

# Projection of Care Need and Family Resources in Germany

Presentation at the workshop: Aging, Care Need and Quality of  
Life, Rostocker Zentrum

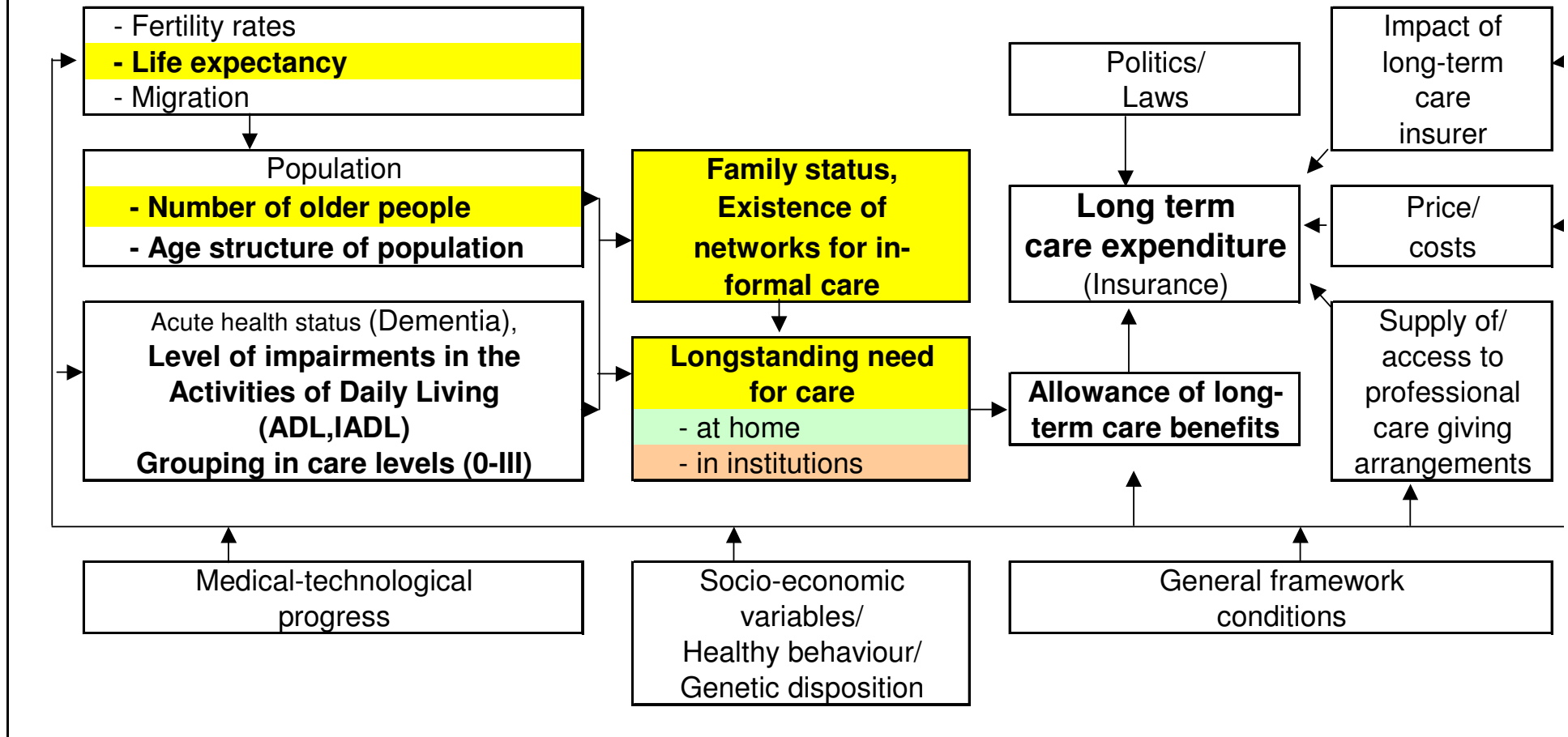
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31.01.2008

## **Projection of long-term care need**

- The number of people in need for long-term care is
  - **strongly related to age, and the expected further increase in life expectancy may lead to a marked increase in this number**
  - **influenced by the level of care needed - depending on the impairments in Activities of Daily Living (ADL) and mental illness – and**
  - **the level of help needed with housework (IADL), and therefore**
  - **medical progress may lead to a shift of need for care giving to higher ages and/or may reduce the level of care needed**

## Determinants of long-term care need and expenditure



## Development of life expectancy in Germany

Life tables	Life expectancy in years					
	at birth		at age 65		at age 80	
	Men	Women	Men	Women	Men	Women
1949/51 <sup>*)</sup>	64,56	68,48	12,84	13,72	5,24	5,56
1960/62 <sup>*)</sup>	66,86	72,39	12,36	14,60	5,24	5,85
1970/72 <sup>*)</sup>	67,41	73,83	12,06	15,18	5,36	6,16
1986/88 <sup>*)</sup>	71,70	78,03	13,77	17,30	5,86	7,27
1990/92	72,90	79,29	14,45	18,21	6,24	7,77
1999/2001	75,1	81,1	15,8	19,4	7,1	8,6
2000/2002	75,4	81,2	15,9	19,6	7,1	8,6
2004/06	76,6	82,1	16,8	20,2	7,5	8,9
2050 Var.1	84,3	86,9	22,0	23,7	10,6	11,1
2050 Var.2	85,9	88,7	23,1	25,2	11,0	11,9
	Changes per year in %					
2005/2050 V	0,21	0,12	0,59	0,35	0,75	0,48
2005/2050 V	0,25	0,17	0,69	0,48	0,84	0,63

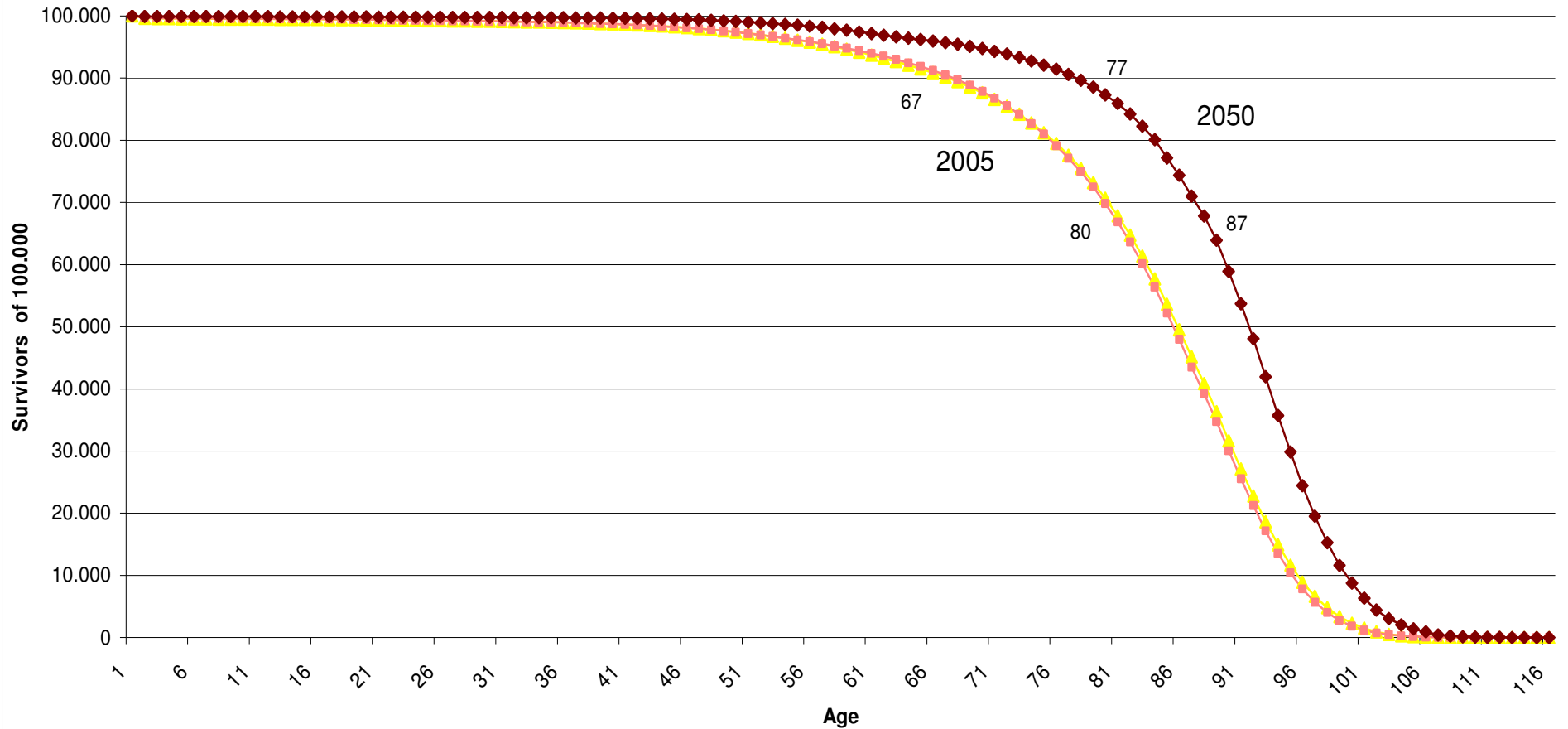
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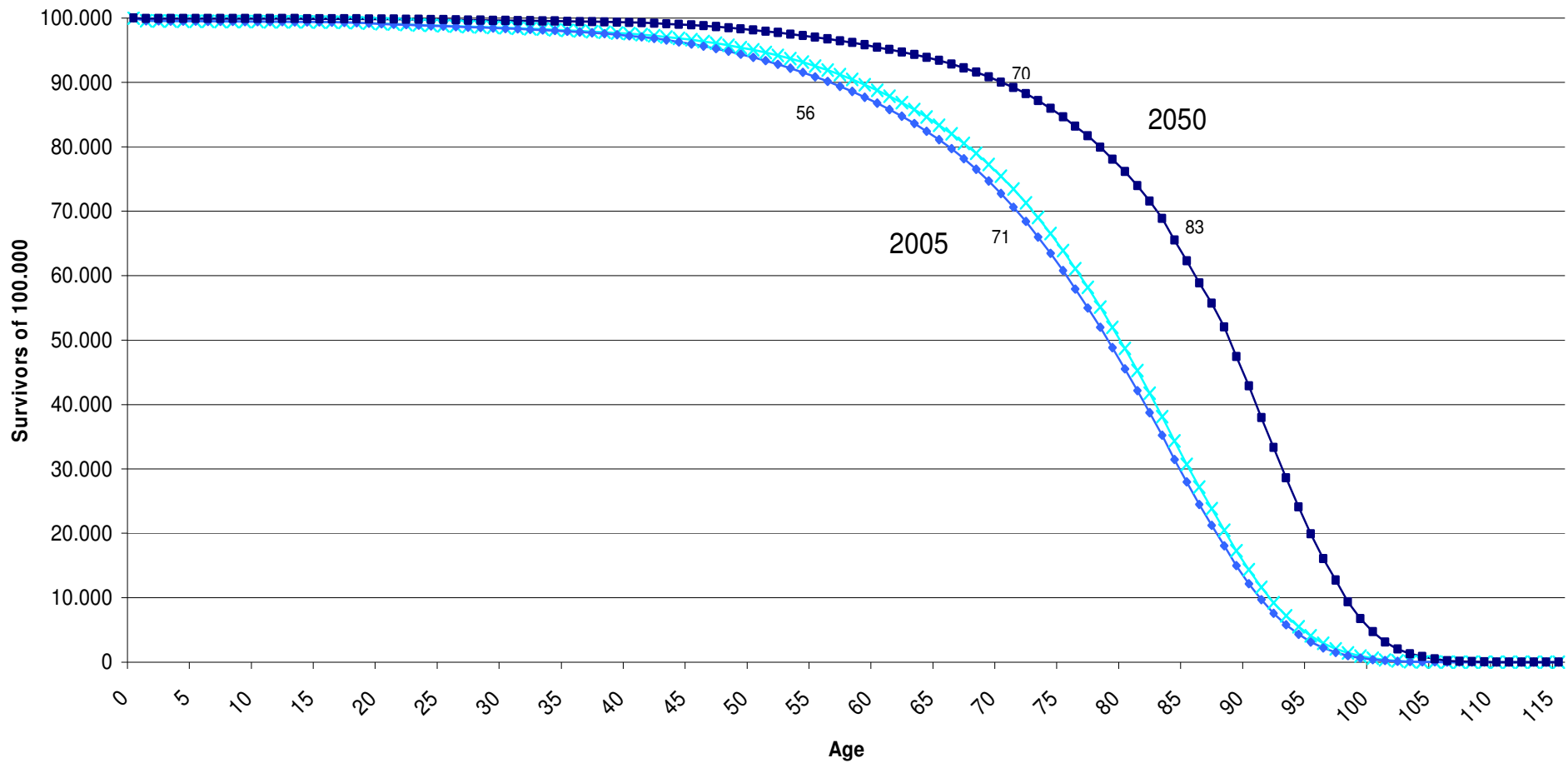
<sup>\*)</sup> General life table, West-Germany.

Source: Federal Statistical Office of Germany, Forecast by DIW.

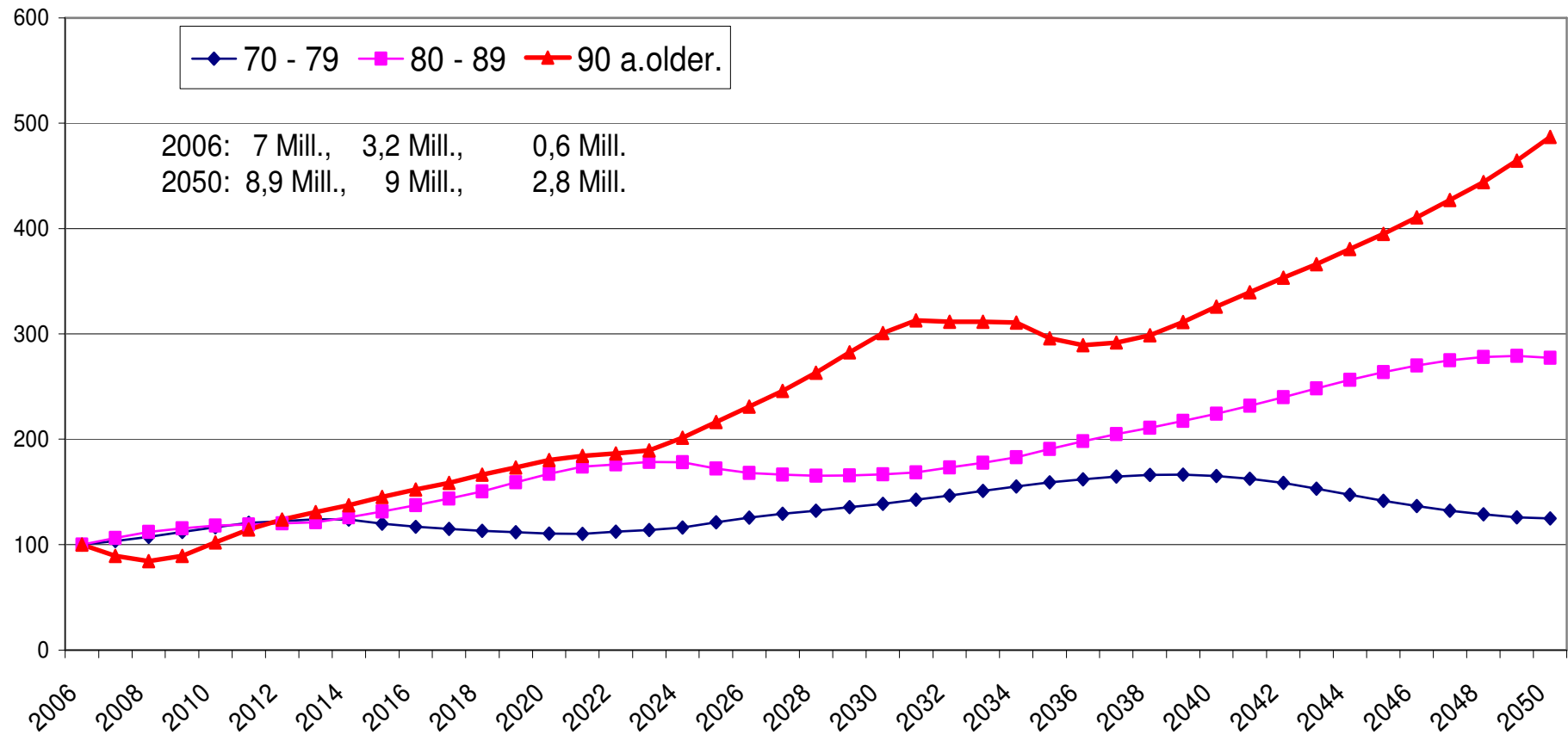
### Survival curves - 2005 and 2050 Women



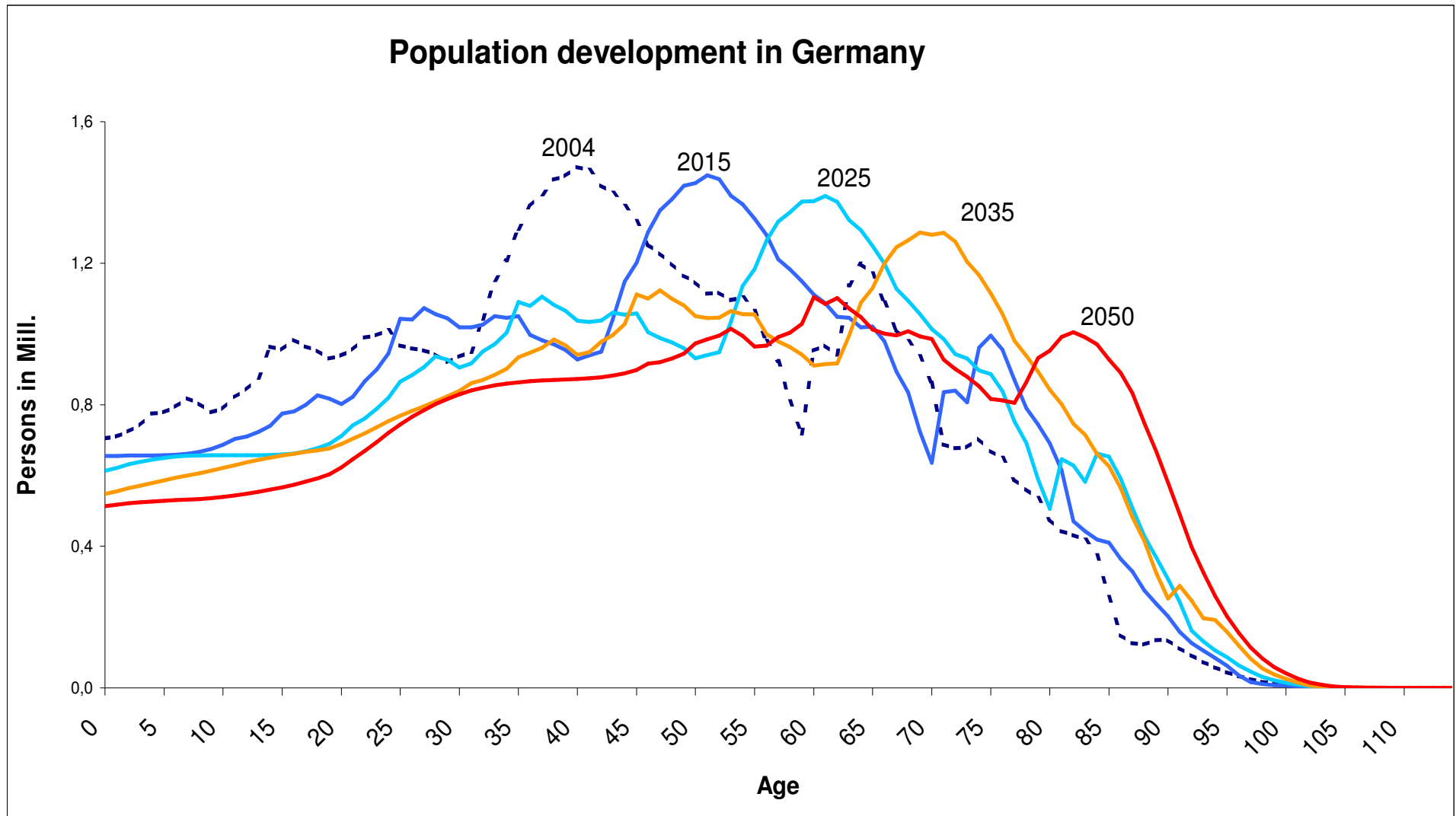
### Survival curves - 2005 and 2050 Men



### Development of older persons 2003 to 2050 in Germany 2006 = 100



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# Long-term care beneficiaries

LTC insurance system since 1995 for home care and since 1996 also for institutional care

Benefits vary with the level of care needed

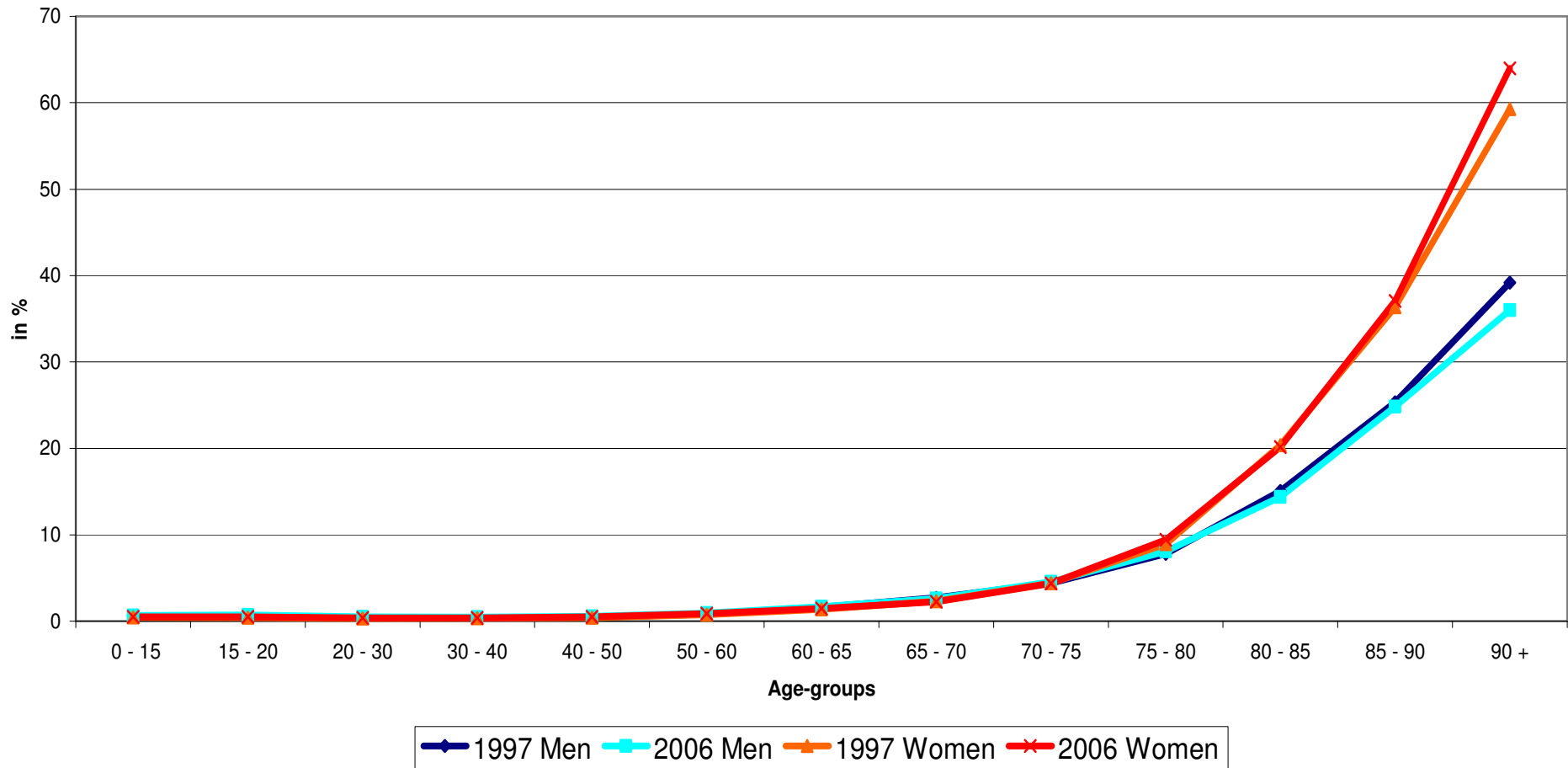
- 1) level I : need help with their personal care, nutrition or mobility at least once a day for at least two tasks and additional assistance several times per week in performing household chores (90 minutes per day, 45 min accounted for by basic care (personal care, feeding, mobility))
- 2) level II: ... at least three times a day at different times of the day and several times per week for household chores (not less than three hours, two hours accounted for basic care)
- 3) Level III: .. .around the clock and additional....(at least five hours, four hours for basic care)

## Beneficiaries of social and private long term care insurance

Year	Beneficiaries			Care level			Care giving	
	social	private	total	I	II	III	at home	in institutions
	in 1000			Share in %				
1997	1 659 948	88 377	1 748 325	43,6	40,6	15,8	72,1	27,9
1998	1 738 118	96 968	1 835 086	45,9	39,3	14,8	70,6	29,4
1999	1 826 362	102 947	1 929 309	47,3	38,4	14,3	70,1	29,9
2000	1 822 104	106 709	1 928 813	48,6	37,6	13,8	69,2	30,8
2001	1 839 602	110 980	1 950 582	49,4	37,1	13,5	68,6	31,4
2002	1 888 969	114 463	2 003 432	50,2	36,5	13,3	68,3	31,7
2003	1 891 144	116 845	2 007 989	50,8	36,0	13,2	67,7	32,3
2004	1 925 703	122 583	2 048 286	51,0	35,8	13,2	67,5	32,5
2005	1 951 953	128 343	2 080 296	51,2	35,5	13,2	67,2	32,8
2006	1 968 505	134 722	2 103 227	51,9	35,0	13,1	66,7	33,3

Sources: Ministry for Health; Association of the Private Health Insurance e.V. Köln; calculations by DIW.

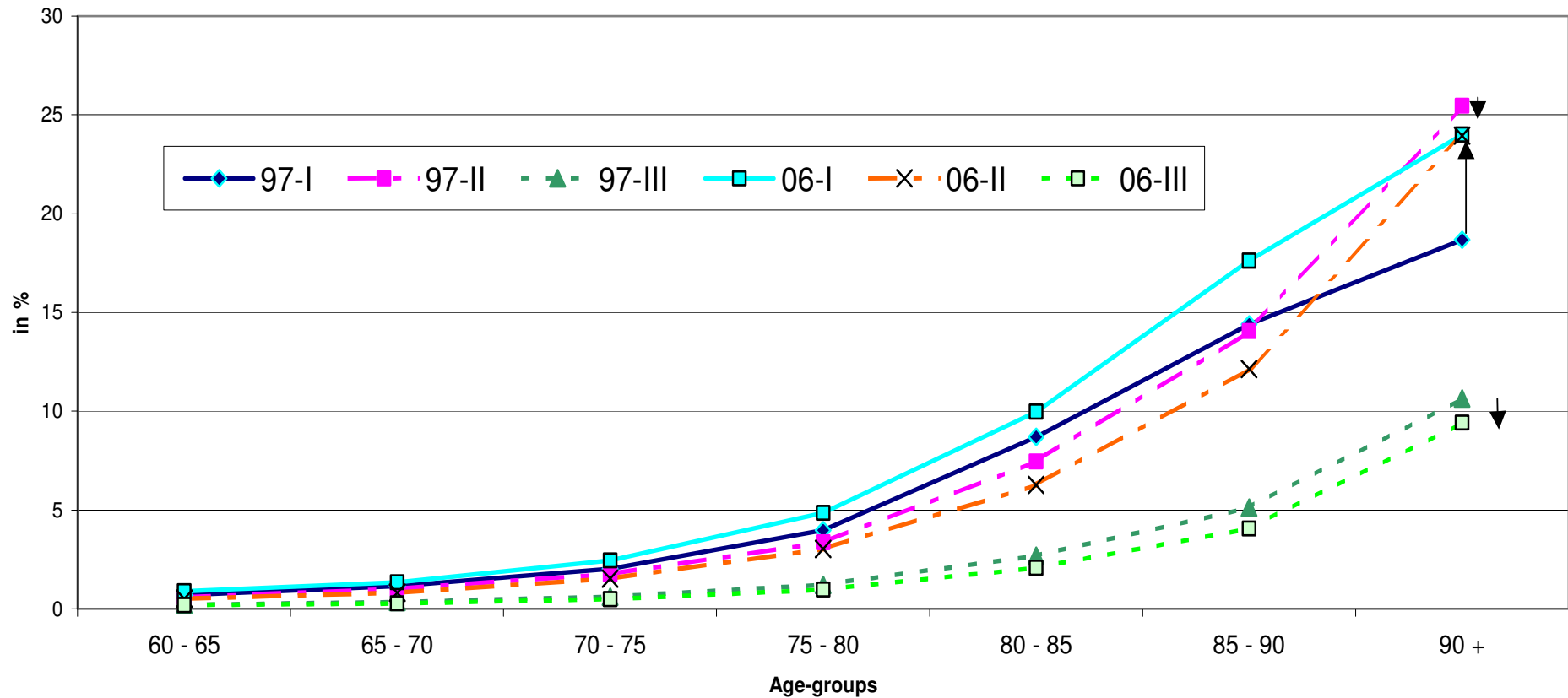
### Proportion of people receiving long term care benefits by age-groups in Germany 1997 and 2006



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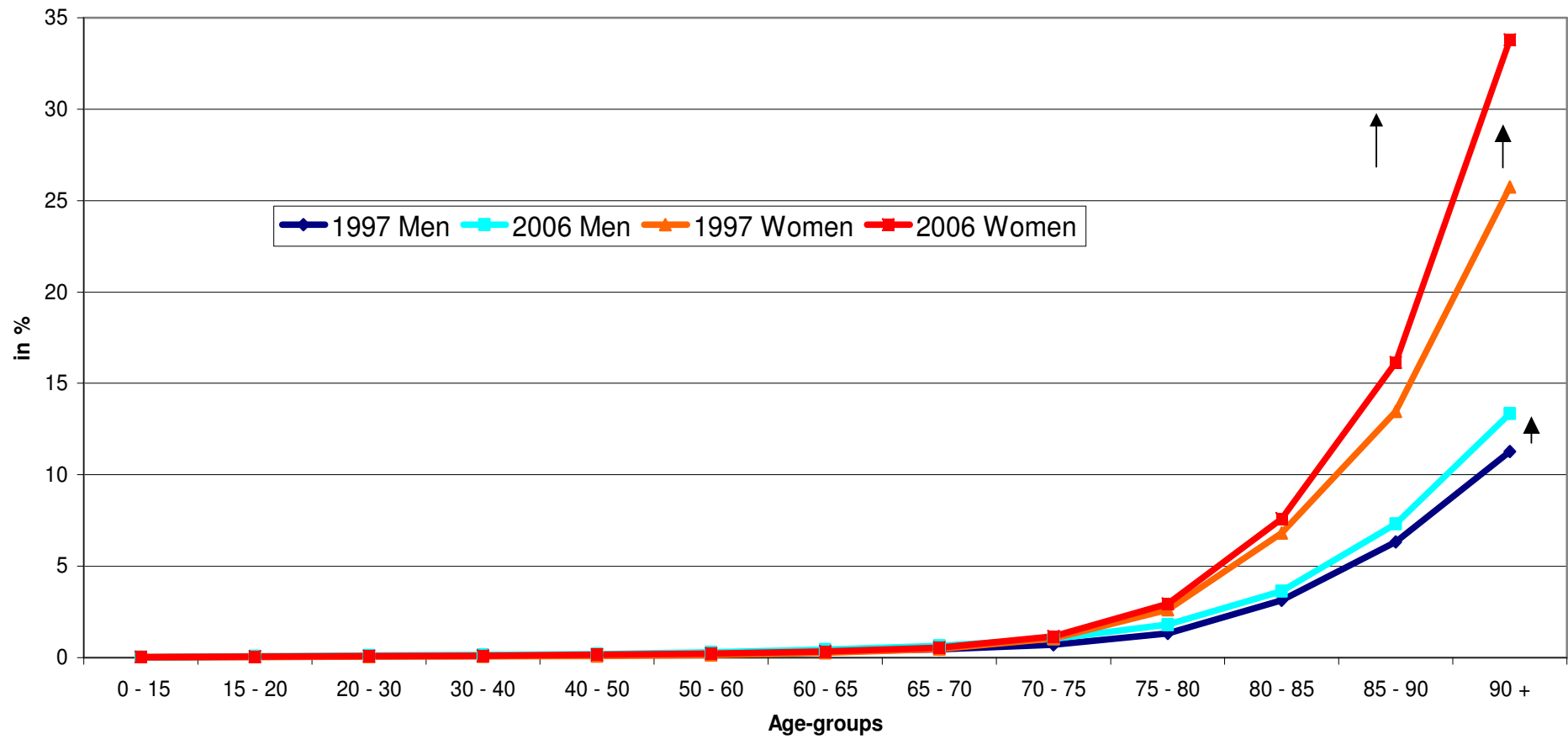
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### Changes in the share of long term care recipients by care level between 1997 and 2006



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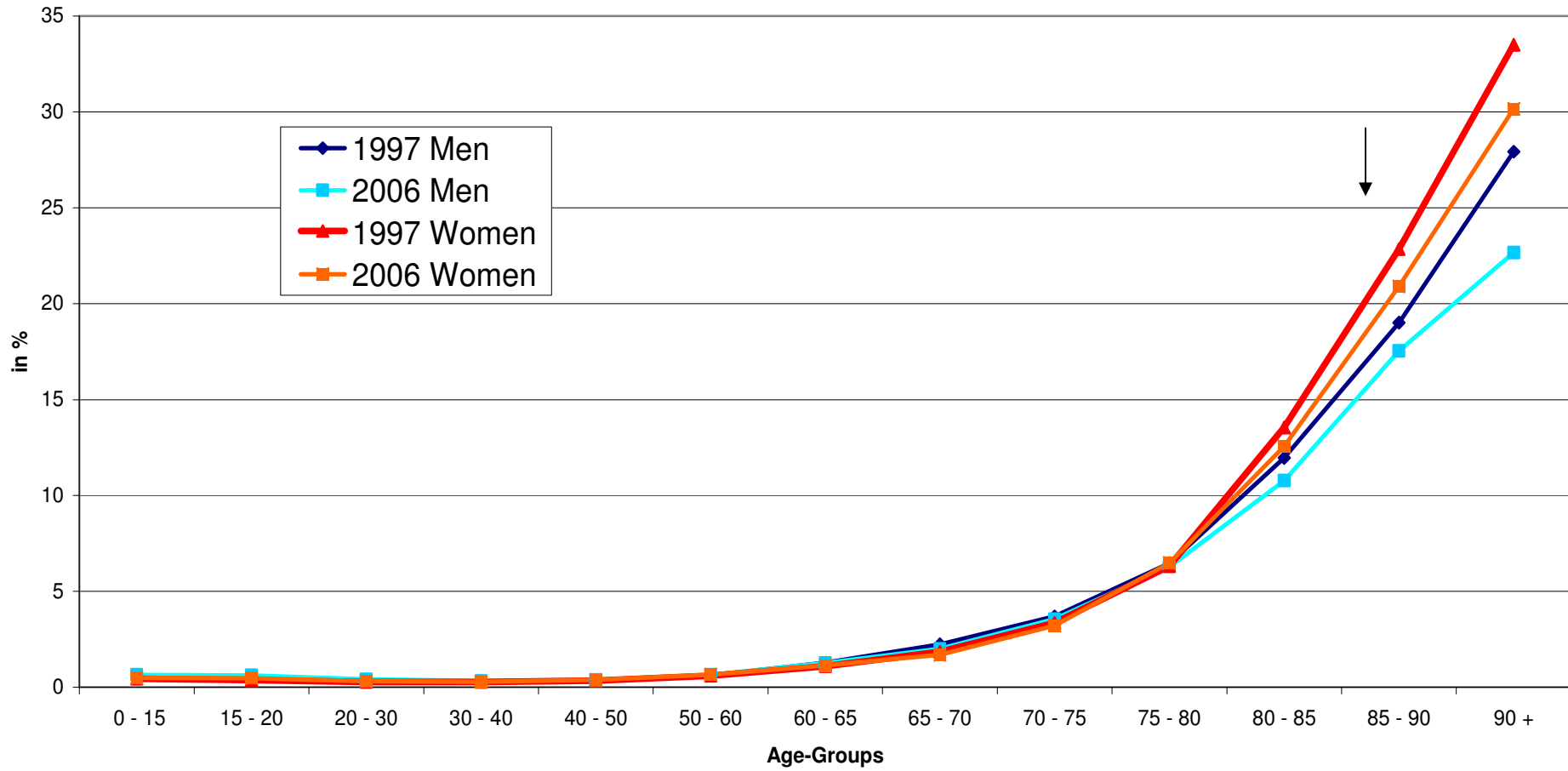
### Share of people receiving long term care benefits in institutions in Germany 1997 and 2006



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### Proportion of people receiving long-term care at home in Germany 1997 and 2006



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## People in need for care not receiving long-term care benefits

Besides the recipients of long-term care benefits from the social or private LTC insurer there exist people in need for care – in particular in need for help with housework – who need help to a lower degree than it is required for care level I. The number of people with care level 0 is estimated to around **3 Mill. in 2002**.

Age-groups	Share of people with care level 0 in 2002	
	Men	Women
under 15	0,6	0,3
15 - 39	0,8	0,9
40 - 59	1,8	2,4
60 - 64	3,6	3,8
65 - 69	6,3	7,5
70 - 75	10,2	13,2
75 - 79	15,3	17
80 - 84	14,3	25,8
85 - 89	23,8	29
90 and older	36,3	27
total	2,1	4,5

Source: Schneeklodt/Leven 2003.

## **Proportion of long-term care recipients at home depends . . .**

- on the living arrangements of people in need for long-term care: single persons are more likely to be institutionalized than people living as a couple or with their children in the same household
- on the availability of informal care givers: most care givers at home are members of the family, at first the spouses/partners, second the daughters or daughters in law, then other relatives, and at last friends or neighbours
- on the availability of short-time institutional care (respite care), part-time institutional care (day care centres or night care), the availability of professional home care services (in most cases to assist the informal care givers)

## Long-term care recipients at home by family status 2003

Age-groups	Family status					
	Total	never married	married	widowed	divorced	
	in 1000	in %				
	Men					
under 25	57	100	100	0	0	0
25-60	91	100	55,3	34,2	1,1	9,4
60-70	85	100	9,7	78,9	5,6	/
70-75	64	100	/	79,7	11,5	/
75-80	68	100	/	74,3	18,4	/
80-85	61	100	/	71,4	25,1	/
85-90	52	100	/	48,9	45,4	/
90 and older	34	100	/	38,1	60,6	/
total	513	100	24,7	55	16,6	3,6
	Women					
under 25	46	100	100	0	0	0
25-60	80	100	44,9	42	3,7	9,4
60-70	80	100	12,5	54,9	24	/
70-75	76	100	/	43,2	40,7	/
75-80	137	100	7,5	32,9	55,5	/
80-85	168	100	4,6	20,7	70,2	4,5
85-90	188	100	5	9,1	82,6	/
90 and older	147	100	/	5	87,4	/
total	922	100	14,2	23,3	57,6	4,9

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Source: Micro-census 2003.

Long-term care recipients at home by size of household 2003

Age-groups	Number of persons in the household				
	Total	1	2	3 +	
	in 1000	in %			
			Men		
under 25	57	100	/	/	90,3
25-60	91	100	22,4	31,6	46
60-70	85	100	16,4	67,6	16
70-75	64	100	15,7	76,4	/
75-80	68	100	19,8	71,8	/
80-85	61	100	23,7	67,1	/
85-90	52	100	34,6	50,9	14,5
90 and older	34	100	49	40,1	/
total	513	100	21	52,7	26,3
			Women		
under 25	46	100	0	/	93,6
25-60	80	100	16,2	39,5	44,3
60-70	80	100	32,3	54,1	13,6
70-75	76	100	44,8	46,4	/
75-80	137	100	52,5	36,6	10,8
80-85	168	100	61,4	26,4	12,2
85-90	188	100	68,1	13,9	18
90 and older	147	100	65,2	11,7	23,1
total	922	100	51,2	27,2	21,6

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Source: Micro-census 2003.

**DIW BERLIN** Long-term care recipients in institutions by family status 2003

Age-groups	Family status					
	Total		never married	married	widowed	divorced
	in 1000		in %			
	Men					
under 25	/	100	/	0	0	0
25-60	15	100	81,2	/	/	/
60-70	24	100	41,3	/	/	30,8
70-80	32	100	26,4	29,3	36,1	/
80-90	37	100	/	31,5	54,1	/
90 and older	17	100	/	/	62	0
total	126	100	28,9	22,1	37,8	11,2
	Women					
under 25	/	100	/	0	0	0
25-60	11	100	/	/	/	/
60-70	22	100	38,5	/	38,8	/
70-80	86	100	19	11,3	63,5	/
80-90	219	100	13,1	4,1	78,9	4
90 and older	130	100	12,4	/	82,1	/
total	469	100	16,2	5,1	73,1	5,4

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Source: Micro-census 2003.

# Characteristics of people with care level 0

Schneeklodt/Leven provide some information about the living arrangements of people in need for care, who receive no benefits from the LTC insurer.

Characteristics of people in need for care with care level 0 in Germany 2002

	in %		in %
<b>Gender</b>		<b>Family status</b>	
male	34	married	42
female	64	widowed	36
		divorced	5
<b>Age-groups</b>		single	17
under 40	10		
40-64	23	<b>Household Size</b>	
65-74	26	1 Person	41
75-85	26	2 Persons	40
85 and older	16	3 Persons	11
		4 + Persons	8

Source: Schneeklodt and Leven 2003.

## Characteristics of informal care givers at home 2002 Germany

	Care giving to people with care level			Care giving to people with care level	
	I-III	0		I-III	0
<b>Gender</b>			<b>Family status</b>		
male	27	30	married	69	78
female	73	70	widowed	12	8
			divorced	5	4
<b>Age-groups</b>			single	12	10
under 40	11	13			
40-54	27	26	<b>Activity status</b>		
55-64	27	23	Full time employed	19	32
65-79	26	28	Part time employed	15	15
80 and older	7	4	Marginally employed	6	3
NA	3	6	Not employed	60	50

Source: Schneekloth and Leven 2003.

## Proportion of people looking after old persons in the EU 2001<sup>1)</sup>

in %

Age-groups	Sex		Marital status					Employment status			Total
	Men	Women	Married	Sepa- rated	Di- vorced	Wi- dowed	Never married	Normally working	Unem- ployed	Inactive	
15 - 29	1,2	2,2	1,8	3,3	4,7	0,0	1,6	1,5	2,5	1,8	1,7
30 - 44	2,3	5,7	4,0	3,9	5,9	6,0	3,6	3,1	5,5	8,4	4,1
45 - 59	5,6	12,1	8,6	10,1	9,0	9,3	12,8	7,1	9,4	13,5	9,0
60 - 69	6,9	10,1	8,5	4,8	9,2	6,9	11,0	5,8	-	9,0	8,6
70 - 79	5,3	7,7	7,4	10,6	6,0	4,8	7,7	-	-	6,6	6,6
80 +	5,5	4,8	9,0	0,0	5,1	2,7	4,2	-	-	5,0	5,1
Total	3,8	7,2	6,5	6,3	7,6	5,1	3,1	-	-	-	5,5
Numbers	1896	3978	4140	72	332	418	912				5874

1) EU (15) without Luxembourg and Sweden.-  
Source: ECHP.

**Households by age-groups and household type  
in Germany 2003 and 2050**

Age of reference-person	In million households					
	Single	Single parent	Couple without children	Couple with children	Other households	Total
	2003					
under 35	3,3	0,4	1,3	1,6	0,2	6,9
35 - 50	2,8	0,8	1,5	4,0	2,2	11,2
50 - 65	2,5	0,1	4,0	0,5	2,5	9,6
65 - 75	2,2	0,0	3,0	0,0	0,6	5,8
75 - 85	2,3	0,0	1,2	0,0	0,2	3,7
85 +	0,7	0,0	0,1	0,0	0,0	0,9
Total	13,9	1,3	11,1	6,2	5,8	38,2
	2050					
under 35	3,2	0,2	1,1	0,8	0,3	5,6
35 - 50	2,5	0,7	1,0	2,6	1,2	8,1
50 - 65	2,7	0,0	3,8	0,5	2,2	9,3
65 - 75	2,2	0,0	3,0	0,0	0,7	5,9
75 - 85	3,2	0,0	2,3	0,0	0,4	5,9
85 +	3,0	0,0	1,1	0,0	0,2	4,3
Total	16,8	0,9	12,4	3,9	5,0	39,0

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## Women aged 18 and older in households by age-groups and household type in Germany 2003 and 2050

**DIW BERLIN**

Age-groups of women	Single		Couple without children		Couple with children		Other* households		Total	
	In 1000	share of employed	In 1000	share of employed	In 1000	share of employed	In 1000	share of employed	In 1000	share of employed
2003										
18 - 35	1 369	78	1 528	82	2 372	56	2 860	54	8 129	64
35 - 50	936	80	1 610	80	3 617	68	3 172	71	9 335	73
50 - 65	1 437	44	4 469	39	193	56	2 085	53	8 184	44
65 - 75	1 628	3	3 172	2	5	0	543	5	5 348	3
75 - 85	1 946	0	871	1	0	0	344	2	3 161	1
85 +	599	0	46	0	0	0	159	0	804	0
Total	7 915	32	11 696	37	6 187	63	9 163	54	34 961	45
2050										
18 - 35	1 461	87	1 470	91	1 598	61	2 540	63	7 069	73
35 - 50	927	89	1 368	88	2 969	75	2 363	80	7 627	81
50 - 65	1 447	68	5 038	55	267	67	2 192	68	8 944	61
65 - 75	1 455	5	3 284	4	6	0	617	7	5 362	4
75 - 85	1 811	0	1 376	0	0	0	390	1	3 577	0
85 +	1 322	0	151	0	0	0	357	0	1 830	0
Total	8 422	37	12 689	43	4 839	70	8 459	59	34 409	49

Source: Federal Statistical Office of Germany; Forecast by DIW Berlin.

\*) Single parents included. 31.01.2008

## People receiving long-term care benefits in Germany

DIW BERLIN

Age-groups	People receiving long-term care benefits					
	care giving		by			
	at home	in institutions	care level			total
			I	II	III	
	in 1000 person		share in %		in 1000	
			2006			
under 35	142	21	48,7	31,4	20,0	163
35 - 50	73	33	54,8	30,0	15,1	106
50 - 65	122	44	56,7	31,1	12,2	166
65 - 75	235	76	54,9	34,0	11,1	311
75 - 80	196	75	54,7	34,3	11,0	272
80 - 85	260	137	54,4	34,2	11,3	397
85 - 90	214	148	52,1	35,9	12,0	362
90+	161	165	41,8	41,7	16,4	326
Total	1 403	700	51,9	35,0	13,1	2 103
			2050			
under 35	100	16	48,3	31,8	19,9	115
35 - 50	48	21	54,6	30,4	15,1	70
50 - 65	130	45	56,2	31,6	12,2	175
65 - 75	253	79	54,2	34,6	11,1	333
75 - 80	272	100	54,0	34,9	11,1	372
80 - 85	588	285	53,6	35,1	11,3	873
85 - 90	809	499	51,5	36,8	11,7	1 308
90+	759	674	42,6	41,9	15,5	1 433
Total	2 958	1 720	49,7	37,3	13,0	4 678

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Source: FMH, Forecast by DIW.

Age- groups	People in need for care not receiving benefits form the LTC insurer Care level 0 (in 1000)					
	Men	Women	Total	Men	Women	Total
	2006			2050		
under 15	34	16	50	23	11	34
15 - 39	111	121	232	79	85	164
40 - 59	214	279	492	175	217	392
60 - 64	91	100	191	99	100	199
65 - 69	128	175	303	150	177	327
70 - 75	207	307	515	242	311	554
75 - 79	178	300	478	308	359	668
80 - 84	89	361	450	320	622	942
85 - 89	46	142	188	416	540	956
90 and older	45	89	133	368	293	662
total	1142	1889	3032	2181	2715	4896

Source: Schneekloth/Leven 2003; Forecast by DIW.

## Potential of care givers in million

Potential care givers	2006	2050
Women aged 40-65		
Active	9,9	8,7
Non-active	4,4	3,0
Total	14,3	11,7
Share of non-active in % persons in %	30,7	25,7
Women aged 65-80		
Total	6,8	6,9
Without people in need for care*	5,7	5,7
Men aged 65-80		
Total	5,7	6,8
Without people in need for care*	4,9	5,8
Women aged 80 years and older		
Total	2,7	6,4
Without people in need for care*	1,2	2,6
Men aged 80 years and older		
Total	1,1	5,3
Without people in need for care*	0,7	3,0

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\*) Including people in need for help with housework, not receiving benefits from LTC insure

## Ratio of people in need for care (I-III) to potential care givers

	Care ratios %	
Women aged 40-65		
Active	2,8	6,8
Non active	10,9	33,3
Total	5,3	13,6
Women aged 65-80		
without people in need for care	6,4	13,4
Men aged 65-80		
without people in need for care	2,0	3,6
Women aged 80 years and over		
without people in need for care	7,9	8,0
Men aged 80 years and over		
without people in need for care	2,0	1,0

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Source: Schneeklodt/Leven 2005; Forecast by DIW.

## Ratio of people in need for care including care level 0 to potential care givers

	Care ratios %	
Women aged 40-65		
Active	12,6	24,7
Non active	21,9	59,2
Total	15,7	34,0
Women aged 65-80 without people in need for care	21,3	37,4
Men aged 65-80 without people in need for care	5,7	8,6
Women aged 80 years and over without people in need for care	17,7	15,6
Men aged 80 years and over without people in need for care	6,3	2,6

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Source: Schneeklodt/Leven 2005; Forecast by DIW.

## Share of people aged 15+ by health status in 2001, 2020, 2050

Age-groups	2001			2020			2050		
	Share of people in ... health								
	good <sup>1)</sup>	fair	bad <sup>2)</sup>	good <sup>1)</sup>	fair	bad <sup>2)</sup>	good <sup>1)</sup>	fair	bad <sup>2)</sup>
	Germany								
15-29	0,76	0,19	0,06	0,79	0,19	0,02	0,82	0,18	0,00
30-44	0,62	0,29	0,09	0,65	0,30	0,06	0,67	0,30	0,03
45-59	0,38	0,40	0,22	0,40	0,41	0,19	0,42	0,41	0,17
60-69	0,25	0,48	0,28	0,28	0,51	0,21	0,31	0,53	0,16
70-79	0,17	0,48	0,36	0,19	0,51	0,30	0,21	0,53	0,26
80+	0,10	0,40	0,50	0,11	0,43	0,45	0,12	0,45	0,42

1) People in good and very good health.- 2) People in bad and very bad health.

Sources: ECHP; calculations by DIW.

**Severely hampered persons 2050  
in Germany and EU <sup>1)</sup>  
2001 = 100**

Health status	Germany	EU <sup>1)</sup>
	Basic	
good	158	141
fair	153	150
bad	160	159
total	159	155
cut down <sup>3)</sup>	161	157
	Better Health	
good	190	152
fair	169	157
bad	120	123
total	128	135
cut down <sup>3)</sup>	130	137
<small>1) EU (15) without Luxembourg and Sweden; people aged 15+.- 3) Severely hampered persons who have to cut down things they usually do. Source: Projections by DIW.</small>		

## Relation of hampered persons to care givers in the EU (15)

Age- groups	2001	2050	
	Basic	Basic	Better Health
15-29	0,53	0,53	0,32
30-44	0,51	0,51	0,33
45-59	0,54	0,54	0,45
60-69	0,85	0,85	0,65
70-79	1,75	1,75	1,51
80+	3,60	3,60	3,34
15+	0,86	1,21	1,04

# Conclusion

- The number of people in need for care will increase, even if we assume further improvements in health
- The potential of care givers among the elderly will increase due to a higher share of couples growing old together
- The potential of non-
  - employed female care givers aged 45-65 will decline
- The mean age of potential care givers will increase as well as the mean age of people in need for care
- Elderly care givers need additional help from professional h
  - ome care services
- In total, it can be expected, that the share of institutionalized people will increase (a little bit, depending on informal networks)