



**Department of Social Work
& Social Administration**

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Trends in dementia-free life expectancy in Hong Kong SAR

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**Réseau Espérance de Vie En Santé
Network on Health Expectancy**

Charles Kao

- Invented fiber-optic networks and received the 2009 Nobel Prize in physics



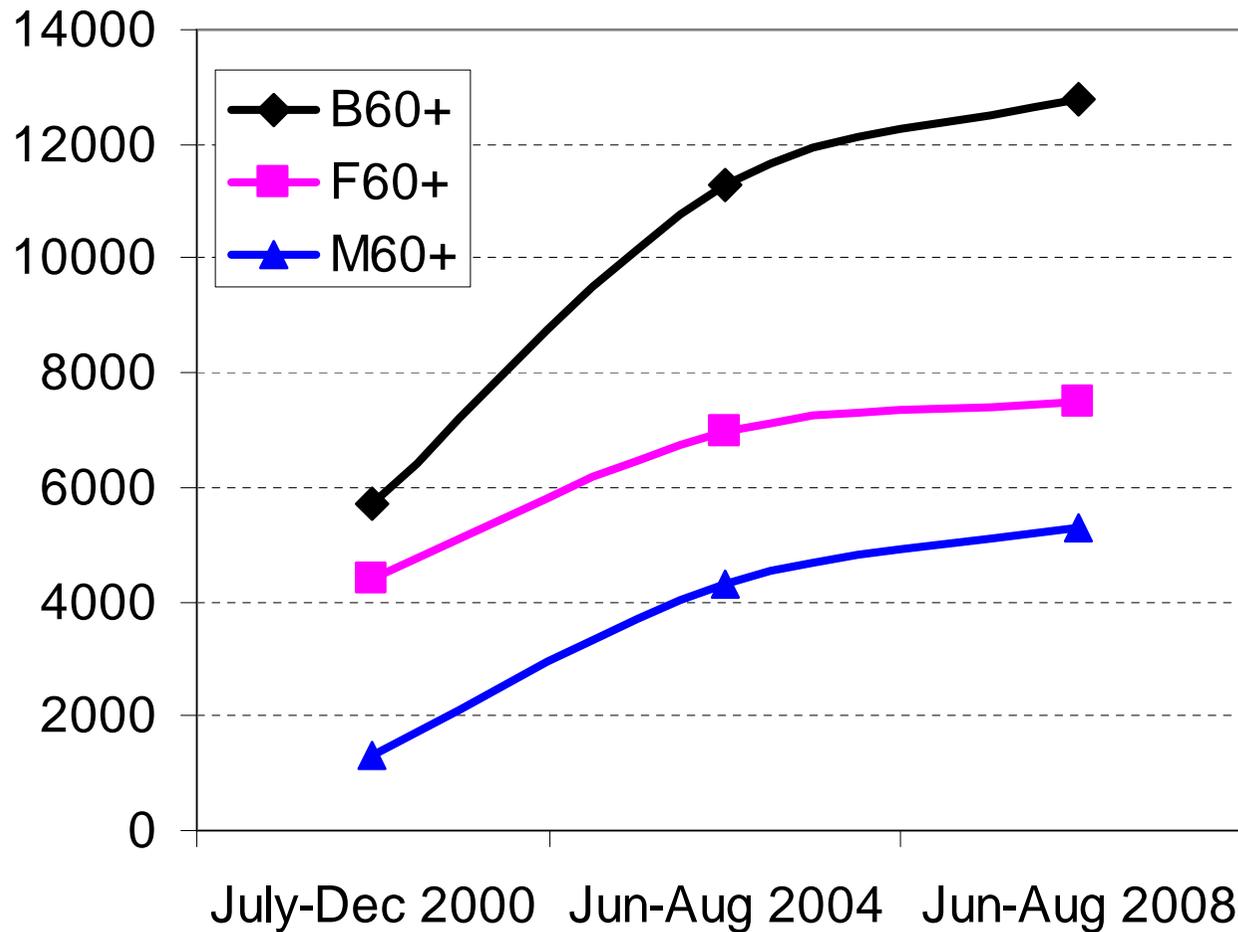
Previous studies

- Several previous studies have tried to investigate the mental health status of the elderly in Hong Kong since 1984 (Mental Health Association of Hong Kong 1984; Donnan et al. 1988; Chi and Lee 1989)
- BUT no systematic study has been conducted on the prevalence of dementia until 1992.

Liu et al. (1993)

- The study showed that **6.5% of males and 15.1% of females aged 65+** could be classified as **cognitively impaired** in community of HK
- By using procedures of logistic regression analysis to follow the Shanghai data as the basis of constructing predictive models, the authors found that **the estimated prevalence of dementia in the absence of a clinical evaluation was 5.2% of males and 15.8% of females aged 65 and above.**

The estimated number of older adults reporting suffering from AD &/or dementia

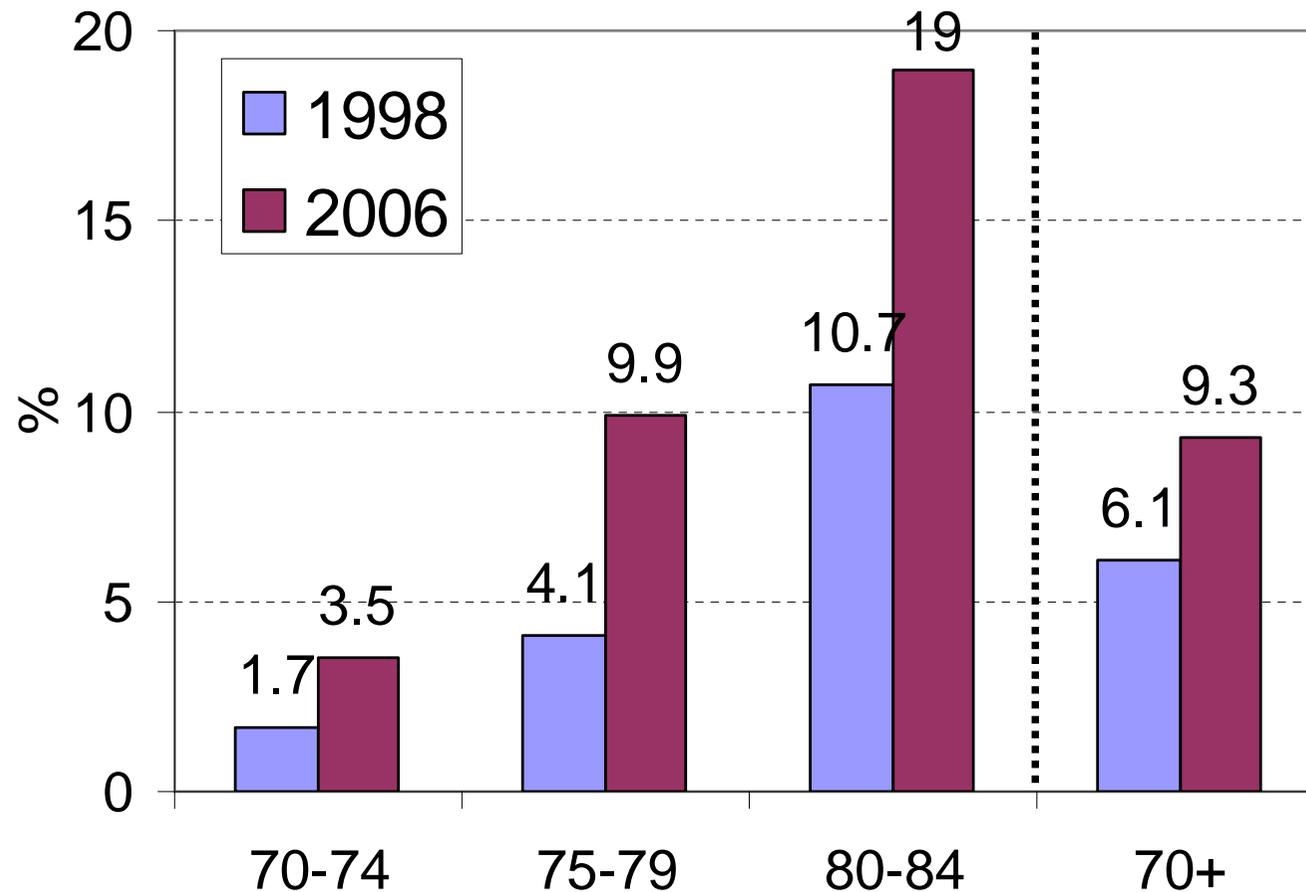


STR#27, THR#21 and #40 (HKCSD 2000, 2004, 2008)

General Household Survey (THS#28) - a cross-sectional study

- Using MMSE and number of years of receiving education to assess the cognitive function of older persons aged 60 and over
- It was estimated from the survey that of 321,100 older persons (30.3%) of the 1,058,700 older persons had positive results in the cognitive screening test which refer to the MMSE score \leq 23 and no schooling
- A total of 2,400 older adults had reported suffering from Alzheimer's Disease (AD) and/or dementia with having positive results in the cognitive screening tests

Weighted Prevalence of Dementia in HK in 1996 & 2006



- 1998: population of community and institutions in Sha Tin district (Chiu et al. 1998)
- 2006: population of the community after stages 1 (screening) and 2 (CA) (Lam et al. 2006)

- **70,000 elders** suffering from dementia in the community (Chan 2006 presented in EC 47th meeting).
- Based on THS#21 and 28 (HKCSD 2004, 2008), the prevalence of AD and/or dementia **reported** by elders at aged 60 and over residing **in residential care institutions remained 31%** in 2004 and 2008, with 28% of males and 32% of females.
- The estimated number of people aged 60 and over with dementia was **110,000 including the community and institutional population** (Cadenza 2010).

- The diverging figures suggest that the importance of data sources, assessment tools and definition and different calculation methods could yield the results greatly various.
- None of current study pertaining to dementia-free life expectancy could be found in the context of Hong Kong.

Aims

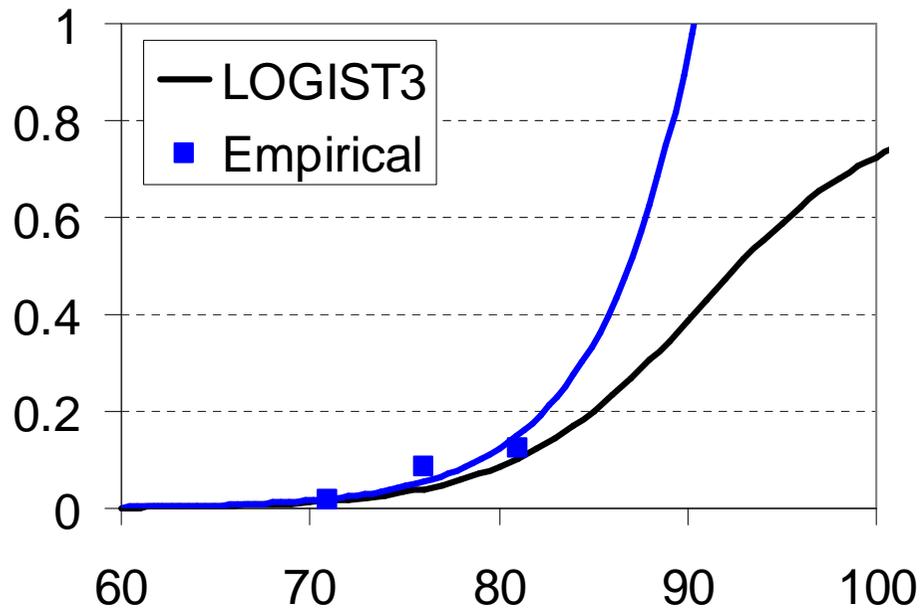
- To assess how long Hong Kong older adults live with dementia and determine the proportion of the life expectancy without dementia

Data and methods

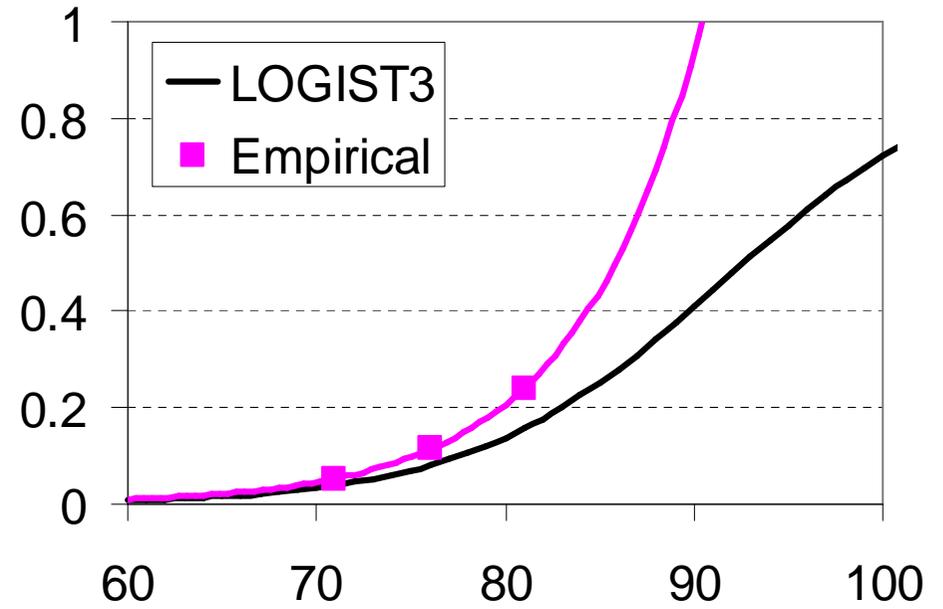
- The weighted prevalence of dementia by age group and sex from the study by Lam et al. (2006)
- Modeling – three parameters of logistic model
- Period life tables by age group and sex for 1998 and 2008

Empirical Observations and Logistic Trajectories

Males



Females



Observed and Fitted Prevalence of Dementia

	<u>Males</u>		<u>Females</u>	
	Empirical	Logisitic	Empirical	Logisitic
60-64		0.002		0.011
65-69		0.007		0.022
70-74	0.016	0.018	0.053	0.046
75-79	0.083	0.049	0.114	0.093
80-84	0.122	0.122	0.240	0.177
85+	0.331	0.315	0.320	0.373

Sullivan prevalence-based method

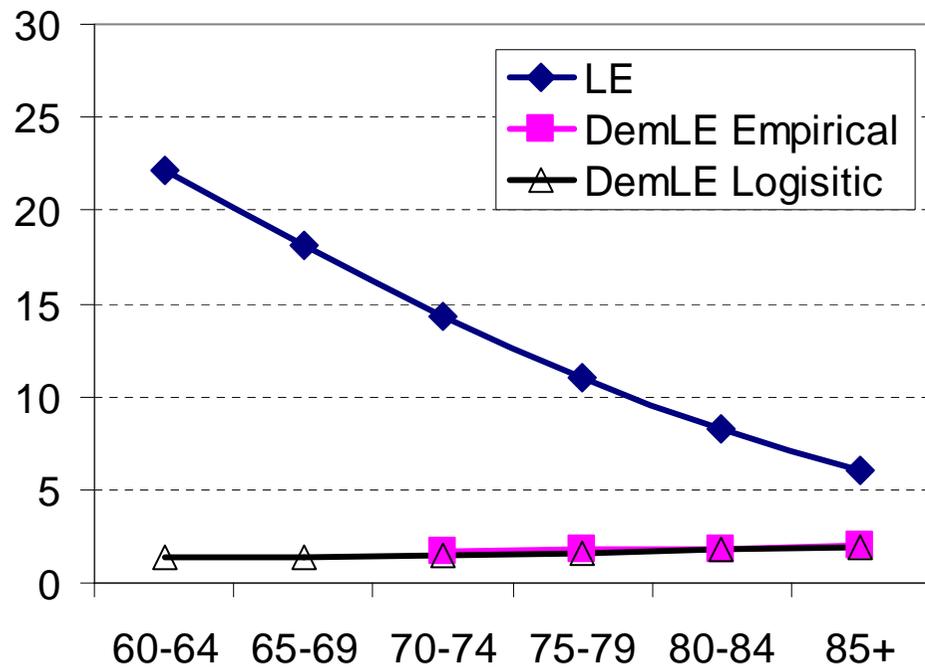
- Compute expected number of years lived with dementia and the proportion of the life-time free of dementia for two time points in 1998 & 2008

LE and LE with Dementia in 2008

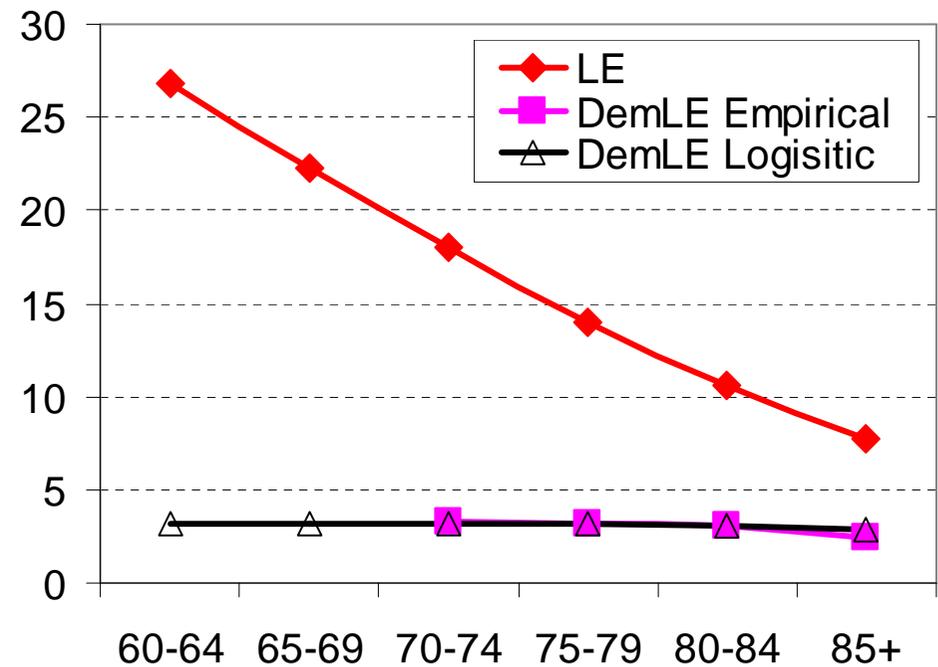
	<u>Males</u>			<u>Females</u>		
	LE	DemLE		LE	DemLE	
		Empirical	Logisitic		Empirical	Logisitic
60-64	22.1		1.4	26.8		3.1
65-69	18.1		1.4	22.3		3.2
70-74	14.3	1.7	1.5	18.0	3.3	3.2
75-79	11.0	1.8	1.6	14.0	3.2	3.1
80-84	8.2	1.8	1.8	10.6	3.0	3.1
85+	6.0	2.0	1.9	7.7	2.5	2.9

Life expectancy and expected number of years with & without dementia

Males

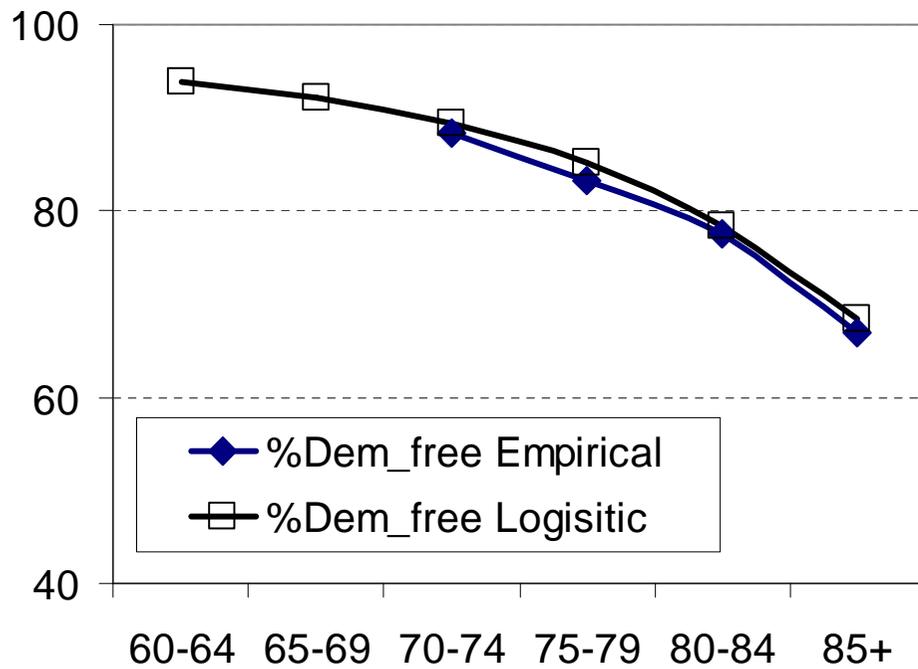


Females

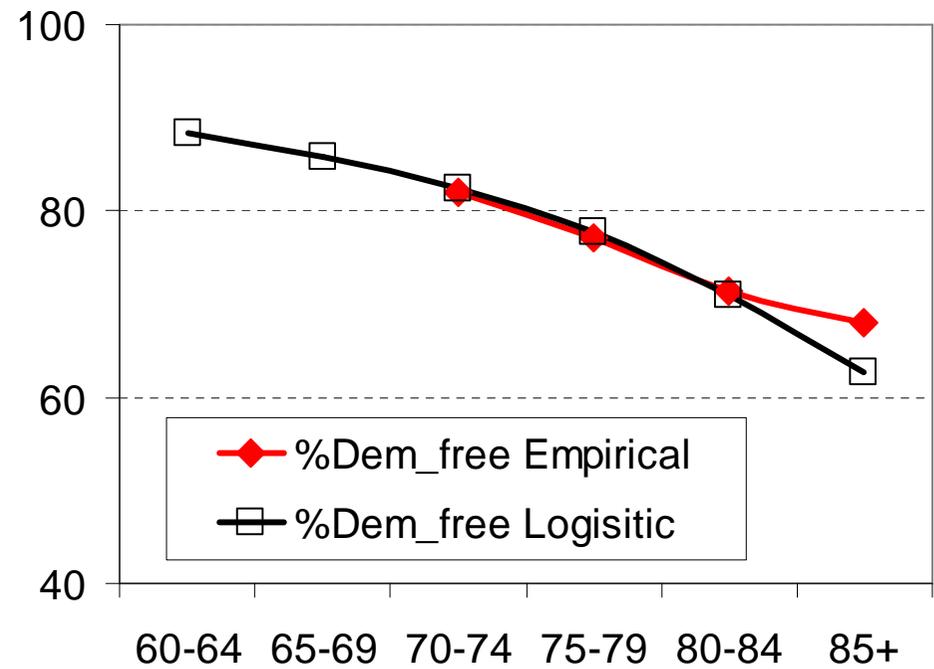


Proportion of life expectancy free of dementia

Males

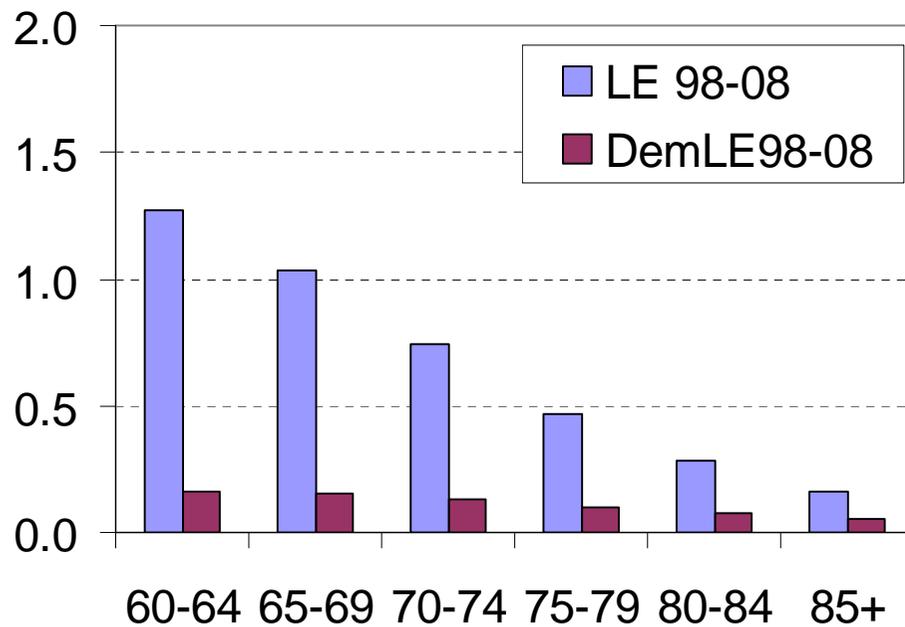


Females

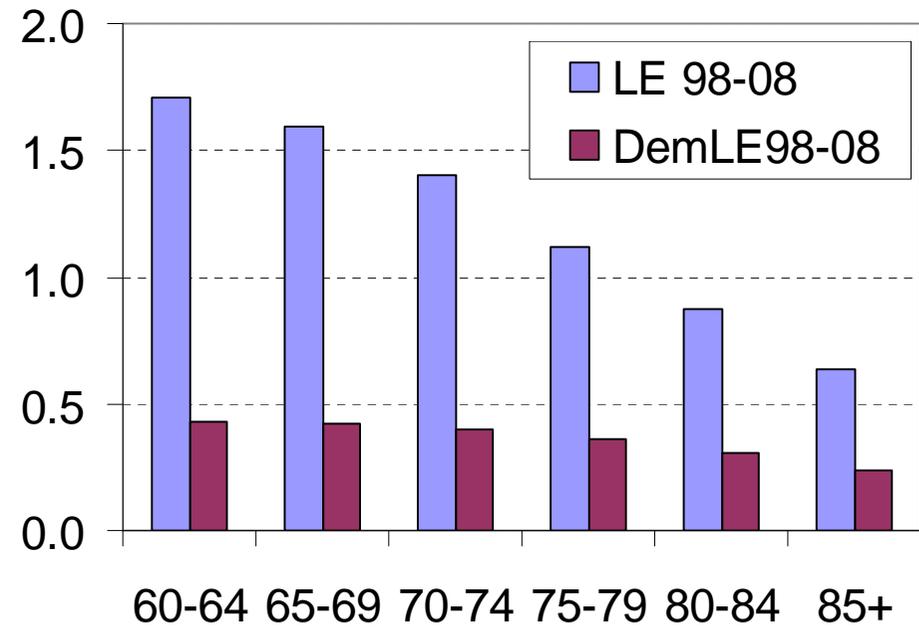


Absolute Change in LE and LE with Dementia b/w 1998 and 2008

Males



Females



Relative Change in LE and LE with Dementia b/w 1998 and 2008

Males

Females

Age	LE 98-08	DemLE98-08		LE 98-08	DemLE98-08
60	6%	13%	60-64	7%	16%
65	6%	12%	65-69	8%	15%
70	5%	9%	70-74	8%	14%
75	4%	7%	75-79	9%	13%
80	4%	5%	80-84	9%	11%

Conclusion

- When older adults live longer, LE with dementia increases over time even if the prevalence remains constant
- Female older adults live longer and also tend to have longer LE with dementia
- LE with dementia very slightly increases with age especially for males and remains almost constant for females
- The proportion of LE without dementia decreases with age

Thank you!