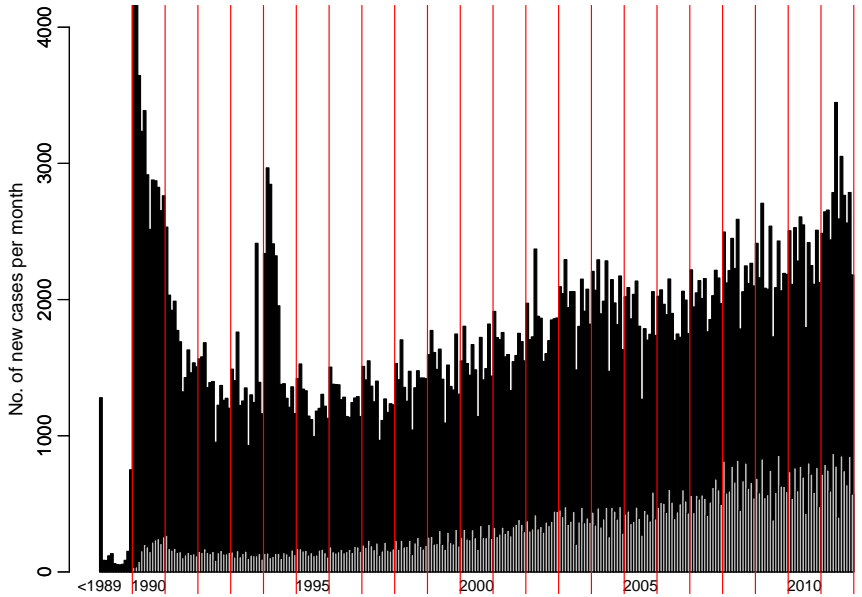
Mortality patterns

- ▶ 51.4% of newborns are boys
- ▶ After age 40, mortality doubles every 7.4 years
- ▶ $RR_{M \text{ vs. } W} = 1.55$
corresponding to 4.7 years age difference

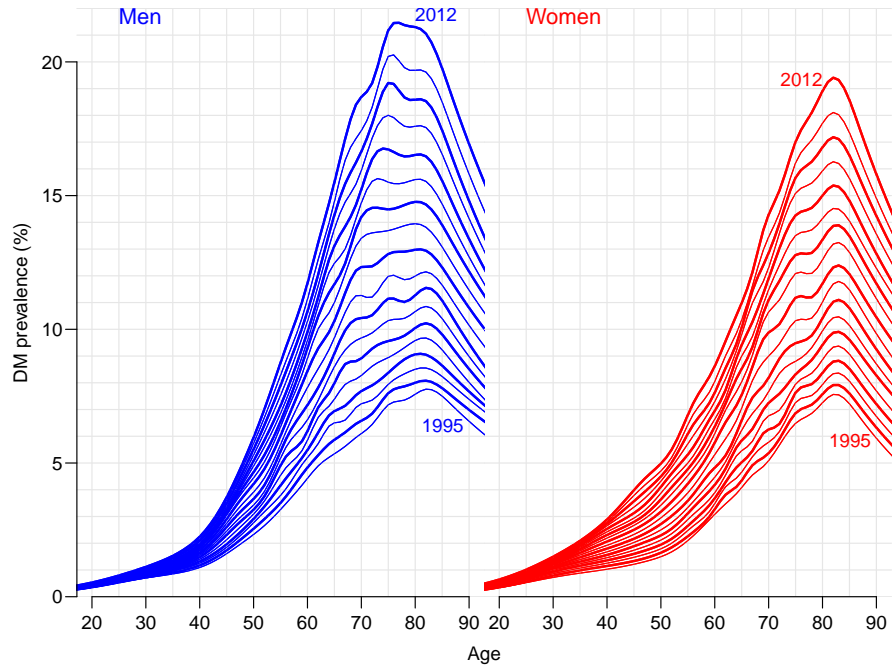






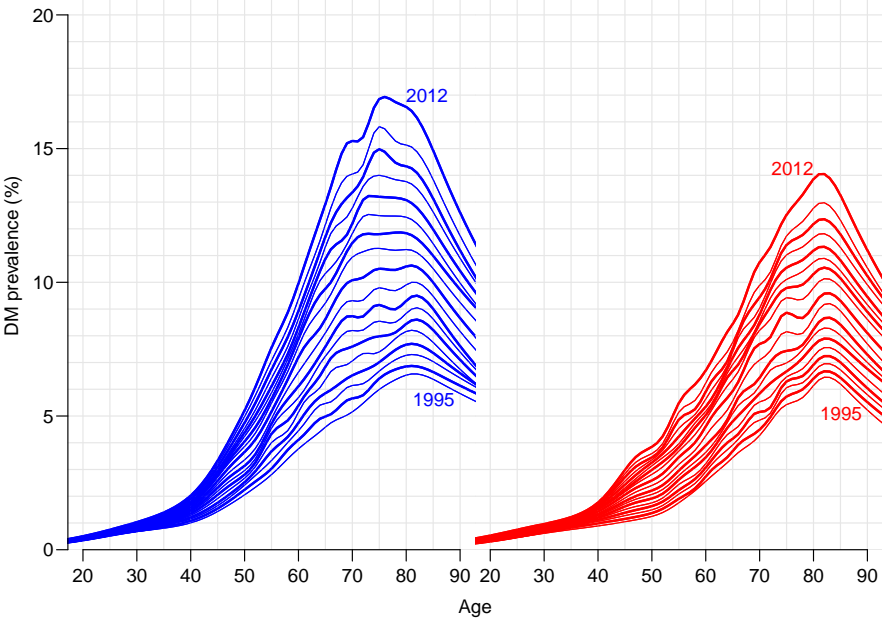


Date of inclusion



Men

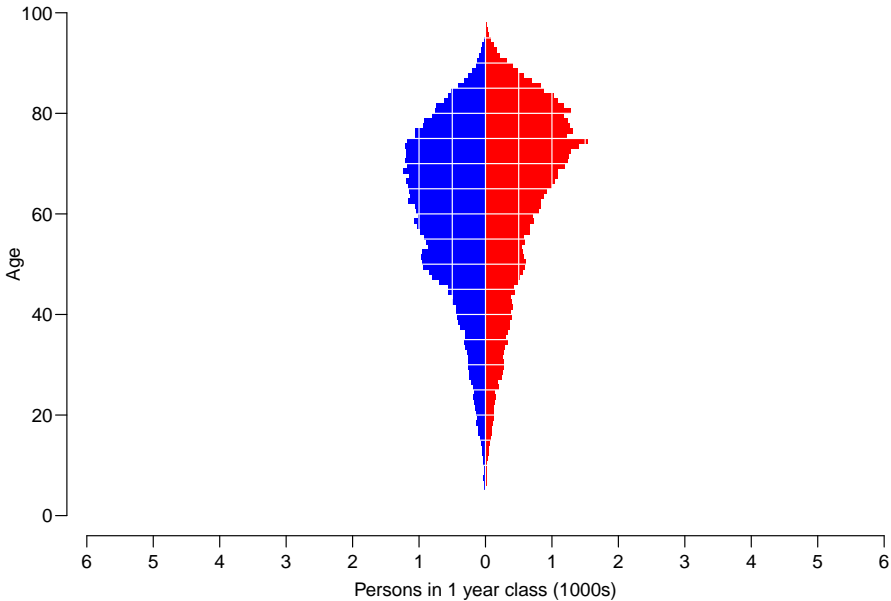
Women



Film!

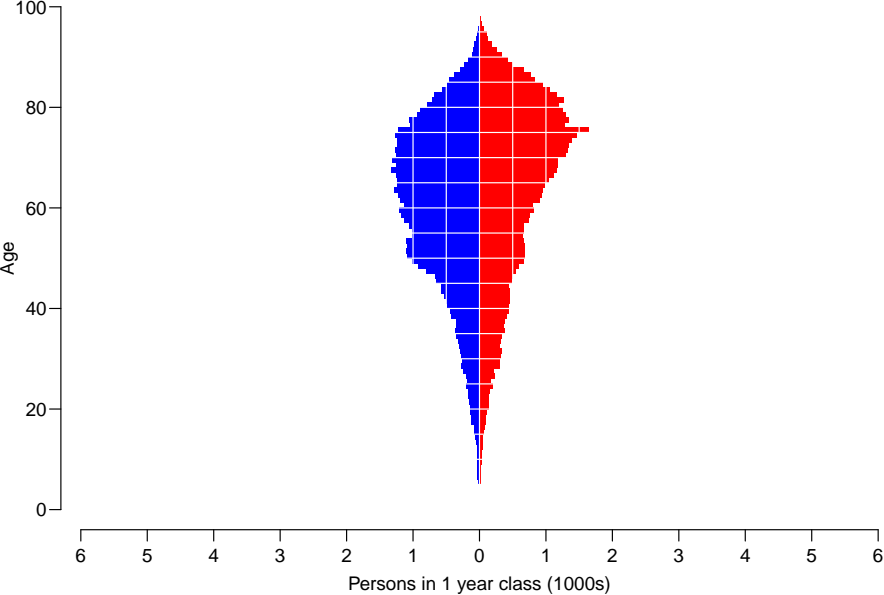
1995

49,438 N 49,126



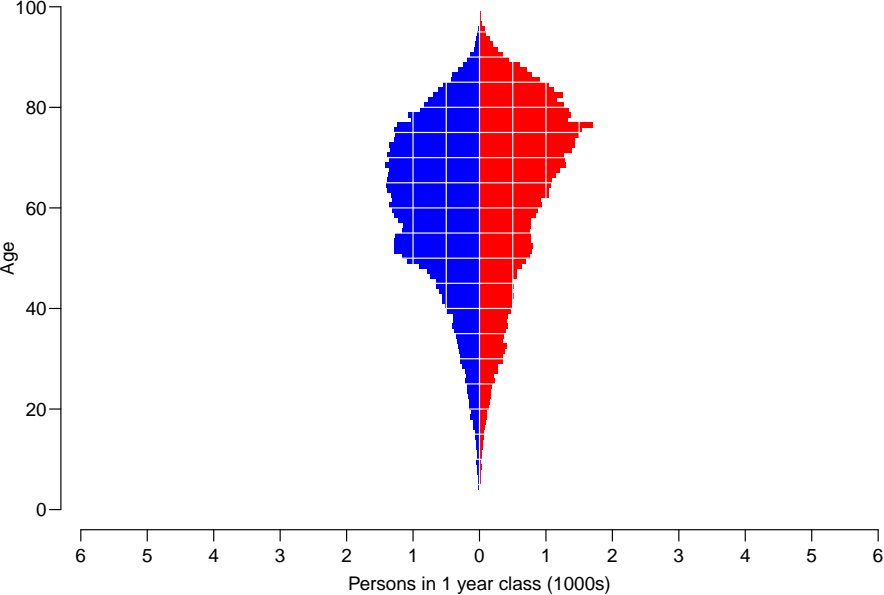
1996

53,443 N 52,631



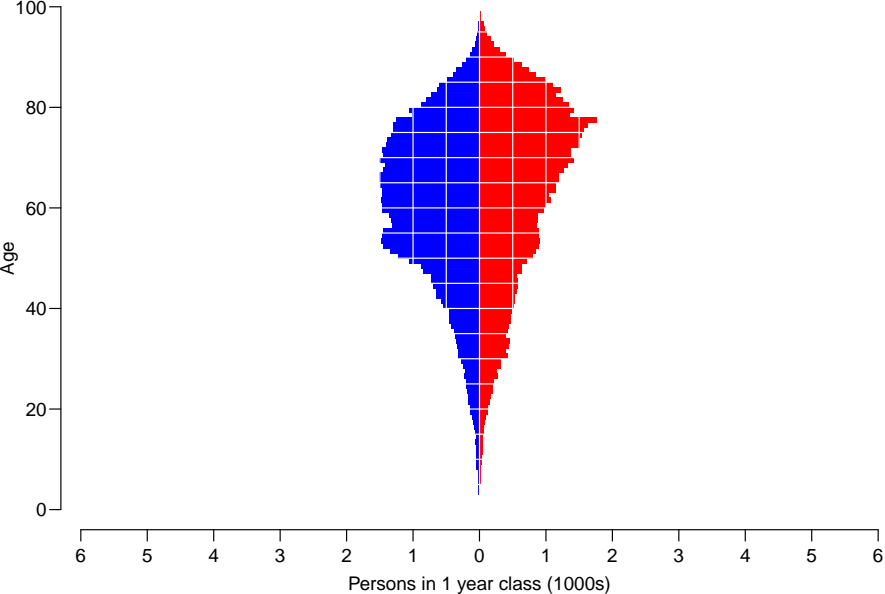
1997

57,739 N 56,551



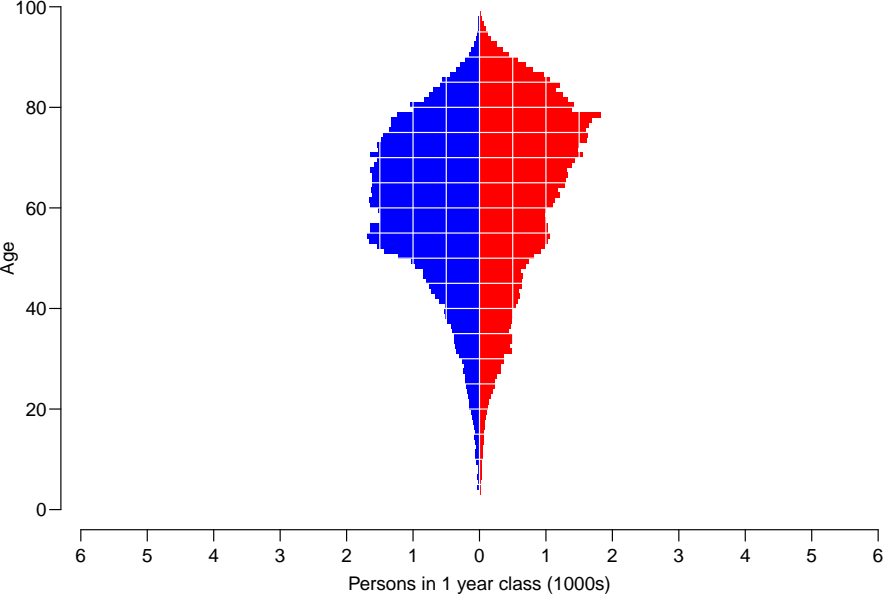
1998

61,832 N 60,522



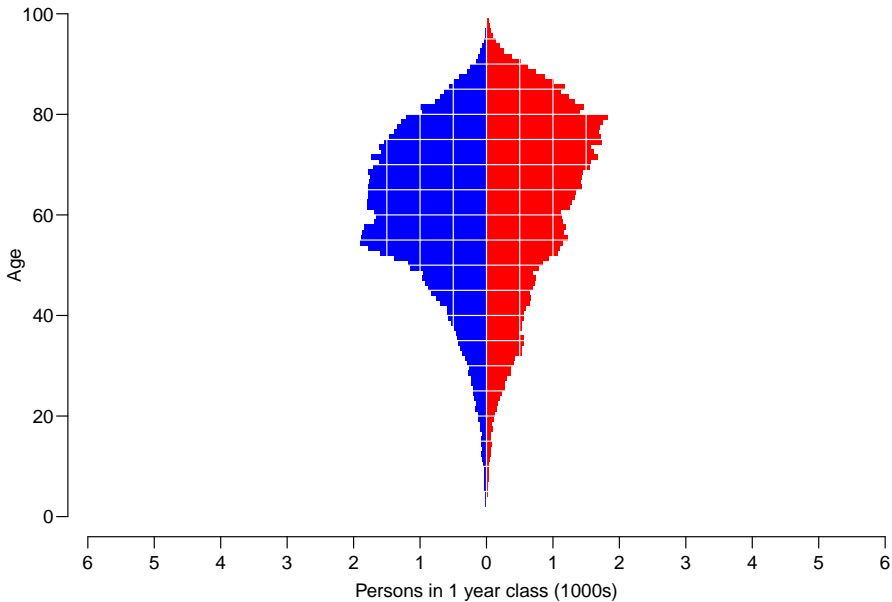
1999

66,746 N 64,974



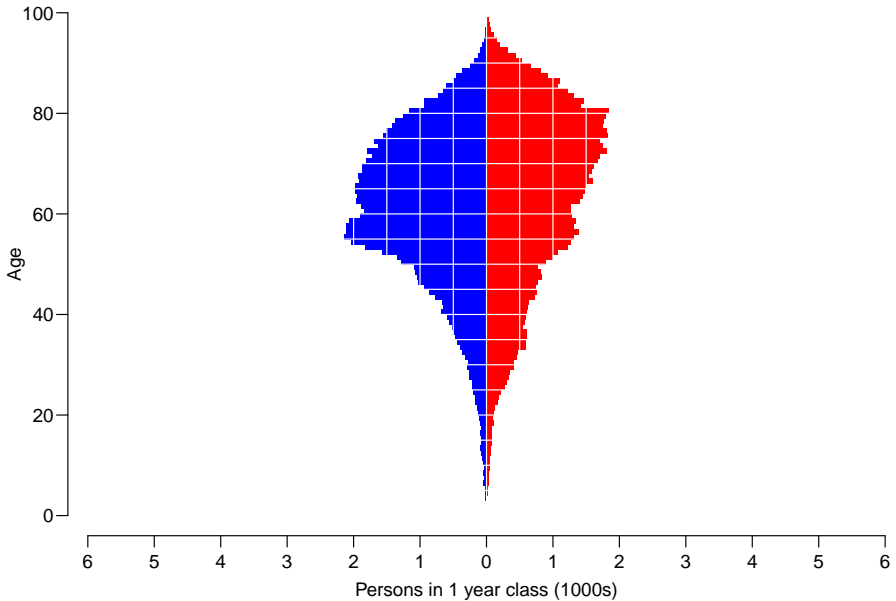
2000

71,798 N 69,692



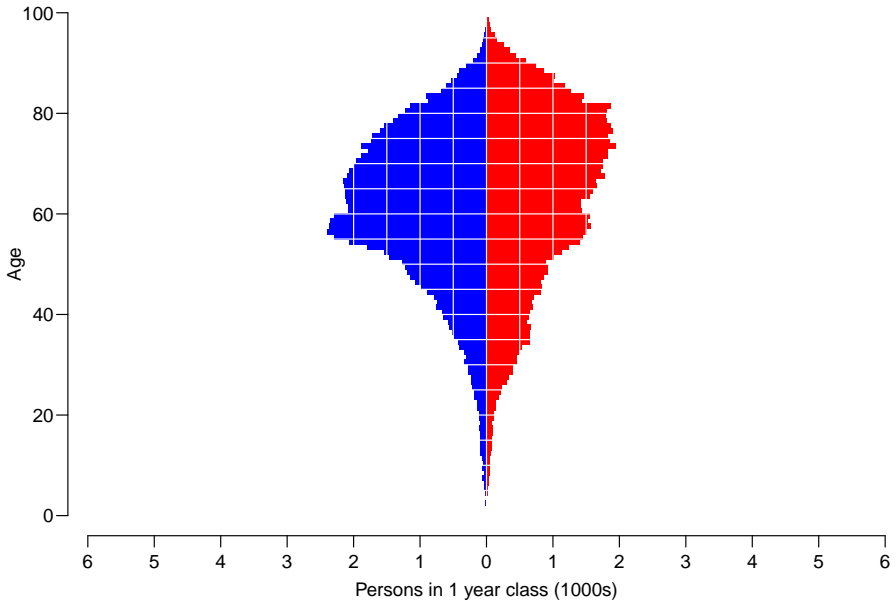
2001

77,120 N 74,570



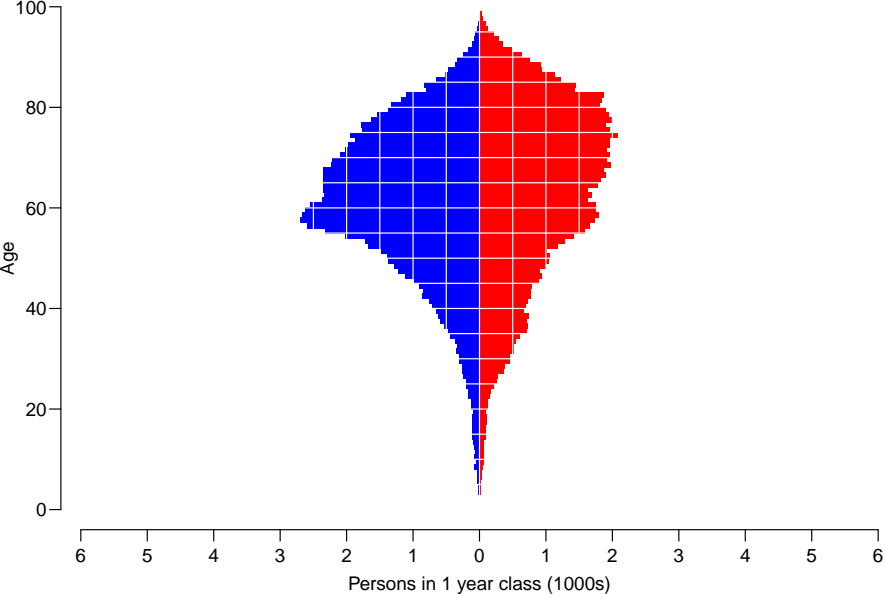
2002

82,914 N 79,895



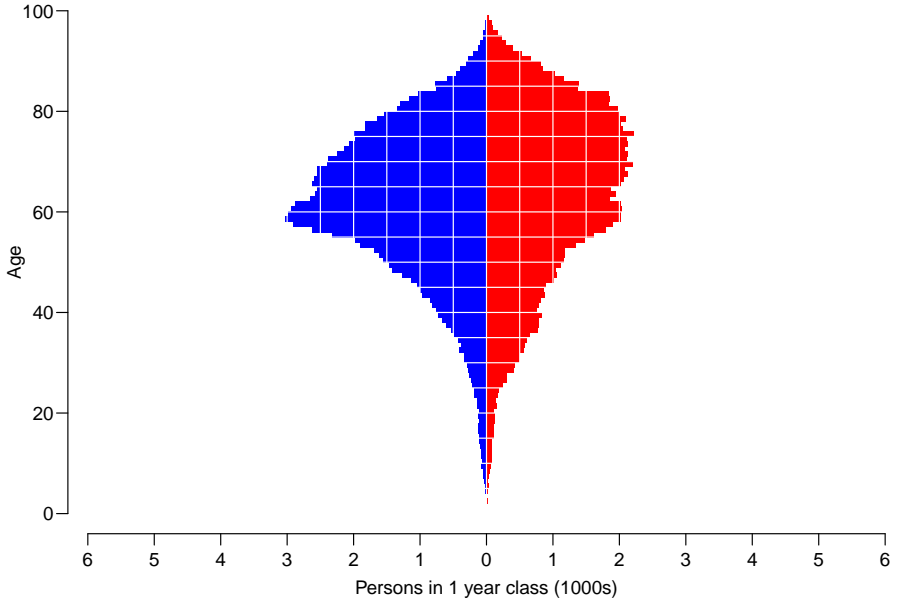
2003

89,291 N 86,364



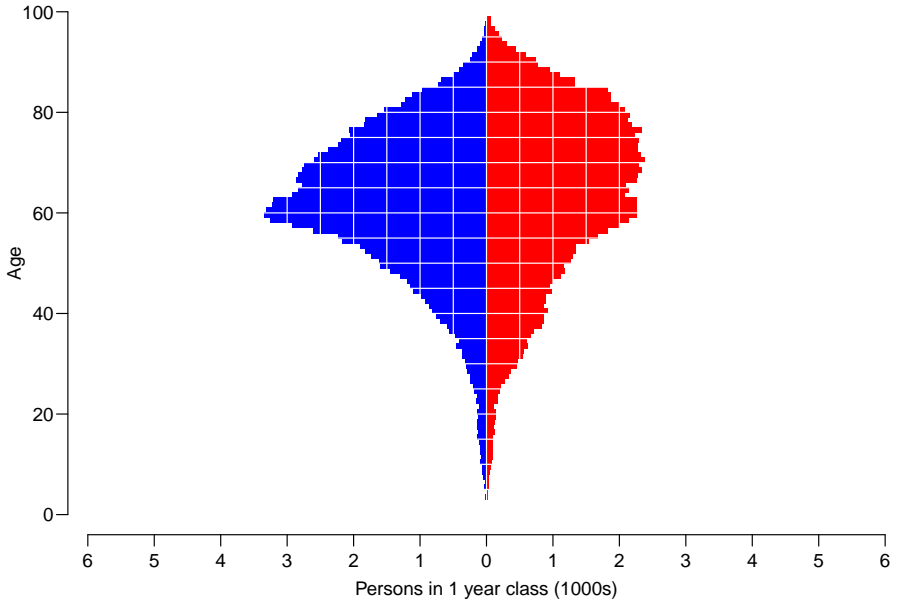
2004

96,706 N 93,199



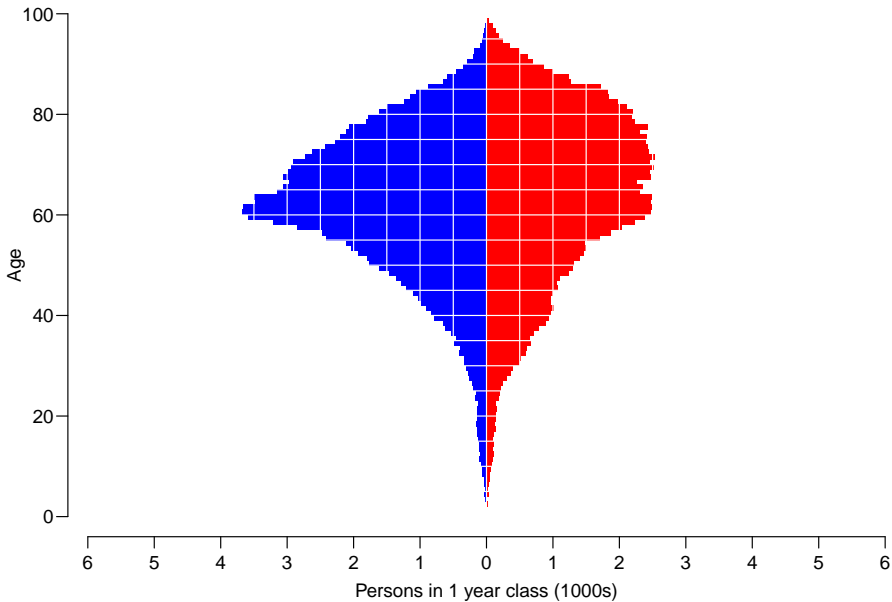
2005

104,149 N 100,227



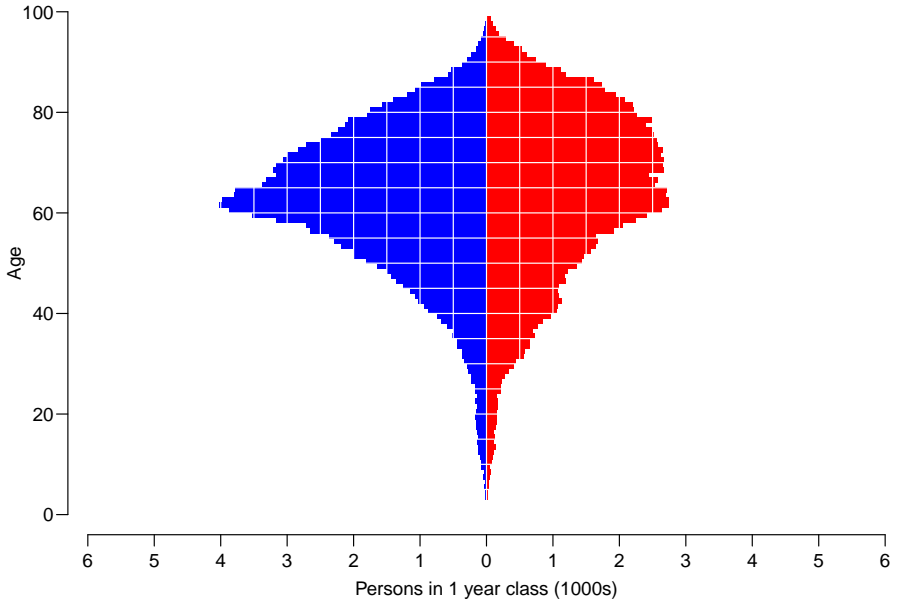
2006

110,581 N 106,028



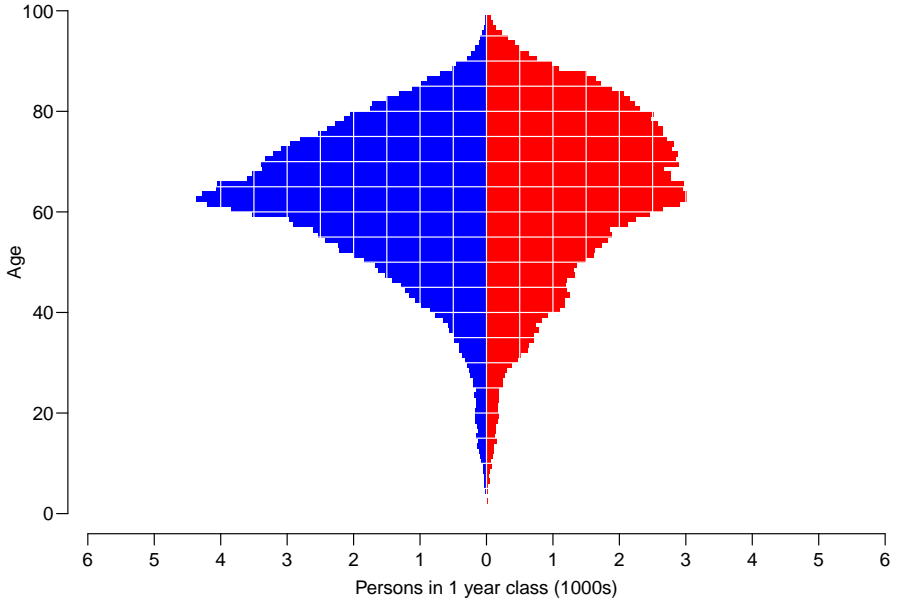
2007

117,328 N 112,018



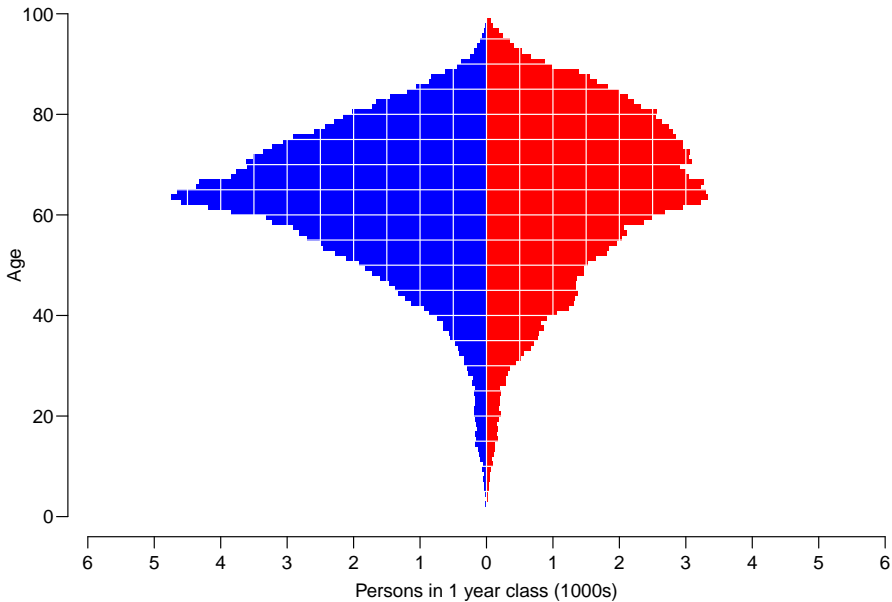
2008

124,501 N 118,726



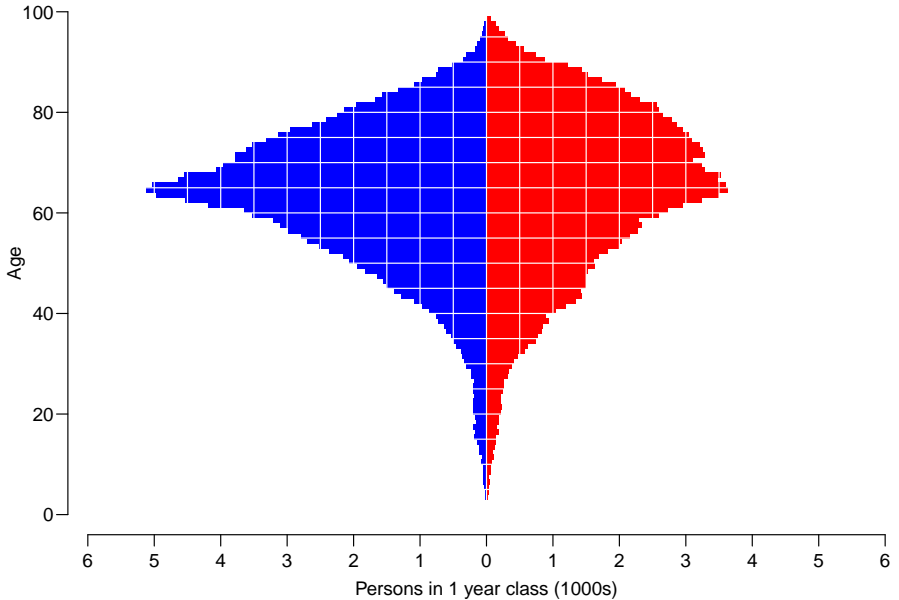
2009

132,847 N 126,295



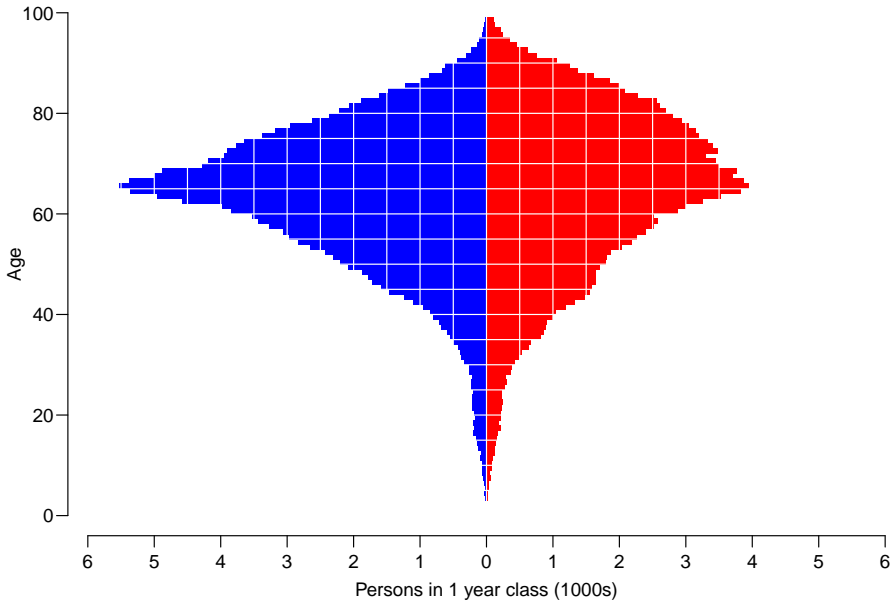
2010

140,940 N 133,318



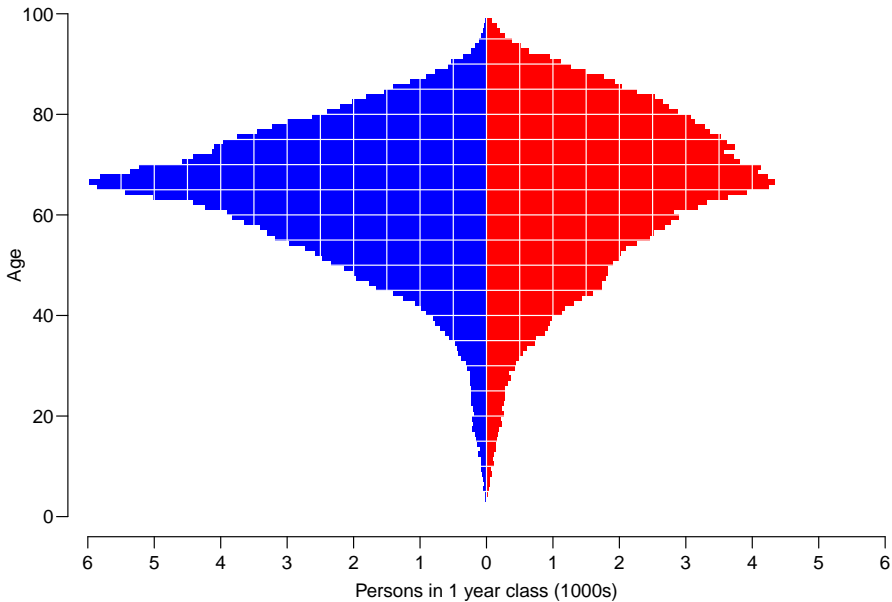
2011

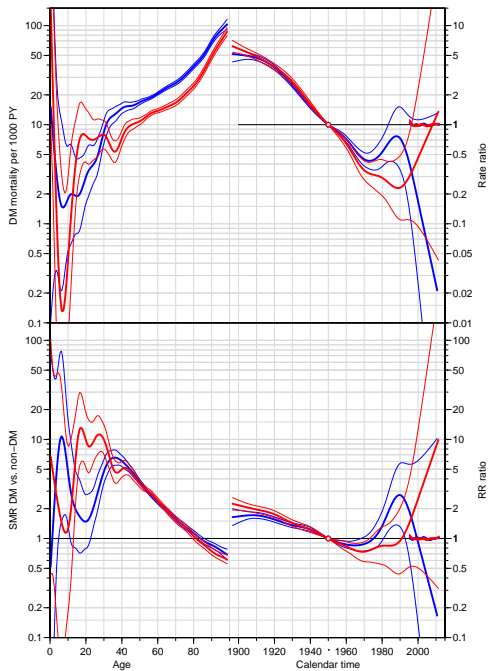
149,702 N 140,507

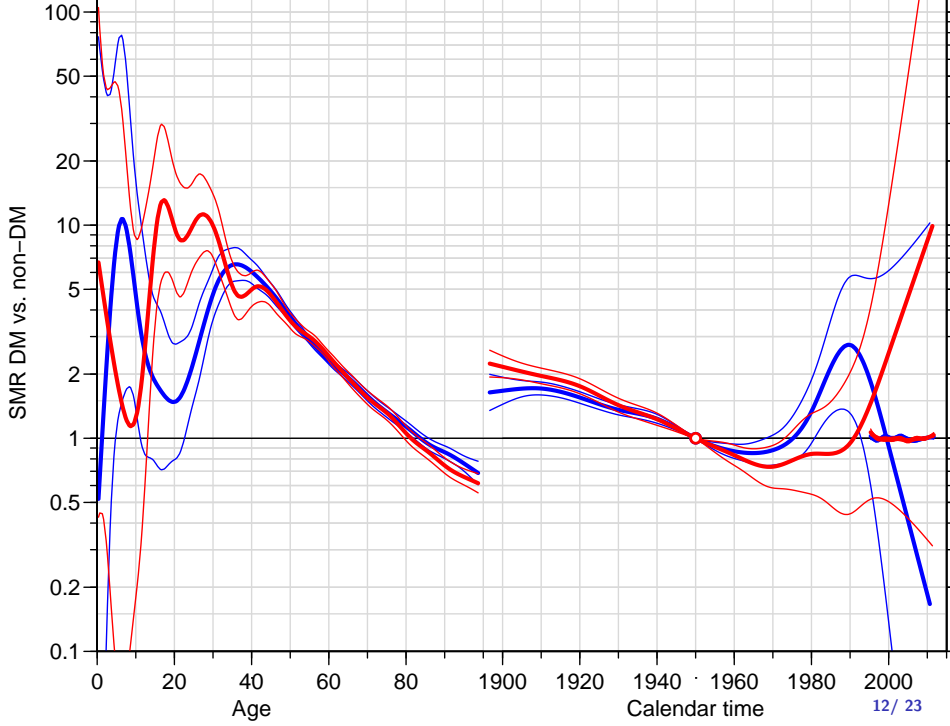


2012

160,352 N 150,309







Annual trend in population rates

% change per year	Men	Women
Diabetes incidence	+3.8	+4.0
Population mortality	-2.8	-2.5
DM ppt. mortality	-4.0	-3.8
DM SMR rel to pop	-1.2	-1.3

Change in prevalences of DM

Sources of change in DM prevalence:

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- ▶ Increasing incidence **since** 1995
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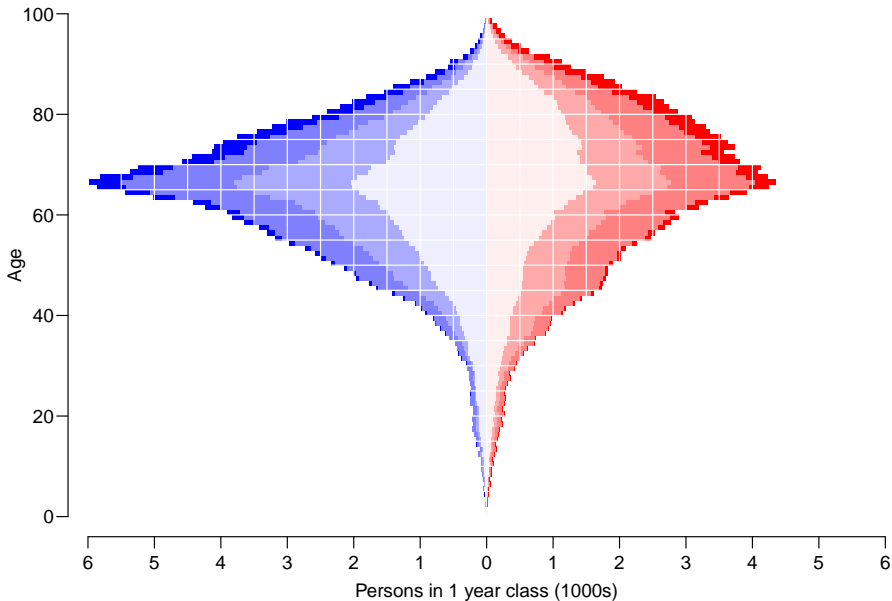
Change in prevalences of DM

Sources of change in DM prevalence:

- ▶ Increasing incidence **since** 1995
- ▶ Decreasing mortality **since** 1995
- ▶ Imbalance between mortality and incidence **in** 1995

2012

Mort	Inc	Const	Org	All	N	All	Org	Const	Inc	Mort
13,045	43,487	42,905	60,916	160,352		150,309	55,253	40,046	42,850	12,159
8.1	27.1	26.8	38.0		%		36.8	26.6	28.5	8.1



SDC patients

Results from:

- ▶ Improved survival among patients with complicated type 2 diabetes in Denmark: A prospective study (2002-2010).

Færch K, Carstensen B, Almdal TP, Jørgensen ME.

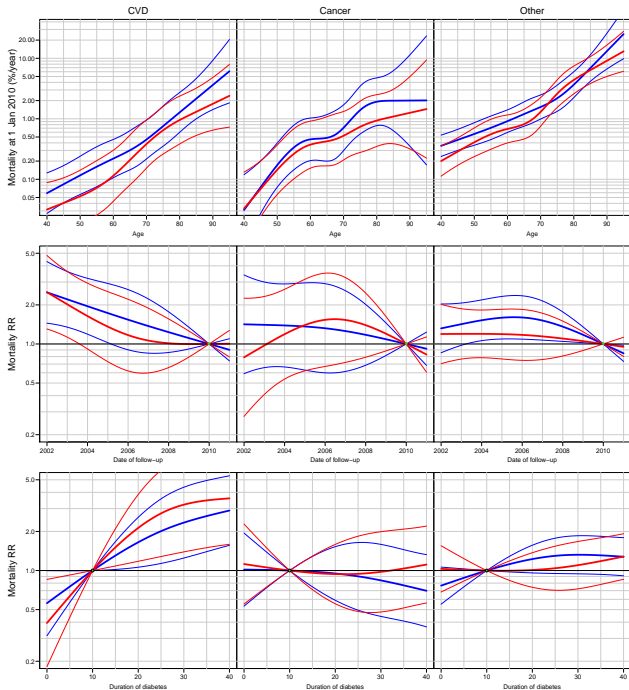
J Clin Endocrinol Metab. 2014 Jan 31;
(Epub ahead of print)

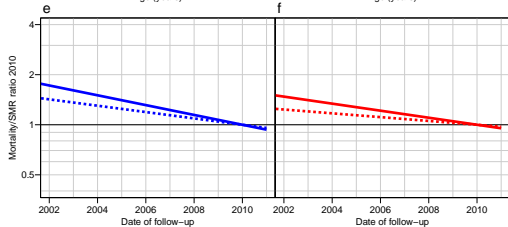
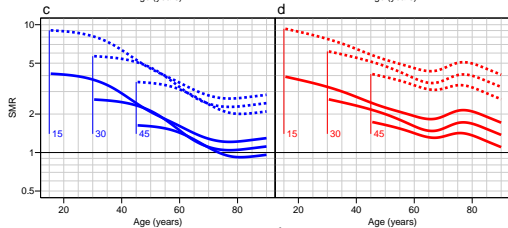
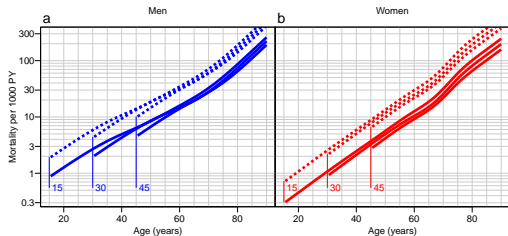
- ▶ Time trends in mortality rates in type 1 diabetes from 2002 to 2011.

Jørgensen ME, Almdal TP, Carstensen B.

Diabetologia. 2013 Nov;56(11):2401-4.

Causes of death in T1 SDC patients





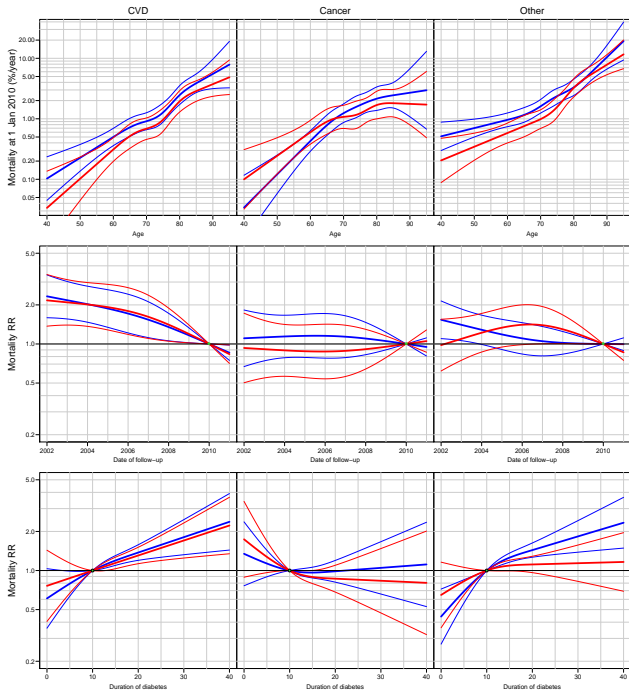
T1D (SDC):
 Lines:
 Nephropathy status

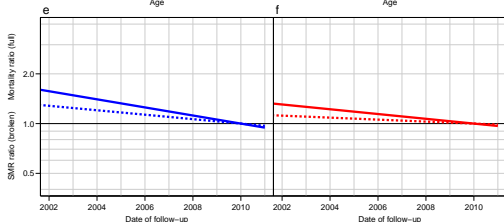
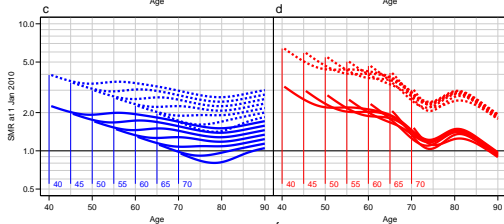
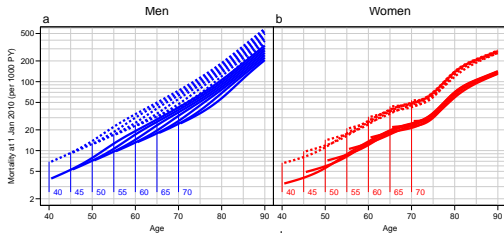
Mortality change
 -6.6% -4.8%

SMR change
 -4.3% -2.6%

SMR decreases

Causes of death in T2 SDC patients



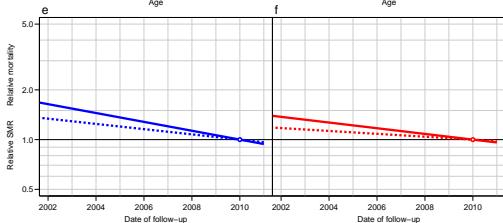
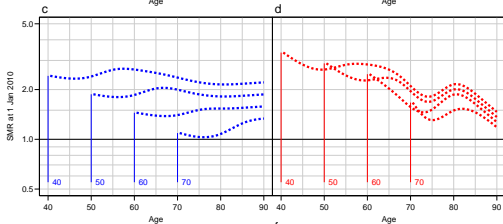
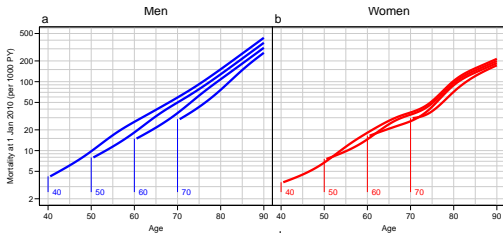


T2D (SDC):
 Lines:
 Nephropathy status

Mortality change
 -5.5% -3.3%

SMR change
 -3.0% -1.4%

SMR depends on
age at diagnosis
 not on current
 age!



T2D (SDC):
 Lines:
 Mortality / SMR

Mortality change
 -5.5% -3.3%

SMR change
 -3.0% -1.4%

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 not on **current age!**

Summary

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 - ▶ Higher mortality among DM men
 - ▶ Identical SMR in men and women

Summary DM ptt (SDC)

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Men fare worse than women. . .

but as a group relative to the population,
they fare like women