

2013 George Myers Memorial Lecture

***The Disablement Process Revisited:
What Do We Mean by Healthy Life?***

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**25th Annual REVES Meeting
Austin, Texas
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REVES Website

REVES, the network on health expectancies and the disablement process

- **Réseau Espérance de Vie en Santé (REVES) is an international organization that promotes the use of health expectancy as a population health indicator. As disability-free life expectancy was the first, and remains a major measure useful for cross-national comparisons of the health status of populations, REVES members are also involved in the definition, measurement, and comparison of disability globally.**

http://reves.site.ined.fr/en/home/about_reves/

Why Do We Care About Healthy Life Expectancy?

- **Test compression of morbidity hypothesis**
- **Highlight health inequalities between and within countries**
- **Target resources for health promotion**
- **Evaluate impact of health policies**
- **Inform long-term planning for health, social, and fiscal policy**

***Source: EHEMU Technical Report 2007_1,
“Interpreting Health Expectancies”***

REVES Website

REVES, the network on health expectancies and the **disablement process**

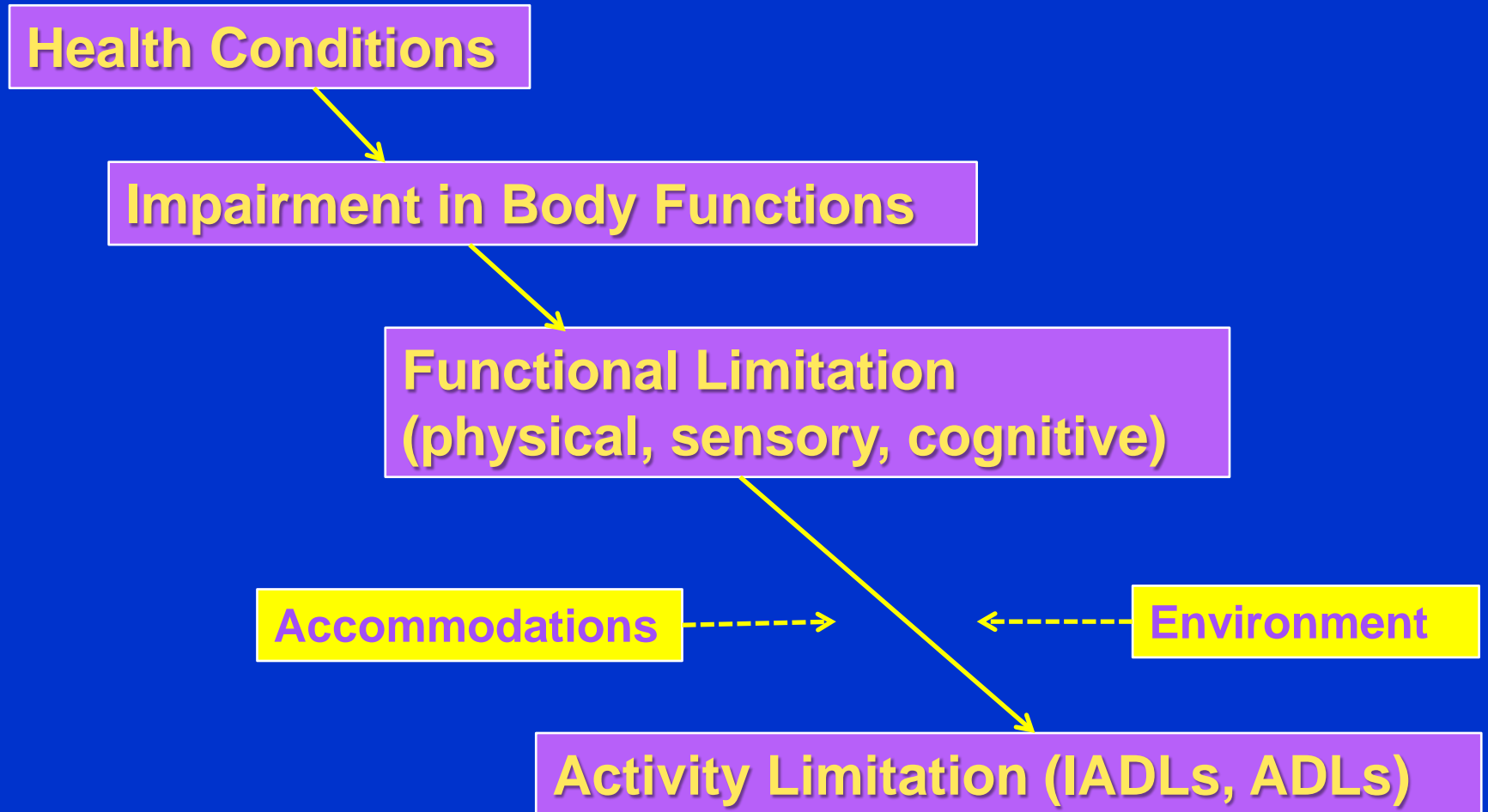
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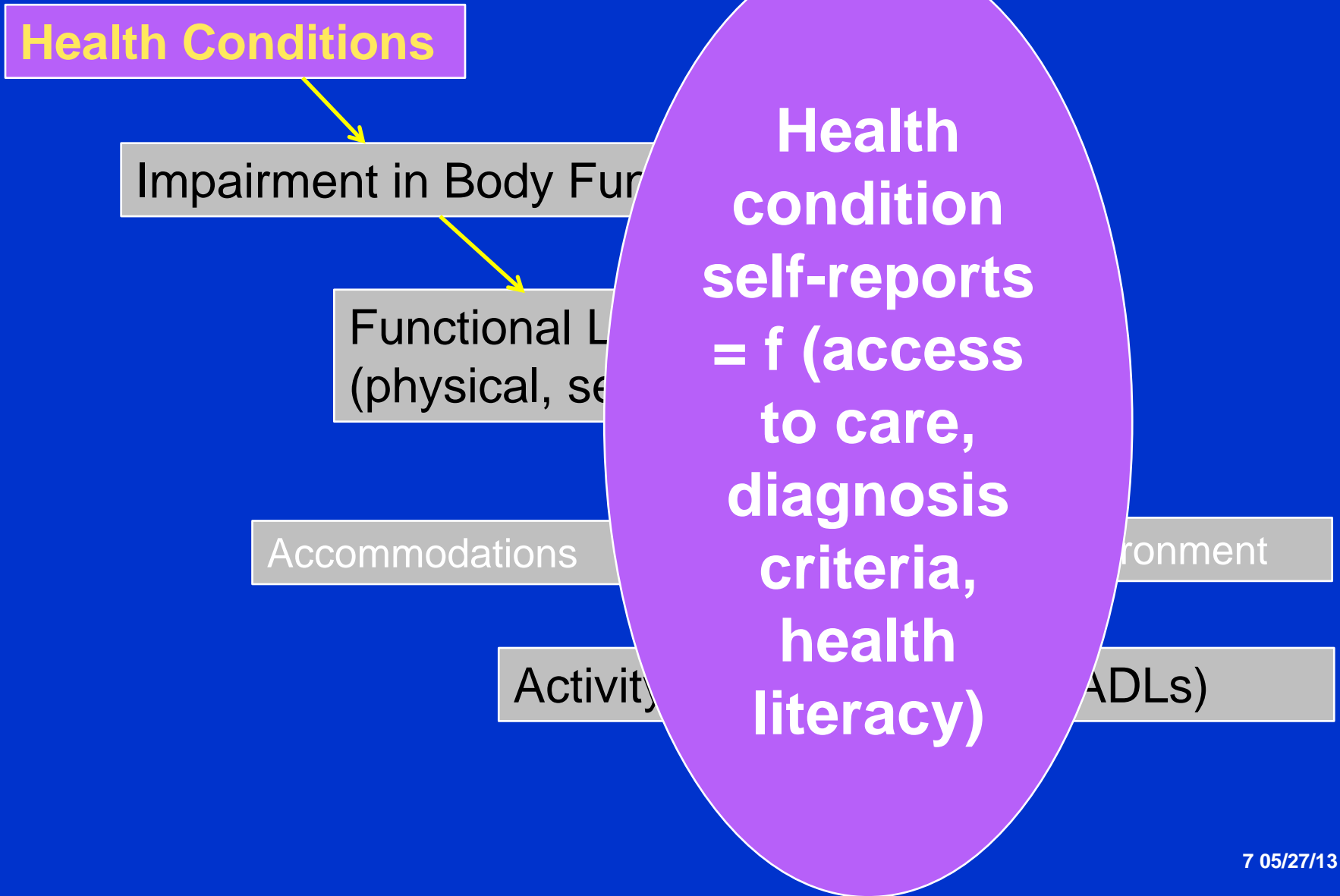
The Disablement Process Revisited: What Do We Mean by Healthy Life?

- **Disablement Process**
- **Role of technology in IADLs in China, Taiwan, and the United States**
- **Roles of assistive device use and behavior change in ADLs in the United States**
- **Concluding thoughts**

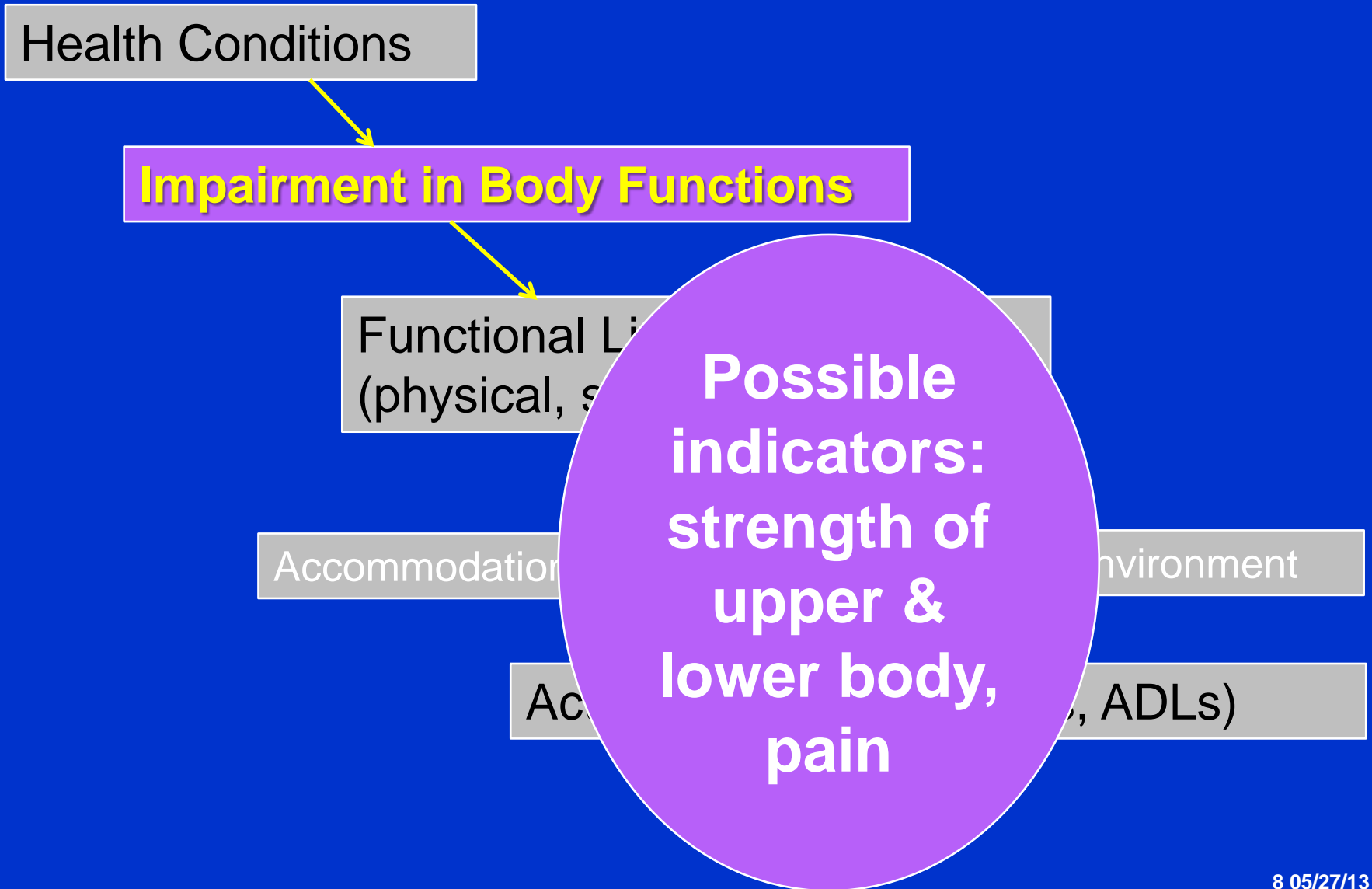
Disablement Process



Disablement Process



Disablement Process



Disablement Process

Her

Less influenced by environment than IADLs/ADLs; sensory limitations neglected; beware cognitive test learning effects

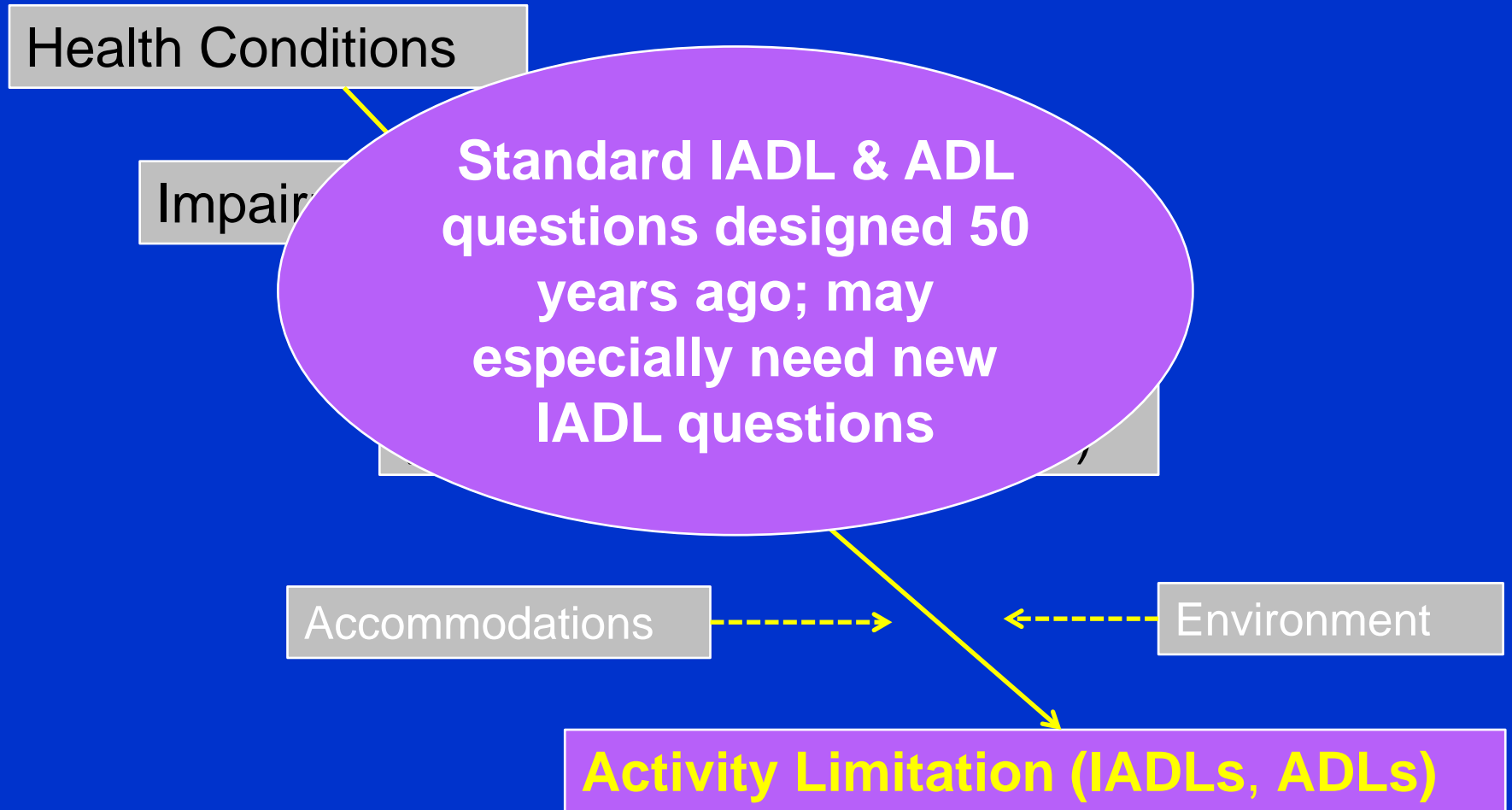
**Functional Limitation
(physical, sensory, cognitive)**

Physical performance tests promising, but require strict protocols

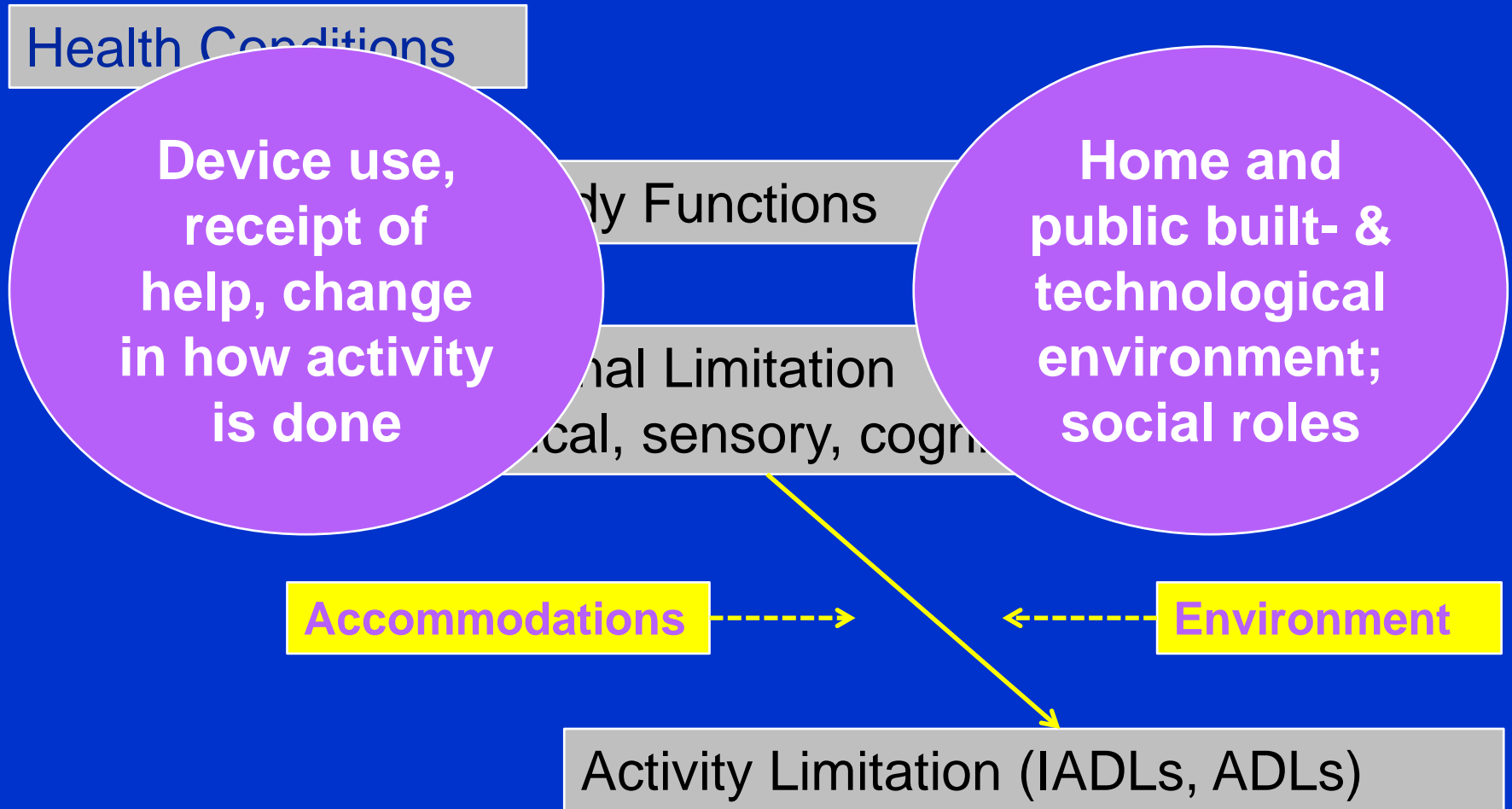
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Activity Limitation (IADLs, ADLs)

Disablement Process



Disablement Process



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Bigger IADL Decline for Chinese Males, 80+, 2002-08

Estimated Annual Rate of Change*		
Inability to Carry Out Independently	Males	Females
3 Physical Functions	0.2% ns	-0.8%
5 IADLs	-2.5%	-1.5%
Cooking	-2.8%	-2.5%
Laundry	-4.0%	-3.4%

* Estimates based on logistic model controlling for age, proxy, institutional residence, and survey wave; Chinese Longitudinal Healthy Longevity Study; Martin, Feng, Zeng, & Schoeni, PAA 2013.

Possible Explanation: Sex Difference in Use of Microwave Oven (If Cook)?

Frequency of Use	Males	Females
Every/most times	22.7%	16.1%
Sometimes	50.0	45.9
Rarely	16.9	24.1
Never	10.4	13.9

Source: U.S. National Health and Aging Trends Study, 65+, 2011

Taiwan: Large Decline in Difficulty Phoning

Estimated Average Annual Rate of Change*, 65+, 1993-2007	
Difficulty by one's self	65+
Any of 6 IADLs	-1.48%
Phoning	-4.14%

* Estimates based on logistic model controlling for age, proxy, and survey wave; Survey of Health and Living Status of the Middle Aged and Elderly in Taiwan; Martin, Zimmer, & Hurng, *Pop Studies* 2011.

Influence of Increase in Phone Availability?

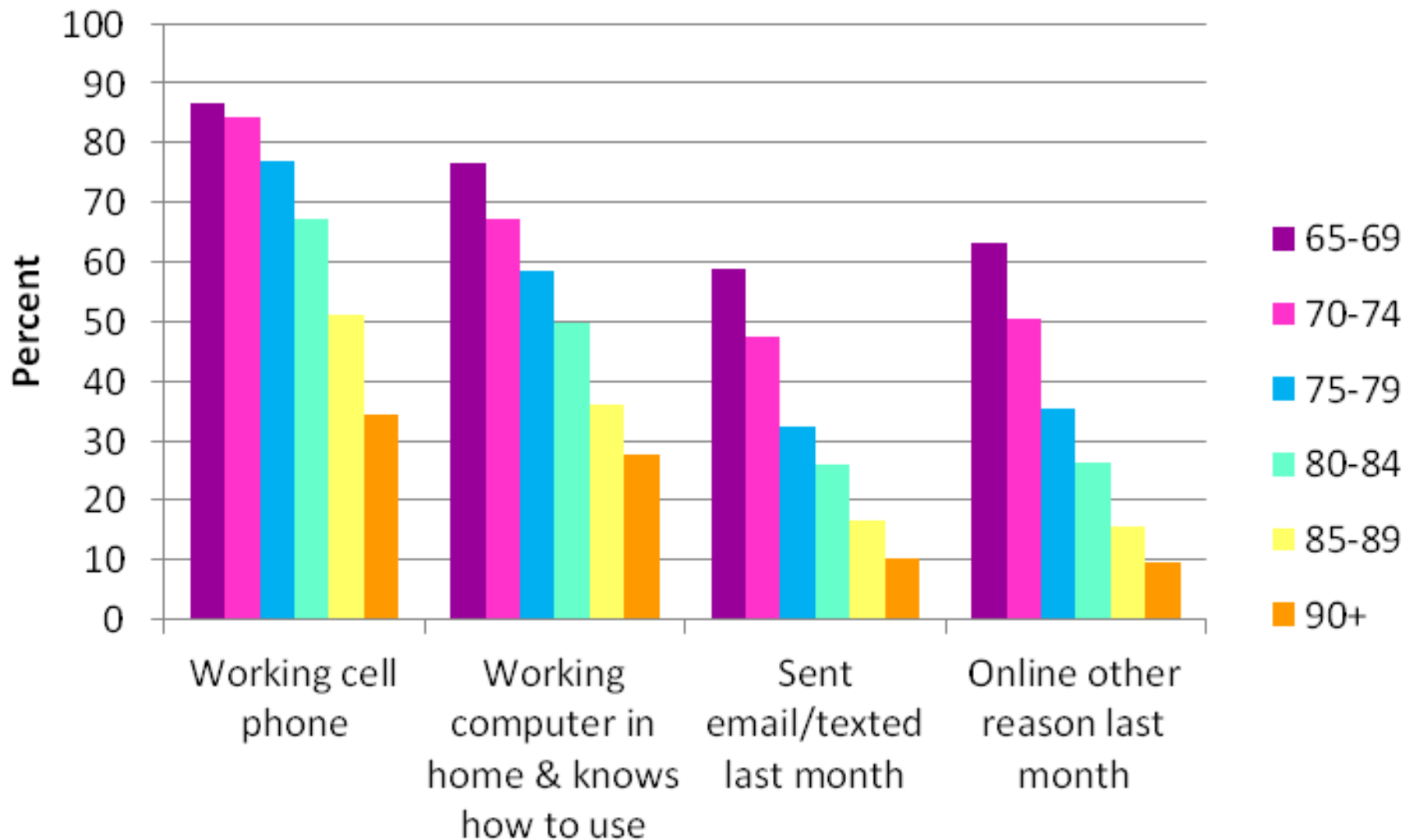
Estimated Average Annual Rate of Change, 65+, 1993-2007

Difficulty by one's self	65+
Any of 6 IADLs	-1.48%
Phoning	-4.14%

Average Annual Rate of Change, 1988-2008

Telephones	
Land lines	+0.09%
Mobile subscriptions	+8.20%

Cell Phone and Computer Use by Age, U.S., 2011



Source: National Health and Aging Trends Study

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National Health and Aging Trends Study (NHATS)

- **Follow-on to the National Long Term Care Survey, funded by U.S. National Institute on Aging**
- **Led by Judy Kasper, Johns Hopkins University, & Vicki Freedman, University of Michigan**
- **Collection of first two annual waves complete (2011 & 2012), data from first available (www.nhats.org)**
- **Respondents in community, assisted living, & nursing homes**
- **Focus on disablement process, measuring temporal trends and individual trajectories**

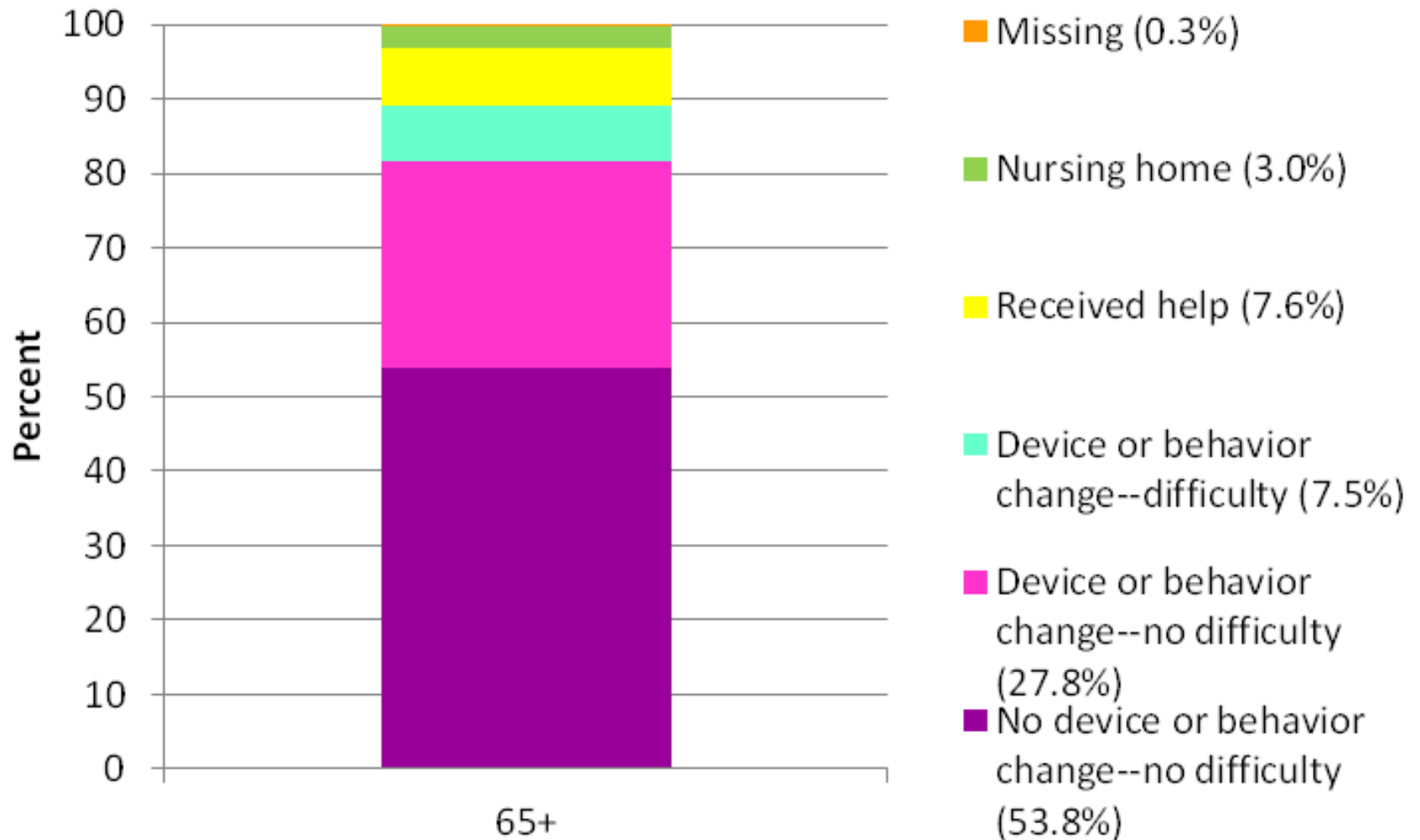
Examples of NHATS Question Domains

- Home & technological environment and use
- Device use (e.g., mobility, dressing)
- Impairments (e.g., lower body strength, pain)
- Physical function (self-reported)
- Physical performance measures
- Cognitive function tests
- Mobility, driving, and transportation
- Household activities
- Self-care activities
- Participation

NHATS ADL Question Sequence (partial)

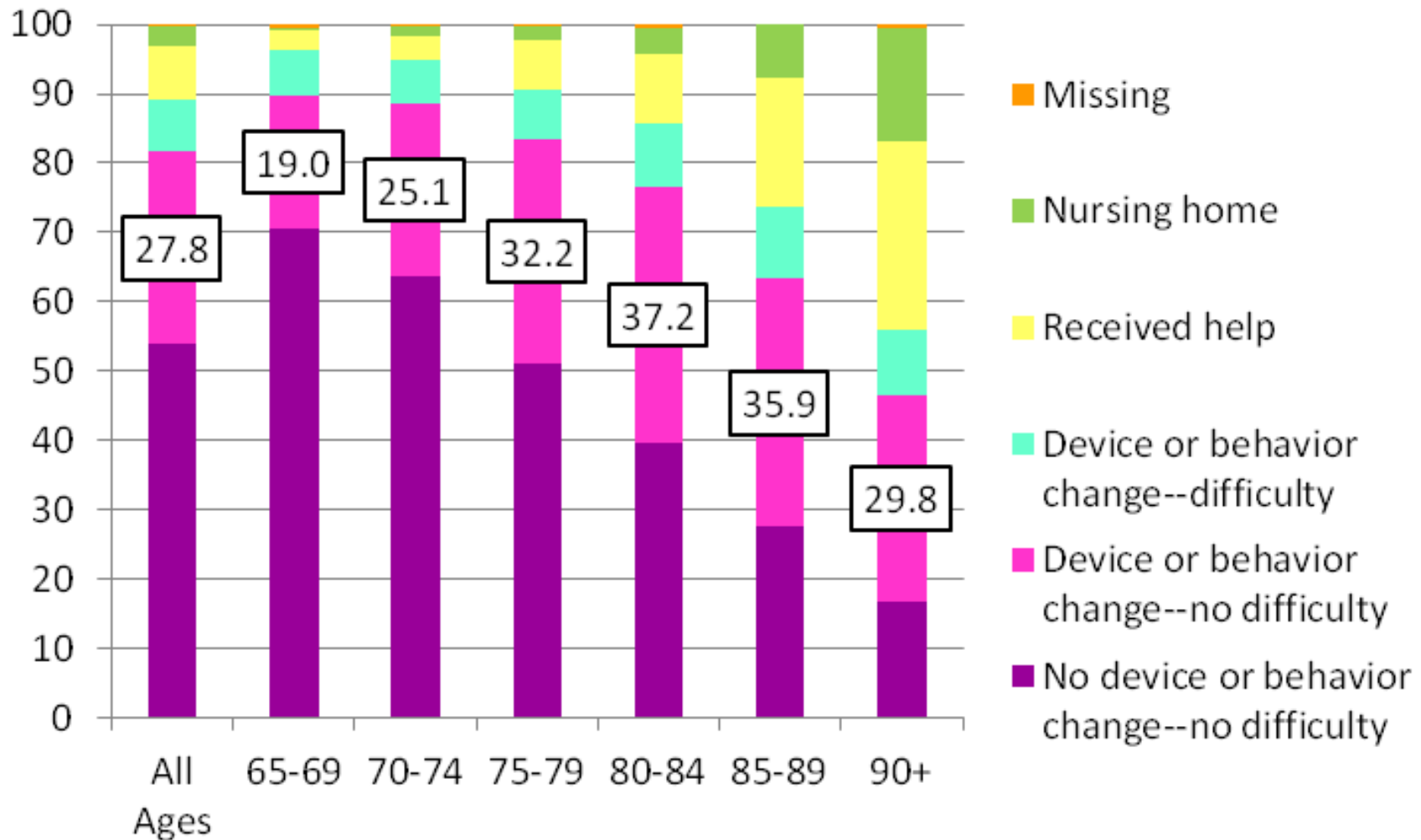
- **Home modification and equipment**
- **How do activity?**
- **Use of equipment/devices?**
- **Help with activity?**
- **How difficult without help or use of devices?**
- **[for bathing only] Compared to a year ago does more or less often?**
- **Consequences because too difficult by self or no one to help?**

Bathing



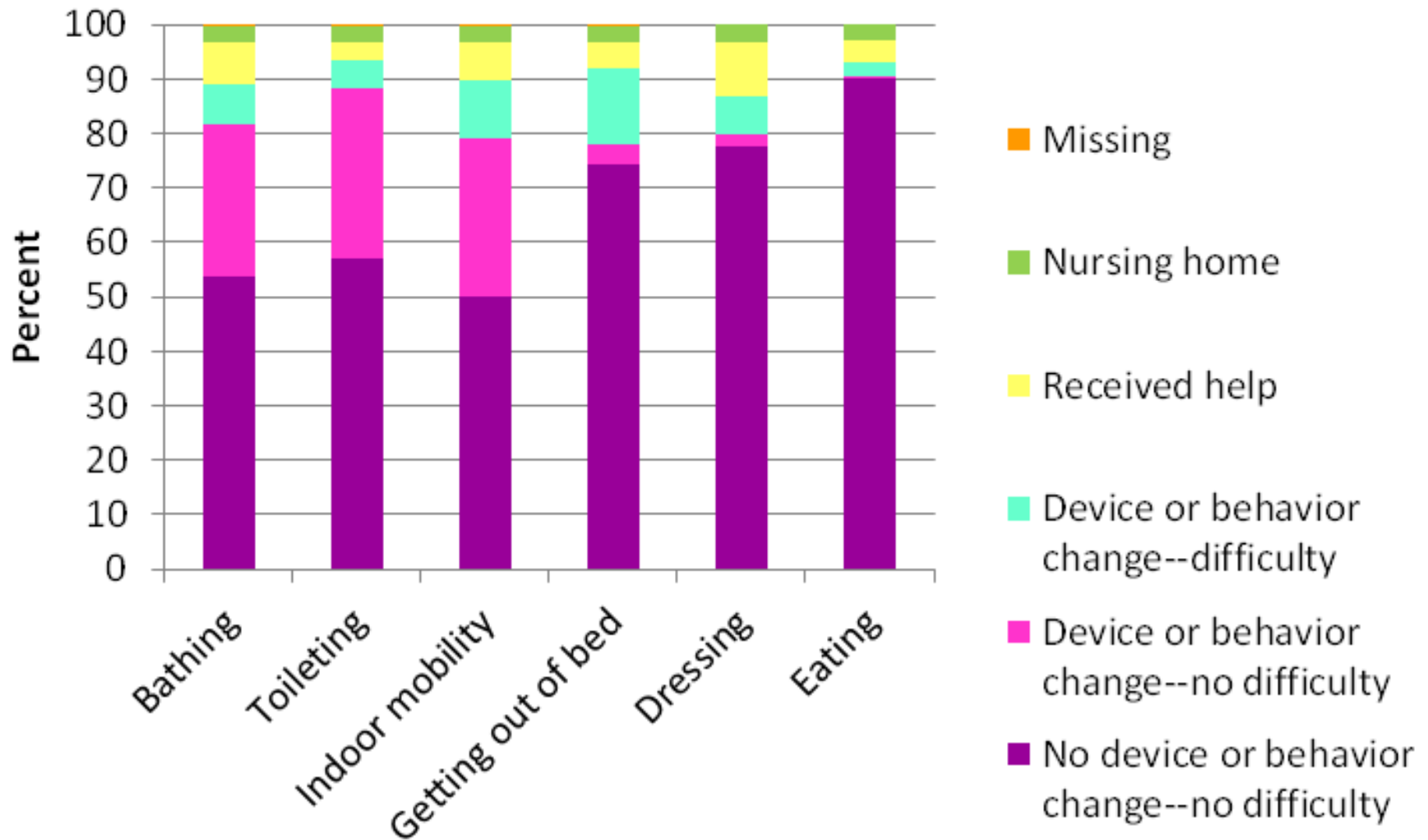
NHATS, 2011

Bathing by Age



NHATS, 2011

All ADLs, 65+



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Concluding Thoughts on Healthy Life

- Haven't really answered the question of what do we mean by healthy life
 - Instead emphasized that we may not necessarily be measuring health well with IADLs and ADLs

Concluding Thoughts on Healthy Life

- **Not necessarily measuring health well with IADLs and ADLs**
- **No one indicator perfect**
 - **Self-reported health conditions = f(access to care, diagnosis criteria, and health literacy)**
 - **Self-reported functional limitations promising, but performance measures even more so**
 - **Self-reported IADLs and ADLs = f(environment, accommodation), but can learn a lot from them if asked carefully**

Concluding Thoughts on Healthy Life

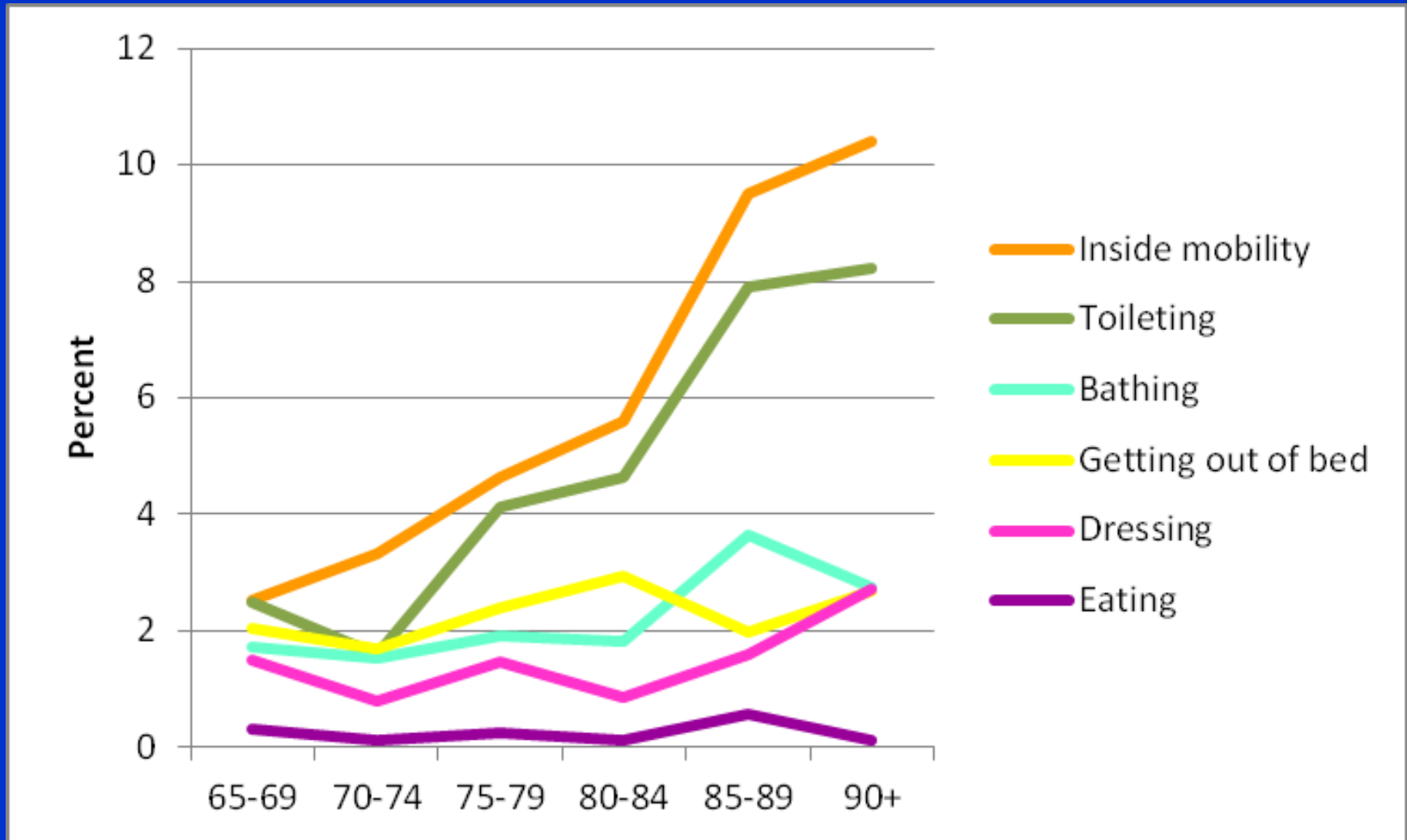
- **Not necessarily measuring health well with IADLs and ADLs**
- **No one indicator perfect**
- **Even if you don't have the detail of NHATS, IADL and ADL analysis can provide useful information about well-being and policy**
 - **But be careful in interpreting results**
 - **Do not assume findings are all about health (or compression of morbidity!)**

Concluding Thoughts on Healthy Life

- **Not necessarily measuring health well with IADLs and ADLs**
- **No one indicator perfect**
- **If limited choice of indicator, given your dataset, be careful how interpret results**
- **If you do have a choice of indicator, think about the purpose of your study**
 - **Highlight inequalities (in what?)**
 - **Target resources for intervention (in what?)**
 - **Evaluate effectiveness of program (for what?)**
 - **Assess quality of life**

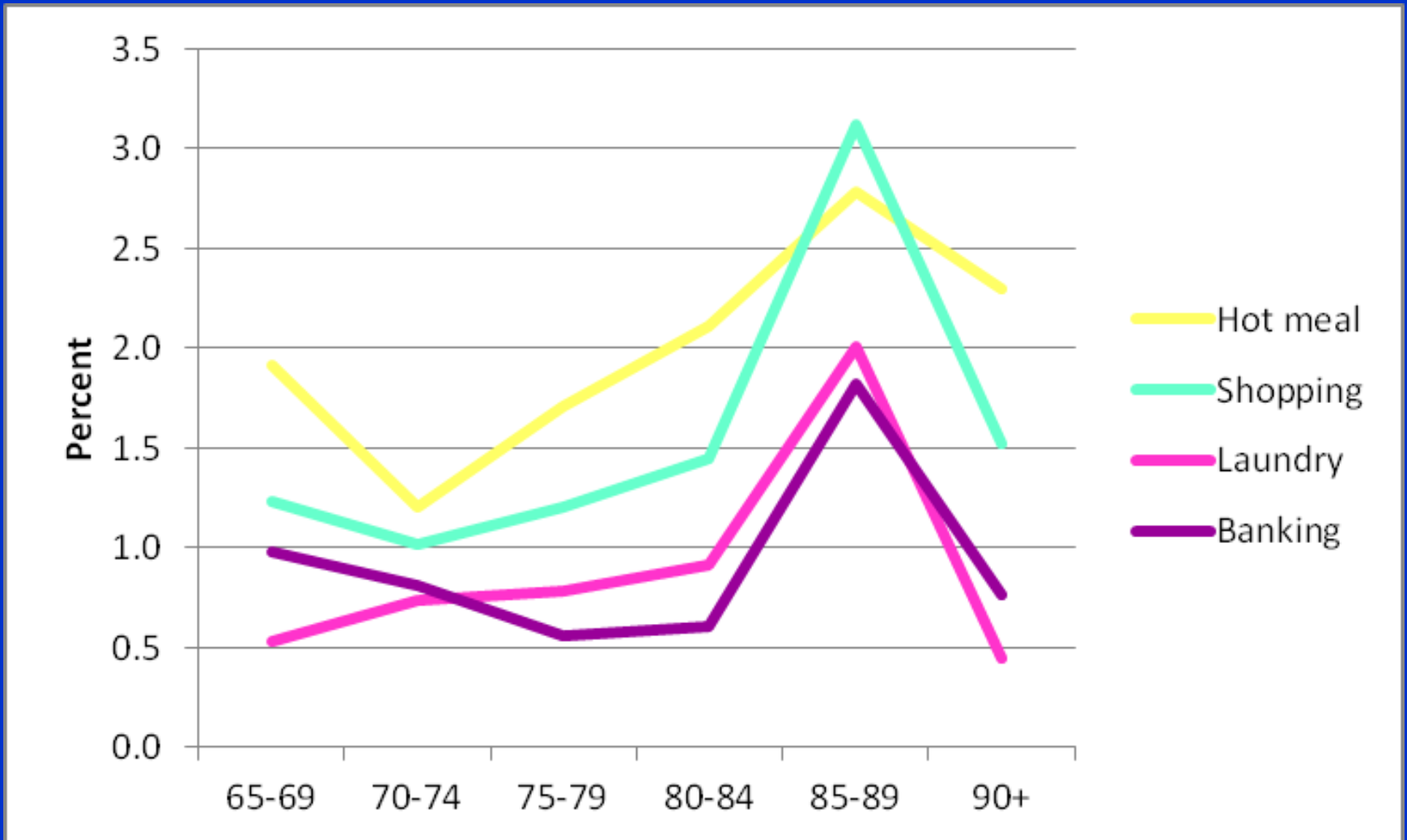
Thank you!

Unmet Need or Going Without Because Too Difficult or No Help, 65+, 2011



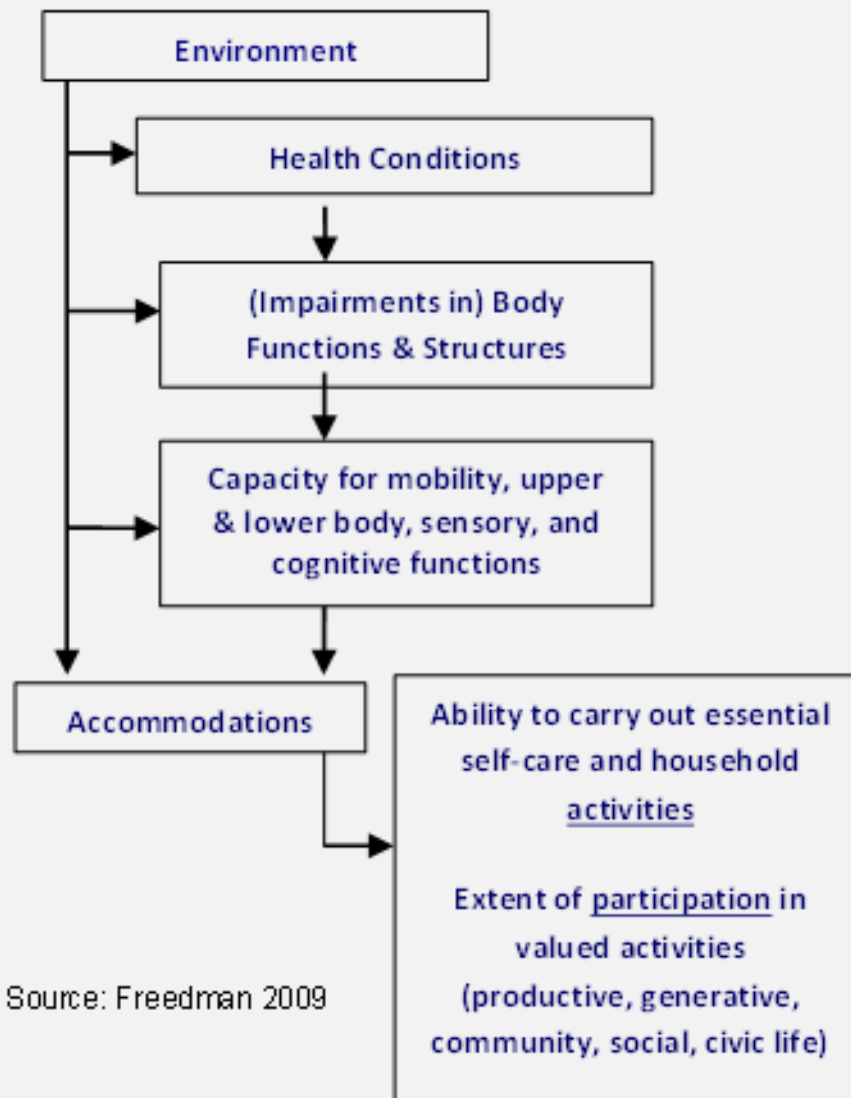
NHATS, 2011

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NHATS, 2011

NHATS' Conceptualization of Disability



Source: Freedman 2009