### Revised cost projections for Swedish LTC 2005 - 2040

Presentation at the 21<sup>st</sup> REVES conference in Copenhagen 09-05-27 Mårten Lagergren Marti Parker Mats Thorslund

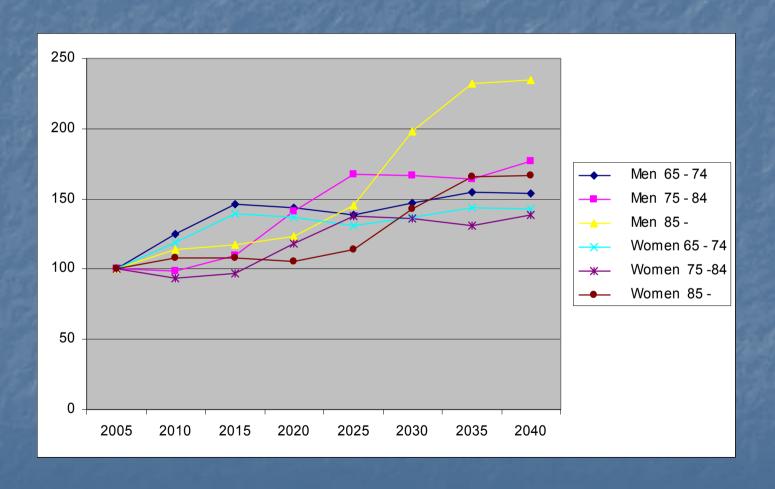
### The calculations have been based upon

Statistics Sweden population forecast incl. mortality

Statistics Sweden Survey of Living Conditions (ULF) 1980 -2006

Costs for LTC in relation to degree of dependency (ADL-dependency or Statistics Sweden health index) per age-group and gender according to surveys in 8 Swedish municipalities (1994, 2002 and 2007)

#### Population forecast 2005 - 2040



### Indicators of need for LTC in the ULF-surveys

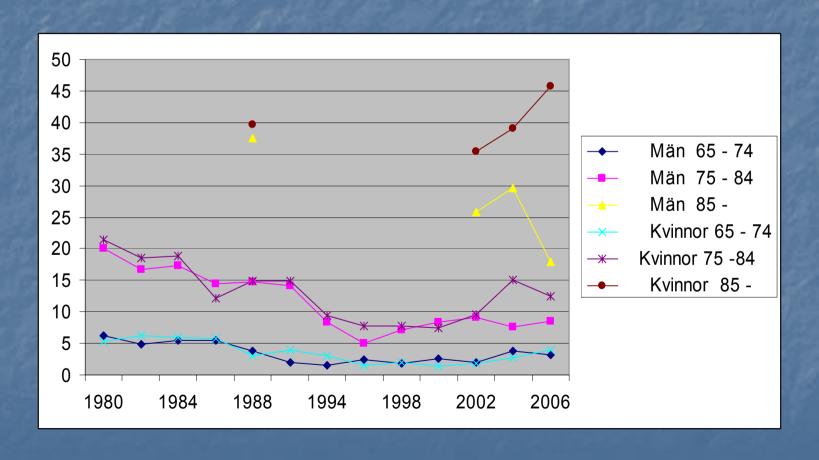
Self-reported general state of health Reduced functioning due to illness Mobility disability Dependency in instrumental ADL (laundry, cleaning etc.)

Statistics Sweden Index of health Dependency in personal ADL (bathing, dressing, toilet etc.)

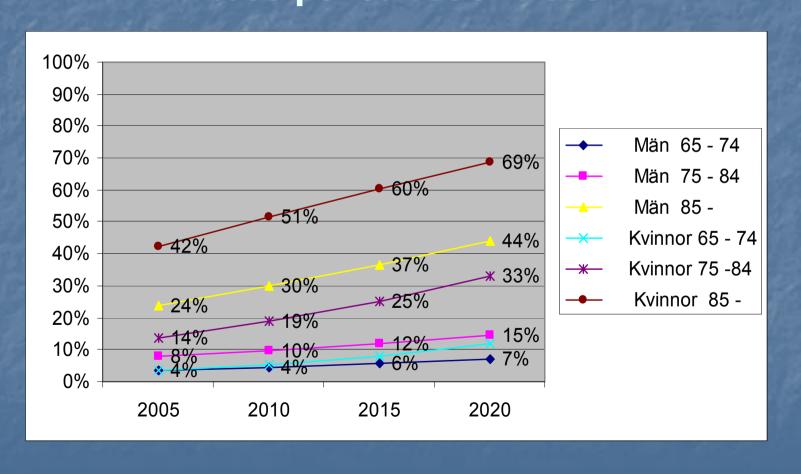
### Proportion with LTC and costs per person (SEK)

	Proportion	LTC costs per		
	with LTC	person		
Not severe ill-health	9.2%	20 455		
Severe ill-health	45.0%	176 578		
No ADL-dependency	4.6%	4 205		
ADL-dependency	77.9%	300 552		

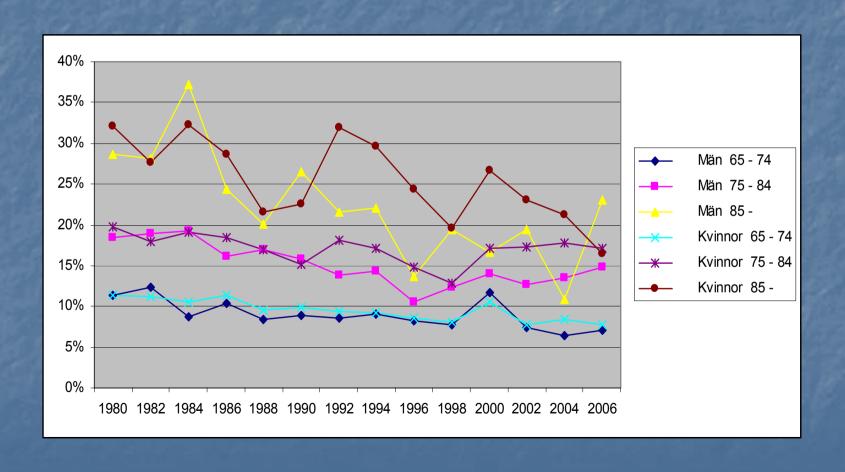
## Proportion of elderly persons with at least one ADL-dependency according to ULF percent



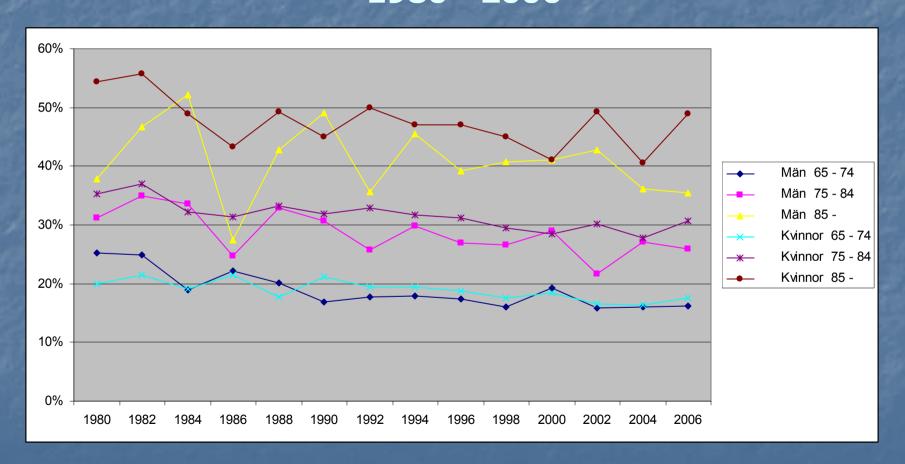
# Projections of proportions of ADL-dependent persons for the period 2005 - 2020 per age.group and gender - base-period 1996 - 2006



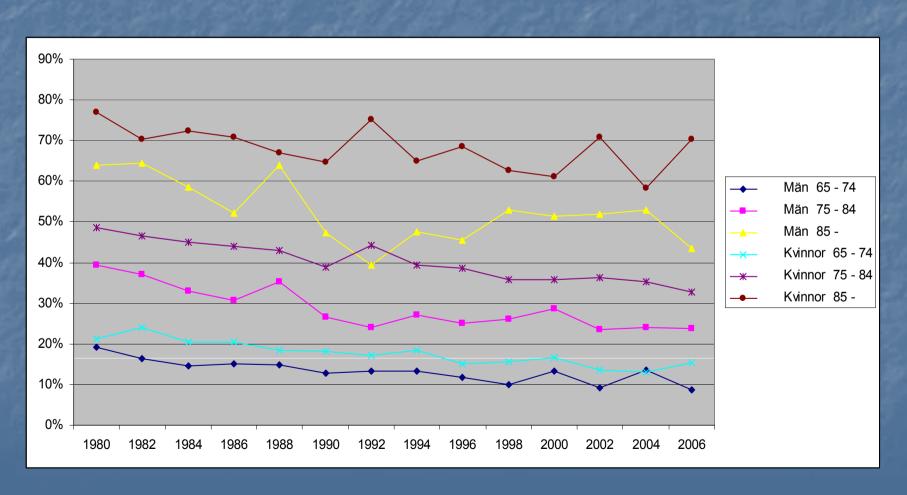
### Proportion of persons reporting bad health per age-group and gender 1980 - 2006



# Proportion of persons reporting reduced functioning depending on chronic illness per age-group and gender - 1980 - 2006

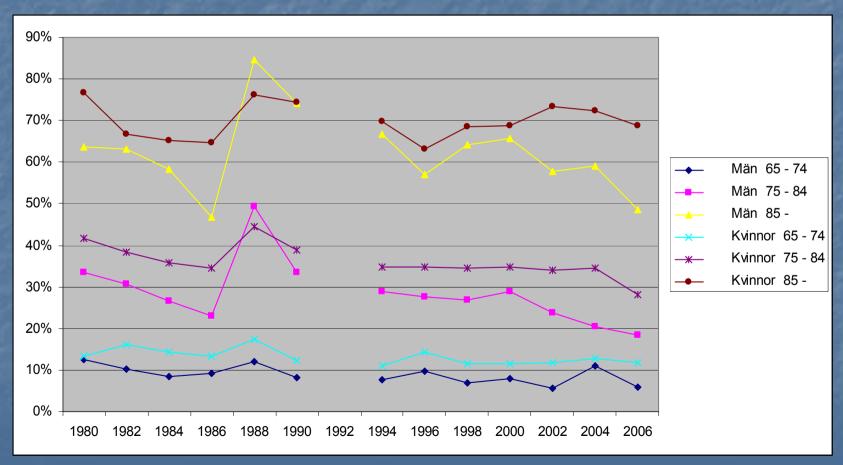


# Proportion of persons with mobility disability per age-group and gender 1980 -2006



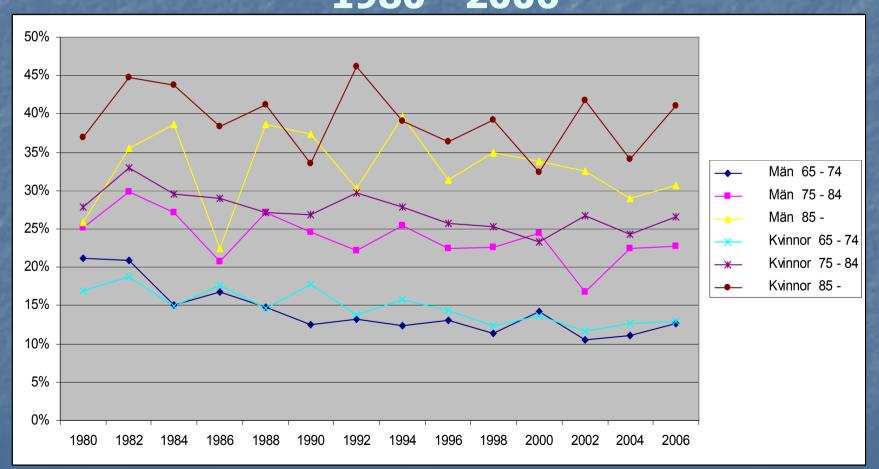
# Proportion of persons with at least one dependency in instrumental ADL per agegroup and gender

1980 - 2006



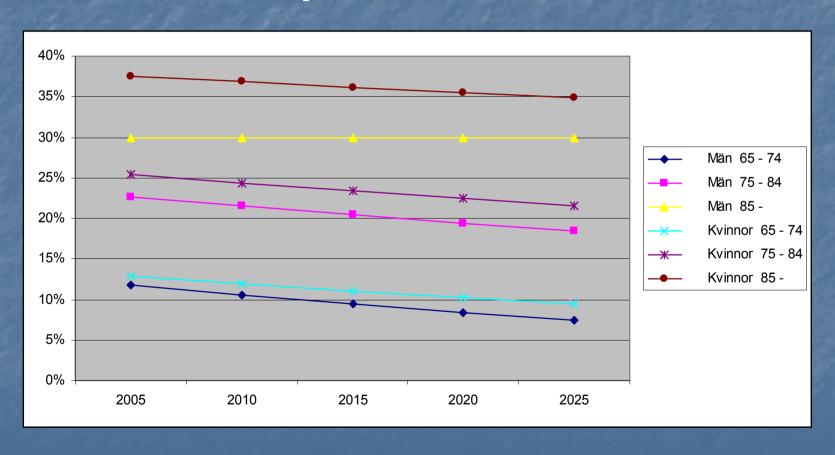
## Proportion of persons with severe ill-health according to Statistics Sweden health index per age-group and gender

1980 - 2006

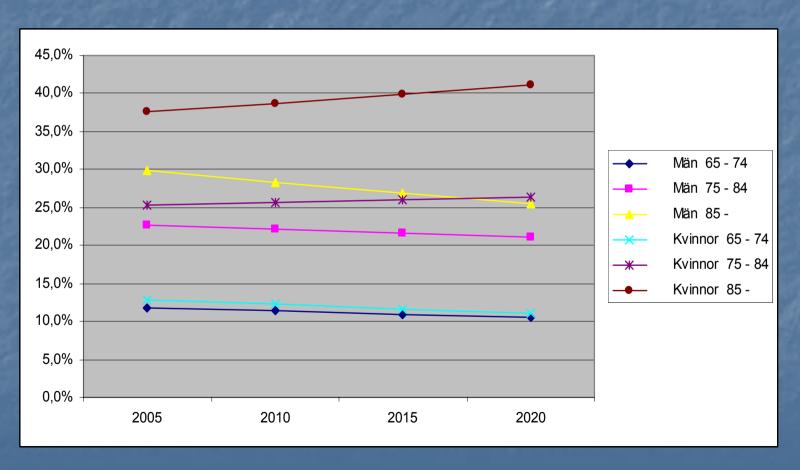


#### Projected proportion of persons with severe illhealth according to the Statistics Sweden Health index per age-group and gender 2005 -2025

base-period 1980 - 2006



#### Projected proportion of persons with severe illhealth according to the Statistics Sweden Health index per age-group and gender 2005 -2025 Base-period 1996 - 2006



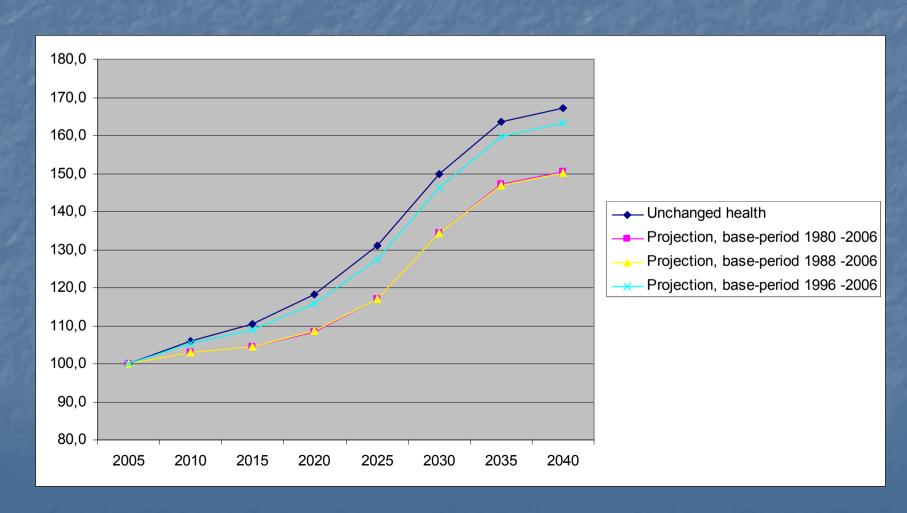
### Cost calculations 2005 – 2040 according to four different health assumptions

(Statistics Sweden Health index)

Unchanged health (per age-group and gender)
Health trend 2005 -2025 based upon the development
1980 - 2006, unchanged health 2025 - 2040
Health trend 2005 -2025 based upon the development
1988 - 2006, unchanged health 2025 - 2040
Health trend 2005 -2025 based upon the development
1996 - 2006, unchanged health 2025 - 2040

### Summary of LTC cost development in percent in the four cases

(index, 2005 = 100)



Cost projection assuming constant cost per age-group, gender and remaining years of life

## Mortality per age-group and gender and future development according to Statistics Sweden

#### Men

Age-group 65-69 70-74 75-79 80-84 85-89 90-0.015 0.026 0.044 0.078 0.140 0.296

Assumed yearly

reduction (percent)

2006/15 2.25% 2.00% 2.00% 2.00% 1.00% 0.50% 2016/40 1.69% 1.50% 1.50% 1.50% 0.75% 0.38%

#### Women

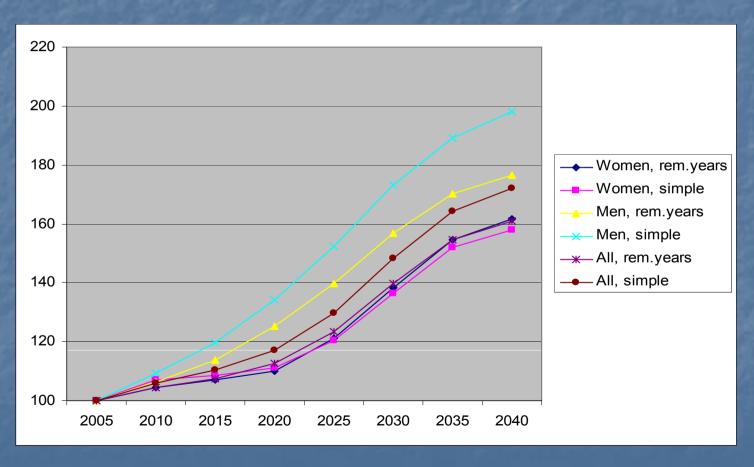
Age-group 65-69 70-74 75-79 80-84 85-89 90-0.009 0.015 0.027 0.051 0.100 0.234

Assumed yearly reduction (percent)

## Costs for LTC per person depending on remaining years of life per age-group and gender

	65 -74	75-79	80-84	85-89	90+
Dying year 0	51.5	161.2	78.6	196.5	165.0
Dying year 1	34.8	113.7	73.1	166.8	151.8
Dying year 2	31.6	69.9	70.1	119.0	99.4
Dying year 3	31.3	39.2	54.1	43.7	49.9
Dying year 4	12.4	11.6	27.9	32.8	59.6
Survivor efter 5 years	8.4	17.0	21.5	32.9	229.4
Dying year 0	37.7	59.0	153.8	192.7	354.4
Dying year 1	34.9	88.5	191.6	241.4	382.5
Dying year 2	58.3	73.2	146.2	177.3	284.5
Dying year 3	21.0	45.8	131.7	135.4	224.8
Dying year 4	33.3	47.8	76.8	148.1	187.7
Survivor efter 5 years	6.1	12.8	46.0	96.7	350.0
	Dying year 1 Dying year 2 Dying year 3 Dying year 4 Survivor efter 5 years  Dying year 0 Dying year 1 Dying year 2 Dying year 3 Dying year 4	Dying year 0  Dying year 1  Dying year 2  Dying year 3  Dying year 4  Survivor efter 5 years  27.7  Dying year 0  Dying year 1  Dying year 2  Dying year 2  Dying year 3  Dying year 4  33.3	Dying year 0       51.5       161.2         Dying year 1       34.8       113.7         Dying year 2       31.6       69.9         Dying year 3       31.3       39.2         Dying year 4       12.4       11.6         Survivor efter 5 years       8.4       17.0         Dying year 0       37.7       59.0         Dying year 1       34.9       88.5         Dying year 2       58.3       73.2         Dying year 3       21.0       45.8         Dying year 4       33.3       47.8	Dying year 0       51.5       161.2       78.6         Dying year 1       34.8       113.7       73.1         Dying year 2       31.6       69.9       70.1         Dying year 3       31.3       39.2       54.1         Dying year 4       12.4       11.6       27.9         Survivor efter 5 years       8.4       17.0       21.5         Dying year 0       37.7       59.0       153.8         Dying year 1       34.9       88.5       191.6         Dying year 2       58.3       73.2       146.2         Dying year 3       21.0       45.8       131.7         Dying year 4       33.3       47.8       76.8	Dying year 0       51.5       161.2       78.6       196.5         Dying year 1       34.8       113.7       73.1       166.8         Dying year 2       31.6       69.9       70.1       119.0         Dying year 3       31.3       39.2       54.1       43.7         Dying year 4       12.4       11.6       27.9       32.8         Survivor efter 5 years       8.4       17.0       21.5       32.9         Dying year 0       37.7       59.0       153.8       192.7         Dying year 1       34.9       88.5       191.6       241.4         Dying year 2       58.3       73.2       146.2       177.3         Dying year 3       21.0       45.8       131.7       135.4         Dying year 4       33.3       47.8       76.8       148.1

# Cost increase in percent 2005 -2040 assuming unchanged costs per remaining years of life compared to projections based upon age-group and gender only (alt. simple)



#### Summary

Assuming unchanged costs per age-group and gender the total costs for LTRC in Seden will increase by 65 - 70% in the period

2005 - 2040 of unchanged costs per age-group, gender and remaining years of life results in somewhat lower cost increase — 60 - 65%

If projections are based upon the health trends in the period 1996 -2006 (Statistics Sweden health index) the projected cost increase stays about the same – 60 - 65%.

Assuming instead a health development according to the trend 1980 -2006 results in an even lower projected cost increase - around 50%

#### Conclusions

The costs in fixed prices for providing public LTC in Sweden on the same level as today will increase by 50 - 70% during the period 2005 - 2040

The cost increase will be less if ill-health and dependency among the elderly continues to develop in a positive way as observed in recent decades — though hardly much lower than 50%.