

# The Last Years of Life: Health Trajectories among the oldest-old

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## Abstract

Based on a multidimensional measure of « health status », we analyze the end-of-life trajectories in late life. Data are from the two cohorts of the Swiss Interdisciplinary Longitudinal Study on the Oldest Old (SWILSO-O; N=717 persons). We document transitions in health status between robustness, ADL-independent frailty, and ADL-dependence, during the last years of life of 273 deceased participants. The majority of participants ended their life while being frail (44%); 25% were ADL-dependent on two successive waves before dying and a similar percentage (15 and 16%, respectively) died after short-term ADL-dependence or while being still robust. The trajectory of long-term ADL-dependence was more frequent ( $p < .05$ ) among women, older participants, persons with low socio-economic status, and persons living in a semi-rural area. However, its prevalence did not depend on birth cohort. Long-term ADL-dependence does not necessarily precede death. Rather, frailty is the more probable last stage in late life.

## Questions

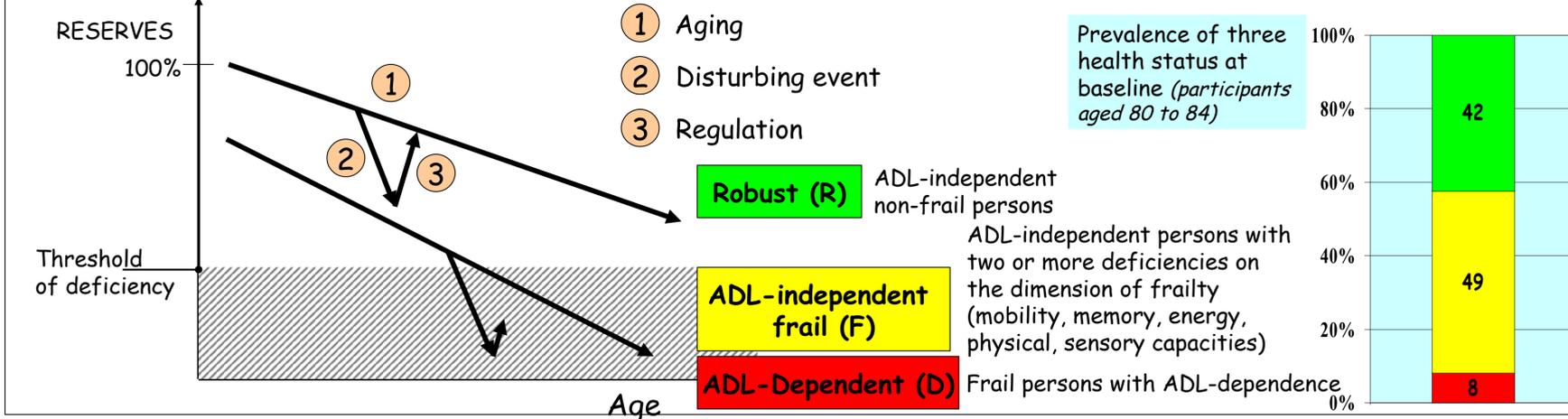
- ❖ Which are the main health trajectories of the last years of life?
- ❖ Which socio-demographic factors predispose to end life in long-term ADL-dependence?

## Sample

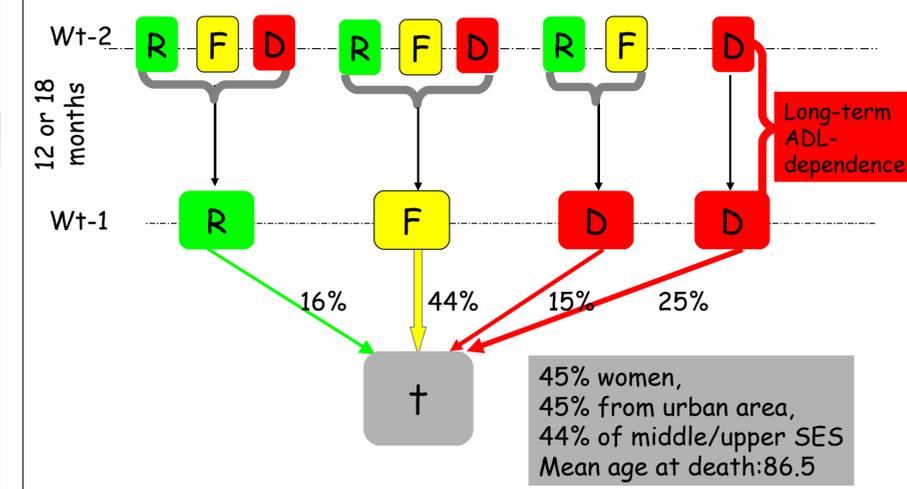
- ❖ SWILSO-O is a two-cohort study on aging in Switzerland
- ❖ Stratified by gender and geographical area (urban and semi-rural) and composed of community-dwelling participants at baseline
- ❖ 362 (50%) of the respondents died between 1994 to 2004
- ❖ We documented health trajectories during the 4 years prior to death of 273 deceased participants.

Cohort	Year									N	Mean age
	1994	1995	1996	1997	1999	2000	2001	2002	2004		
1 <sup>st</sup> cohort	340	267	237	209	172	128	100	80	59	N	Mean age
	81.9	83.2	84.3	85.2	86.6	88.0	88.9	89.8	91.4		
2 <sup>nd</sup> cohort					377	289	247	212	173	N	Mean age
					81.9	83.2	84.2	85.1	86.6		

## Health status



## Results 1: Health status before death



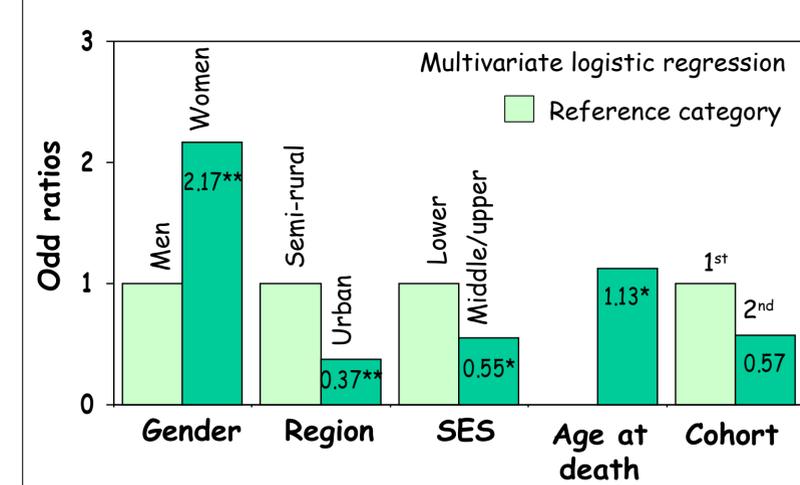
- ❖ The oldest old are in different health states even before death.
- ❖ A majority (75%) of the oldest old die without having to suffer from long-term ADL-dependence

## Results 2: Health trajectories before death

Trajectories during the 4 years prior to death	%
1. ADL-dependent	21
2. ADL-independent frail	18
3. Robust	6
∑ in the same health state	45
4. Decline to D	20
5. Decline to F	11
∑ decline	31
6. Fluctuations to R/F	17
7. Fluctuations to D	7
∑ fluctuations	24
<b>Total</b>	<b>100%</b>

- ❖ Very old people experience various health trajectories before death
- ❖ Health trajectories are not limited to long-term ADL-dependence (21%) neither to decline towards ADL-dependence (20%)
- ❖ Old people can experience an improvement in health (24%) during the last years of their life.

## Results 3: Factors predisposing to end life in long-term ADL-dependence



- ❖ Long-term ADL-dependence prior to death is more frequent among women. This trajectory is less frequent among persons living in a urban area, and persons with middle/upper SES.
- ❖ For each additional year of life, the probability of ending life in long-term ADL-dependence increases by 13%

## Conclusions and perspectives

- Long-term ADL-dependence does not necessarily precede death. Rather, frailty is the more probable last stage in late life.
- High age predisposes to end life in long-term ADL-dependence. As life expectancy continues to increase, will future generations experience longer periods of ADL-dependence at the end of their life?

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