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## *Physical Functioning Among Medicare Beneficiaries*

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# Physical Functioning

- Ability to conduct a variety of activities ranging from self-care to running
- One of strongest predictors of
  - Hospitalizations, institutionalization, and mortality
- This study examines physical functioning items administered in 2010 Consumer Assessment of Healthcare Providers and Systems (CAHPS®) Medicare Survey

# Sample

- n = 366,701 Medicare managed care and FFS beneficiaries
- 58% female
- 57% high school education or less
- 14% 18-64; 48% 65-74, 29% 75-84, 9% 85+



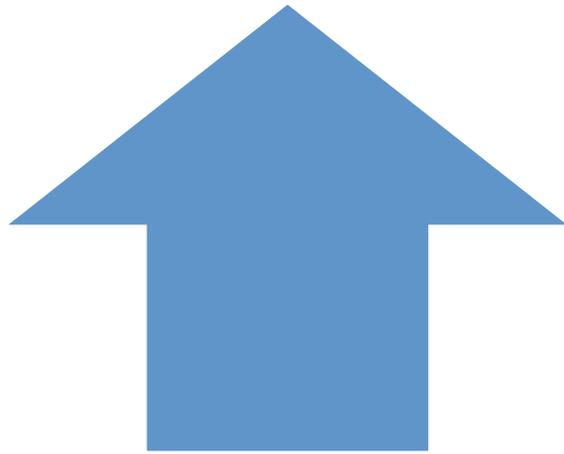
Because of a health or physical problem are you unable to do or have any difficulty doing the following activities?

- Walking?
- Getting in our out of chairs?
- Bathing?
- Dressing?
- Using the toilet?
- Eating?
  - I am unable to do this activity
  - Yes, I have difficulty
  - No, I do not have difficulty

**Table 1. Percentage of Medicare beneficiaries (n = 366,701) selecting each response option for the 6 physical functioning items**

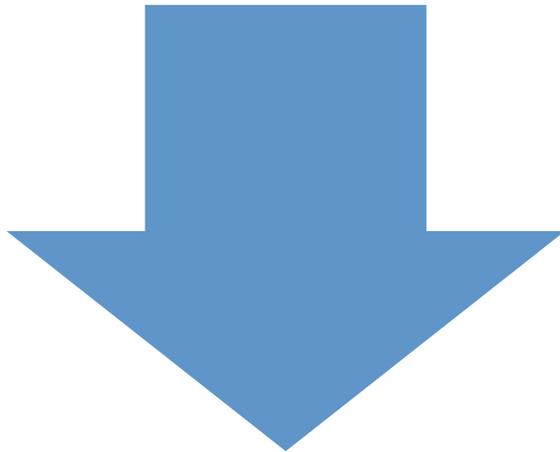
Item	Unable to do	Have difficulty	No difficulty
Walking	4	27	69
Chairs	3	19	78
Bathing	4	11	85
Dressing	3	9	88
Toileting	3	6	91
Eating	3	3	94

# Range of Inter-item Correlations



$$r = 0.84$$

Bathing & Dressing



$$r = 0.51$$

Eating and Walking

Coefficient alpha = 0.92

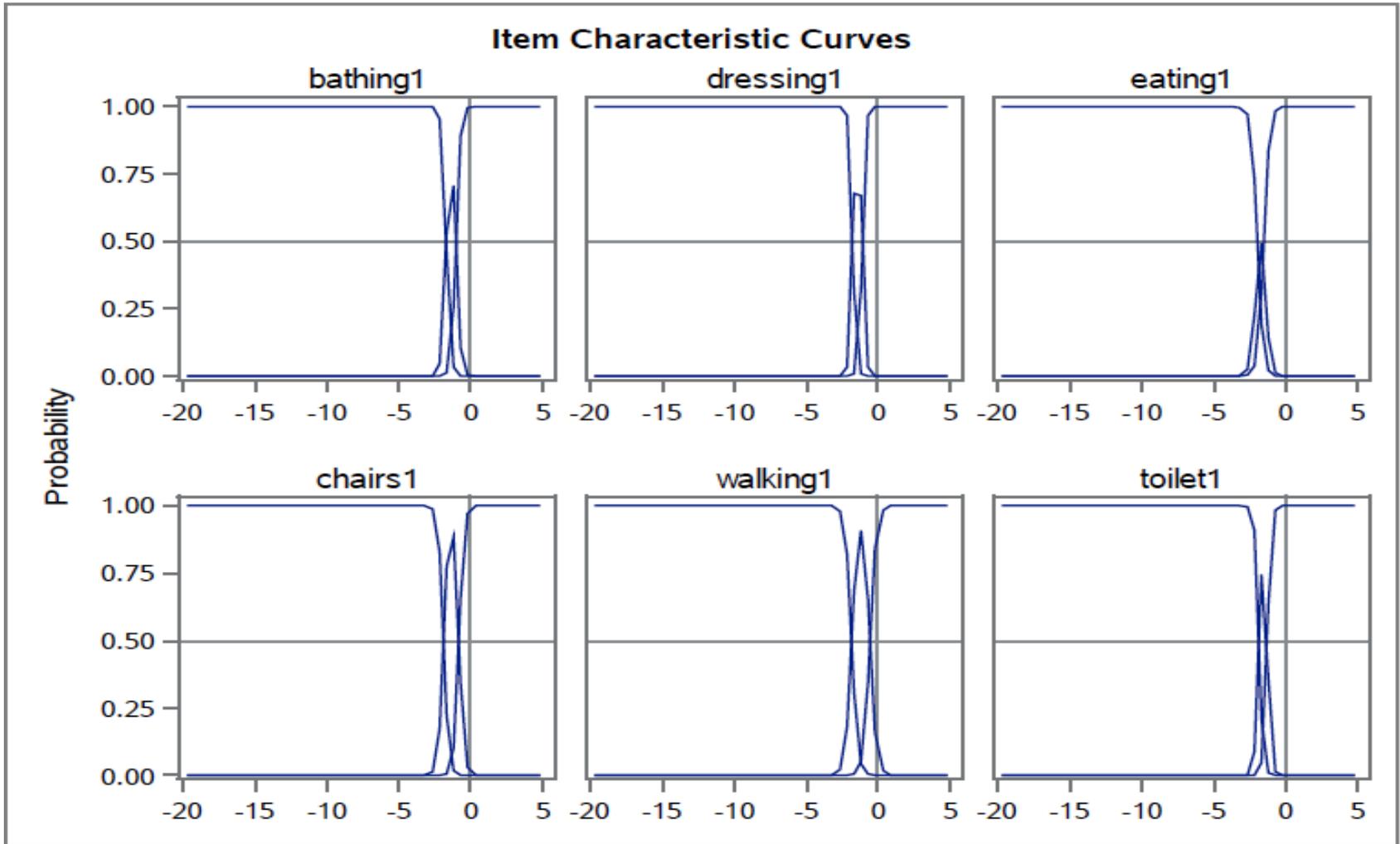
# Categorical Confirmatory Factor Analysis Loadings

Physical Functioning	Loading
Walking	0.93
Chairs	0.95
Bathing	0.96
Dressing	0.98
Toileting	0.97
Eating	0.94

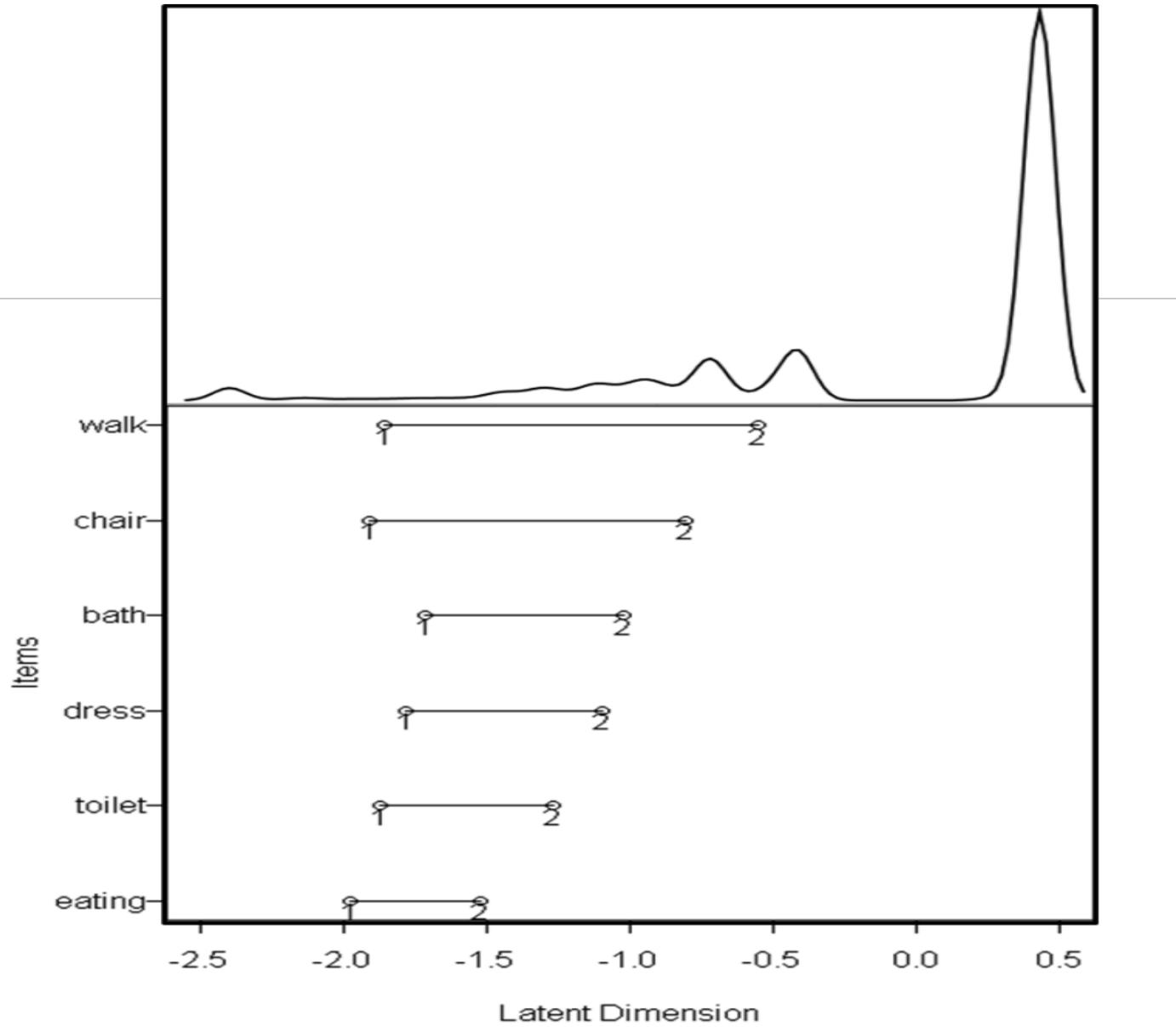
# Item Parameters (Graded Response Model)

Physical Functioning	Threshold Unable to do	Threshold Have difficulty	Discrimination
Walking	-1.86	-0.55	4.63
Chairs	-1.91	-0.81	5.65
Bathing	-1.72	-1.02	6.34
Dressing	-1.78	-1.10	8.23
Toileting	-1.87	-1.27	7.23
Eating	-1.98	-1.53	4.87

The IRT Procedure



**Figure 2. Person-Item Map**

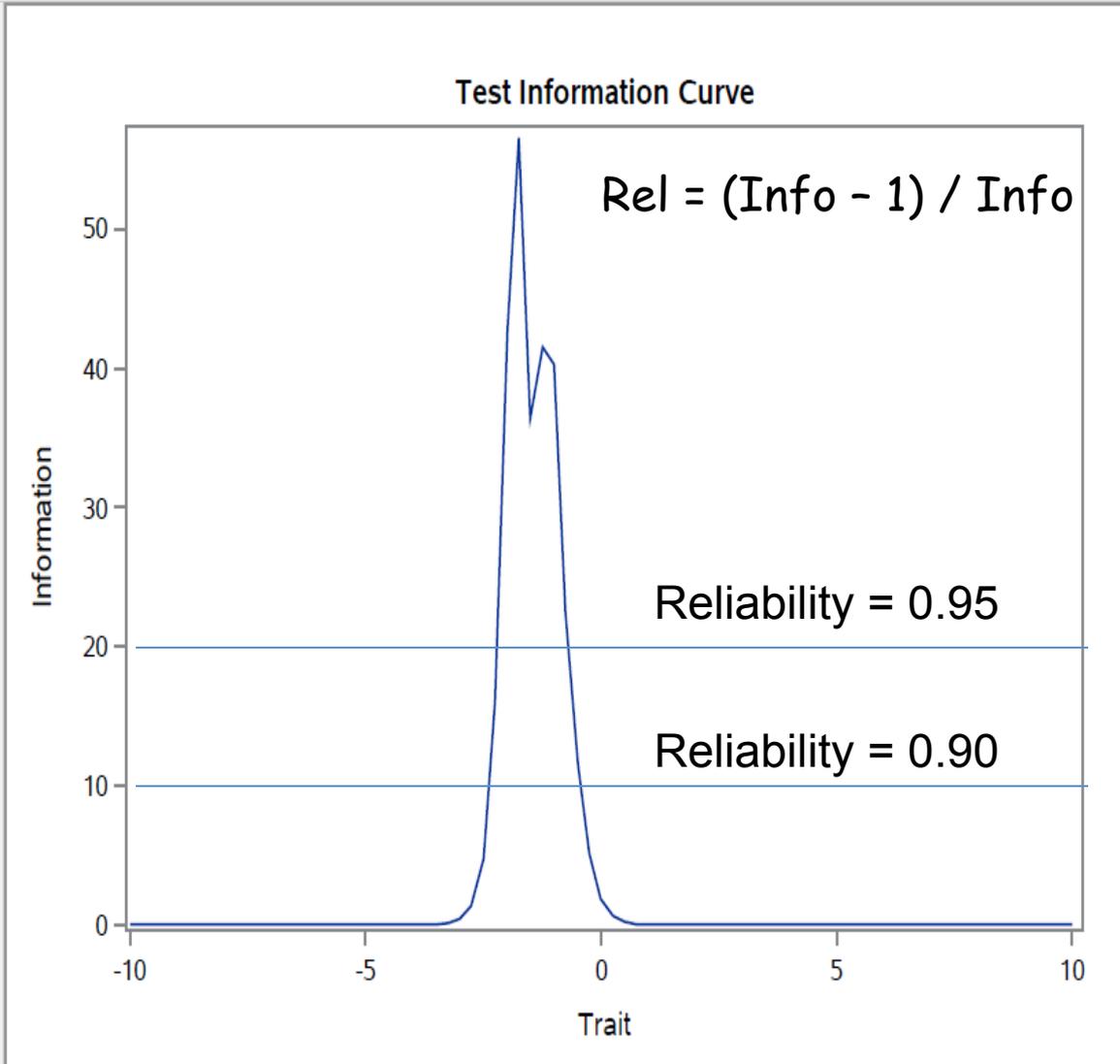




1 / 1



113%



# Physical Function Scale Correlations

$r = 0.39$  (self-rated general health)

$r = -0.23$  (number of chronic conditions)

# Summary

- The 6 physical functioning items target relatively easy activities
- Items representing higher levels of physical functioning are needed for the majority of Medicare beneficiaries.
  - Lifting or carrying groceries
  - Doing chores like vacuuming or yard work
  - Running a short distance

# Acknowledgements

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- Thank you. ([drhays@ucla.edu](mailto:drhays@ucla.edu))

