

# Patient-Reported Outcome Report Cards: Evaluating Process and Outcome

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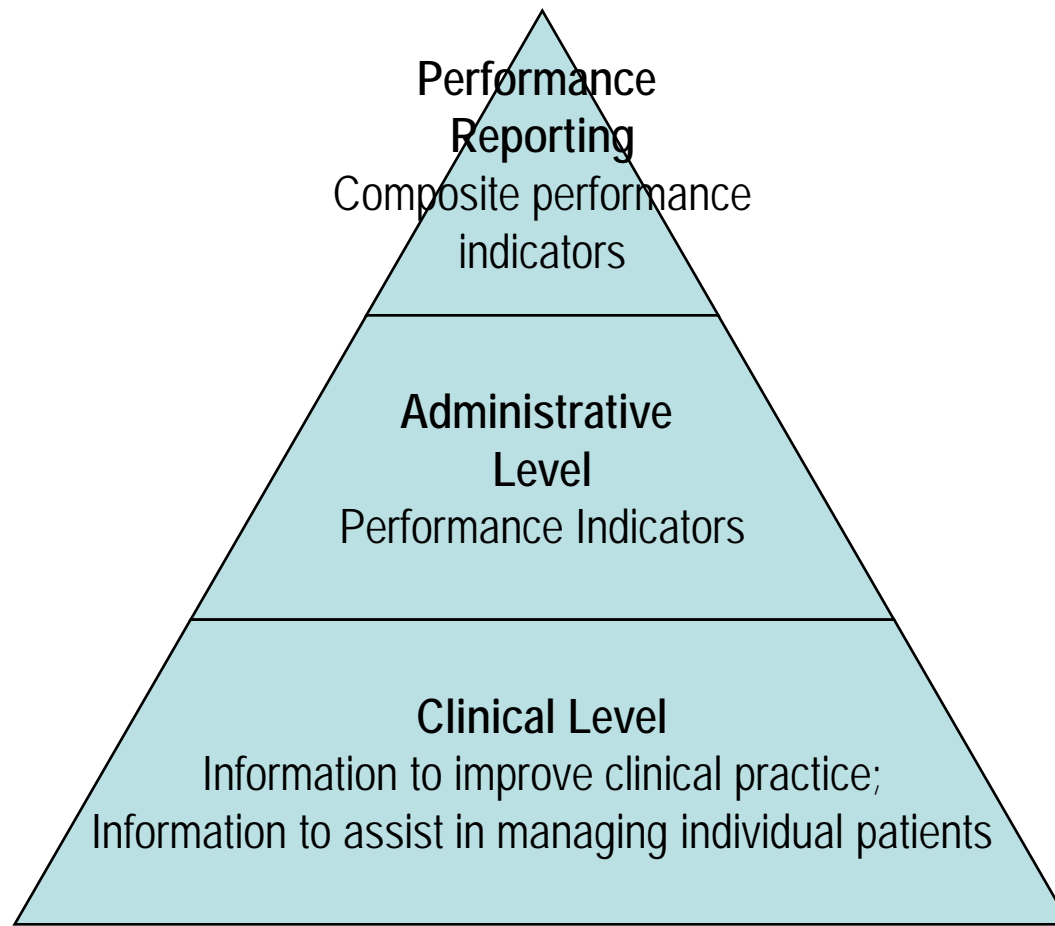
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# Patient-Reported Outcome Report Cards: Evaluating Process and Outcome

## Outline

- I. Information Pyramid
- II. Using Health-Related Quality of Life Measures to Manage Individual Patients
- III. Using Health-Related Quality of Life Measures for Program Evaluation
- IV. A Population-Health Report Card: Health-Adjusted Life Expectancy
- V. Conclusions

# Health Outcome Information Pyramid

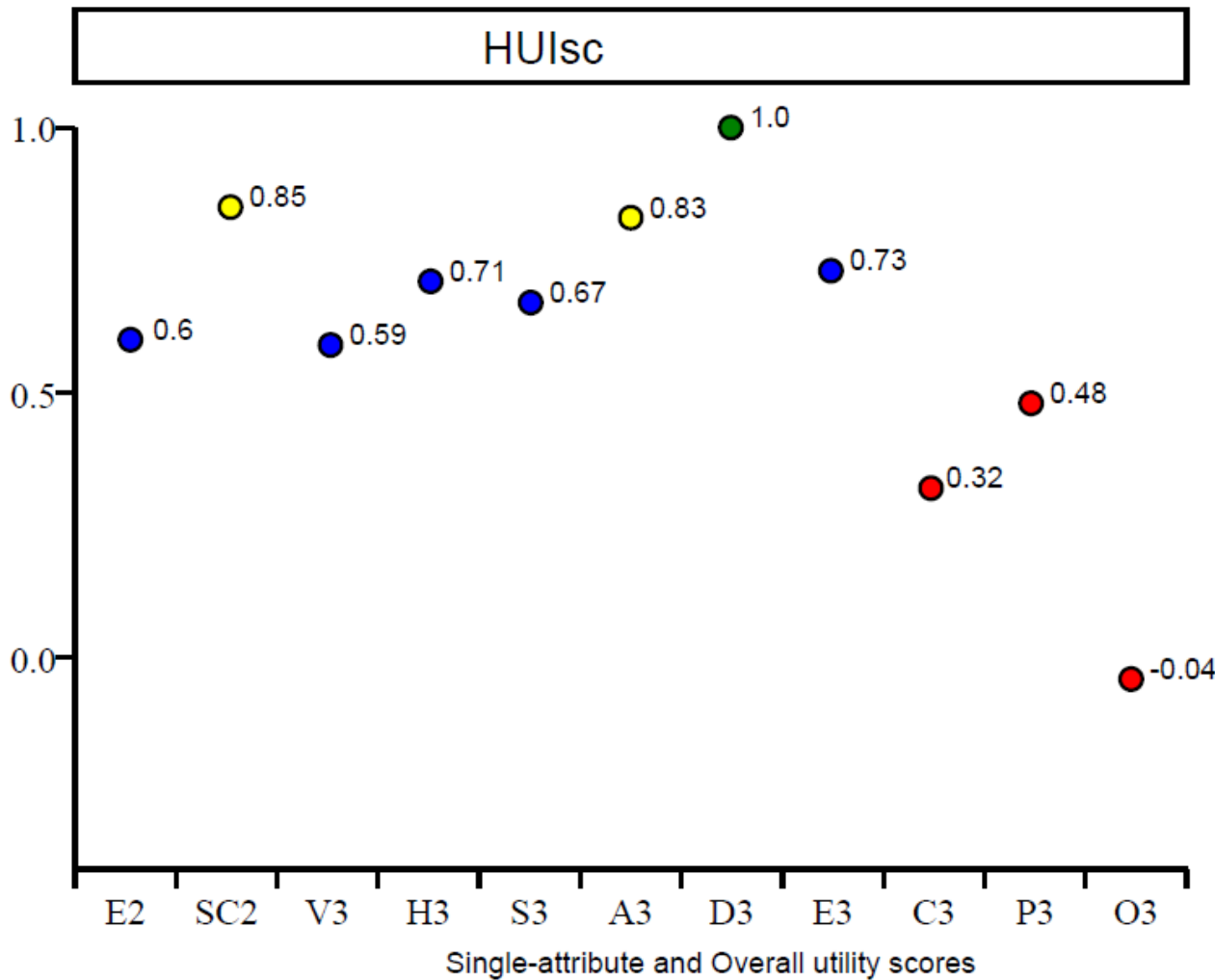


# Using Health-Related Quality of Life Measures to Manage Individual Patients: Evidence from a Randomized Controlled Clinical Trial

- Lung Transplantation Outpatient Clinic
- Serves Pre- and Post-Transplant Patients
- Completion of Health Utilities Index Mark 2 (HUI2) and Mark 3 (HUI3) Questionnaire in Waiting Room on Touch-screen Computer
- HUI Score Card summarizing results placed in chart, available to clinicians before clinician sees patient
- Examples of how clinicians use information from HRQL measure to assist in managing their patients

# HRQL Results

## Clinical Interpretation of Results



### HUI

Single-attribute utility scores:  
differences of  $\geq 0.05$  are important.

Overall utility score:  
differences of  $\geq 0.03$  are important.

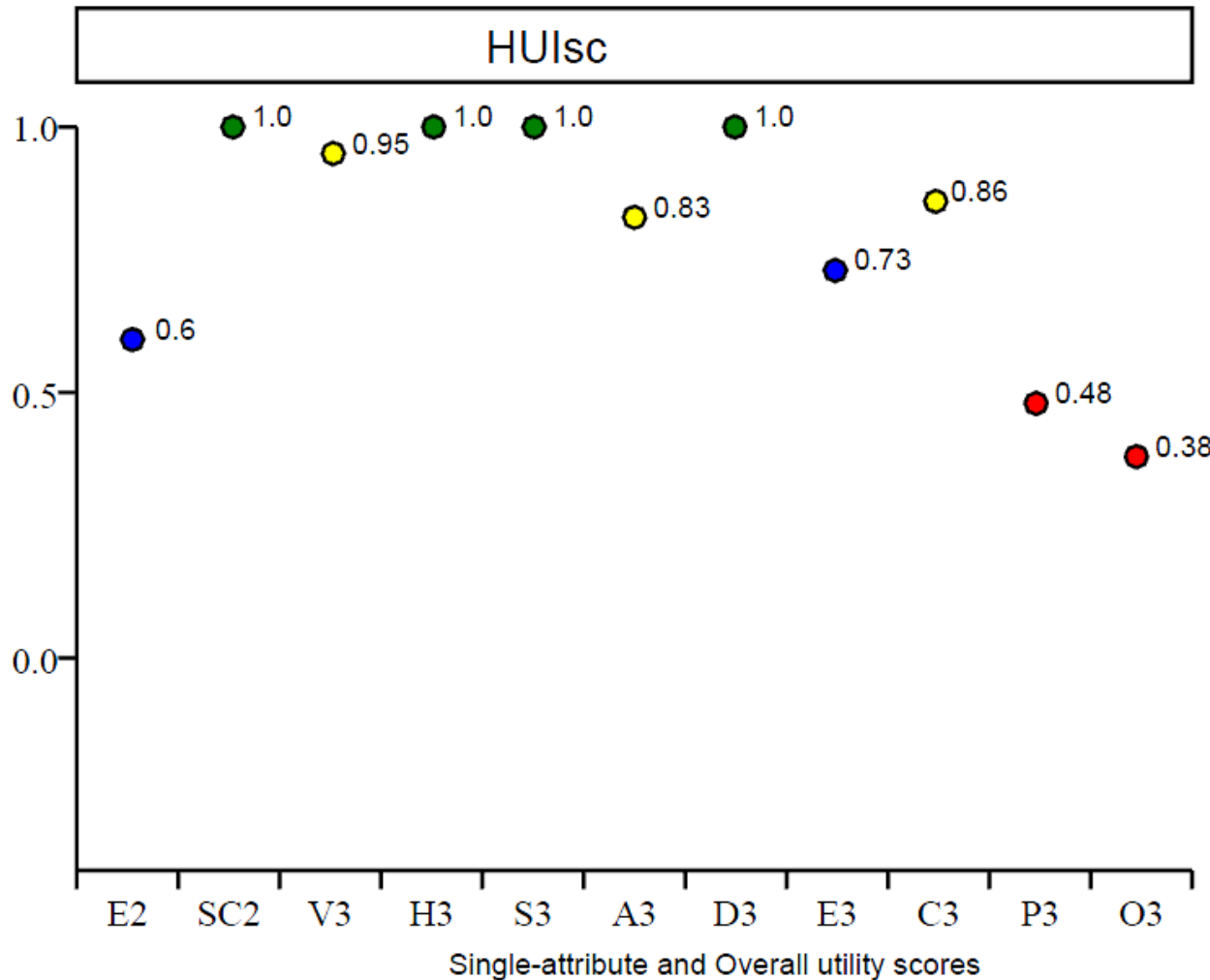
- PH = Perfect Health
- E2 = HUI2 Emotion
- SC2 HUI2 Self-care
- V3 = HUI3 Vision
- H3 = HUI3 Hearing
- S3 = HUI3 Speech
- A3 = HUI3 Ambulation
- D3 = HUI3 Dexterity
- E3 = HUI3 Emotion
- C3 = HUI3 Cognition
- P3 = HUI3 Pain
- O3 = HUI3 Overall

### Legend:

- = Normal
- = Mild
- = Moderate
- = Severe

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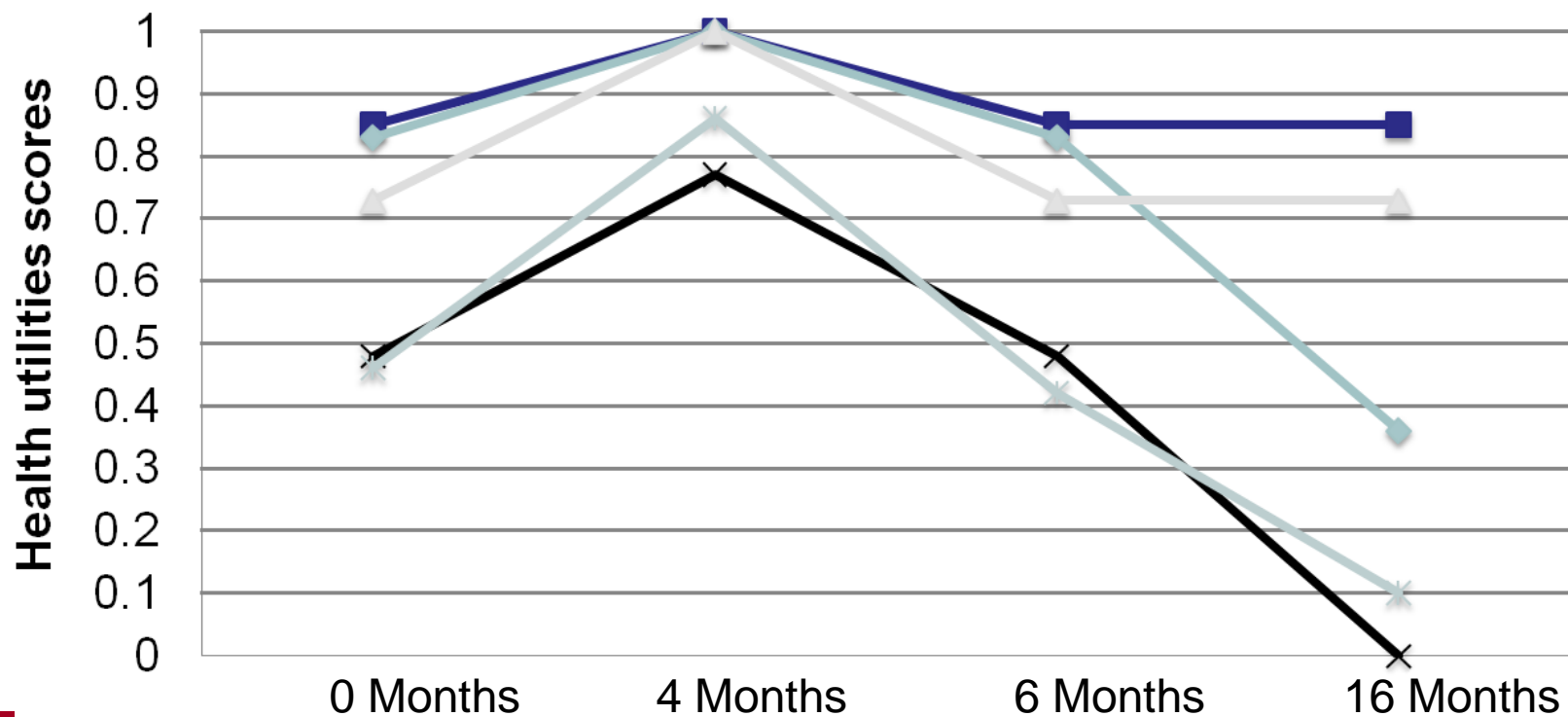
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## HRQL scores and FEV1%pred vs. transplant time



■ Self-Care	0.85	1.00	0.85	0.85
◆ Ambulation	0.83	1.00	0.83	0.36
▲ Emotion	0.73	1.00	0.73	0.73
✕ Pain	0.48	0.77	0.48	0.00
✱ Overall HUI3	0.46	0.86	0.42	0.10
● FEV1%pred	54	86	71	22

# Using Health-Related Quality of Life Measures to Manage Individual Patients: Conclusions

- Overall results of trial: very small improvement in patient-clinician communication; modest (small effect-size) effect on patient management; no effect on overall HRQL
- Information from HRQL measures often assists in managing individual patients
- Generic measure identifies potentially overlooked problems
- Information from HRQL Measures both complements and confirms information from standard clinical measures
- After the Trial was completed the Clinic decided to continue using HUI2 and HUI3 as part of routine (standard) care and added a specific measure, the Chronic Respiratory Questionnaire, to the set of HRQL assessment tools
- Tentative inductive generalization: change in HRQL scores is often observed before change is evident in clinical measures

# Using Health-Related Quality of Life Measures for Program Evaluation: CareOregon CareSupport Program

- CareOregon is a Medicaid provider in Oregon, USA
- Based on previous claims data and/or risk factors, CareOregon screens to identify patients at high risk of a decline in functional health status and/or high utilization of healthcare services
- Clinical Assessment Questionnaire: telephone interviews by case managers to determine eligibility for enrolment in CareSupport

# CareOregon CareSupport Program

- CareSupport is a multi-dimensional intervention including: coordinating multidisciplinary team care; arranging access; coaching to get most from visits to providers; promoting self-management; social support
- Previous analyses indicated that assignment to CareSupport reduces utilization, especially Emergency Department visits and hospitalization
- But what are the effects on Health Status and Health-Related Quality of Life?
- Program evaluation response: add Health Utilities Index (HUI) Questionnaire to baseline interviews; add follow-up interview at 4 months

# Baseline Demographics— Patients assigned to CareSupport

N = 289

*HAVE YOU EVER BEEN TOLD YOU HAVE...?*

<b>SEX (GENDER)</b>			
		Arthritis	68%
Male	28%	High blood pressure	66%
Female	72%	Depression	63%
		Asthma	44%
<b>AGE (YEARS)</b>		Diabetes	38%
Range	30-86	Heart disease	33%
Mean	58	COPD/Emphysema	24%
Median	58	Cancer	18%

# Frequency distribution of HUI3 attribute levels for CareSupport patients at baseline

LEVELS	VISION	HEARING	SPEECH	AMBUL- ATION	DEX- TERITY	EMOTION	COGNITION	PAIN
1 (normal)	12%	86%	92%	23%	78%	37%	24%	12%
2	72%	5%	6%	22%	7%	22%	8%	4%
3	2%	1%	2%	20%	1%	23%	18%	11%
4	7%	6%	1%	8%	5%	12%	26%	18%
5	6%	0%	0%	21%	7%	6%	22%	55%
6	1%	2%	n/a	6%	1%	n/a	2%	n/a
% moderate or severe	16%	9%	3%	55%	14%	41%	50%	84%

# Comparison of overall HUI3 scores at baseline and 4 months for CareSupport and non-CareSupport patients

	CareSupport		NON-CareSupport	
	BASELINE	FOLLOW-UP	BASELINE	FOLLOW-UP
Mean	0.18	0.23	0.20	0.19
	PROPORTION OF PATIENTS			
Stable	10.1%		8.1%	
Improved	49.5%		43.2%	
Declined	40.4%		48.6%	

# Conclusions: Program Evaluation

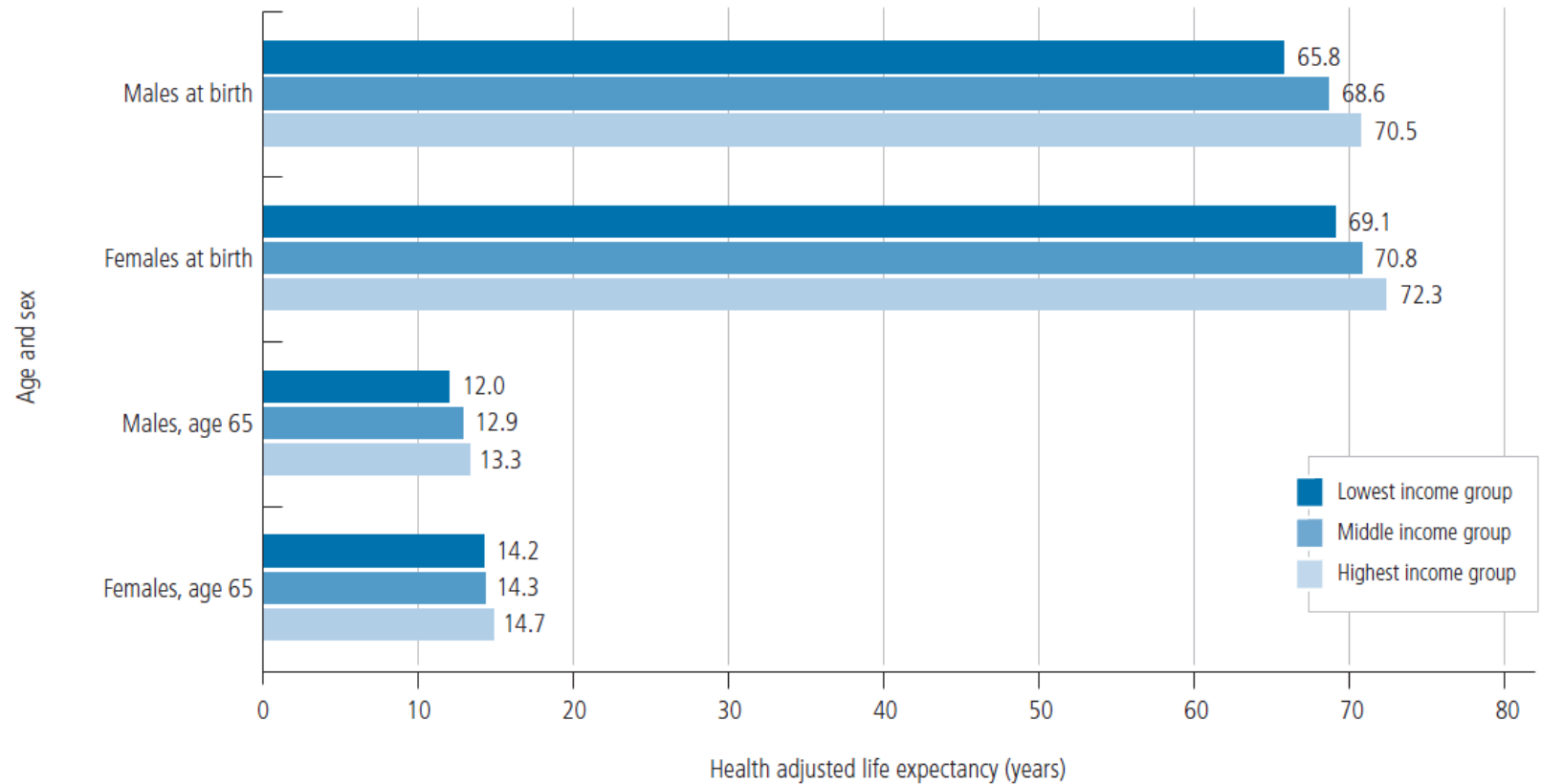
- HUI quantified already recognized burdens with respect to mobility, pain, and mental health
- HUI identified under recognized prevalence and severity of problems with cognition
- HUI results provide some evidence on the effectiveness of CareSupport in improving health outcomes for enrollees while reducing utilization
- Use of a HRQL measure, HUI, assisted in improving patient care

# A Population-Health Report Card: Health-Adjusted Life Expectancy (HALE)

- Canada: 2000 First Ministers Communiqué on Health: develop comparable indicators reporting on health status, health outcomes, and quality of service
- Annual Conference of Ministers of Health; Supported by the Conference of Deputy Ministers of Health
- Three Themes: Access; Quality; Health Status and Wellness
- Health-Adjusted Life Expectancy (HALE) is one of 18 core indicators; addresses Health Status and Wellness Theme
- Separate Indicators for First Nations and Inuit

## Health Adjusted Life Expectancy (HALE)

By sex and income level, at birth and age 65, Canada, 2001



Sources: Statistics Canada. Canadian Vital Statistics, Death Database; National Population Health Survey, 1996–1997; Canadian Community Health Survey, 2000–2001; 2001 Census.

# Patient-Reported Outcome Report Cards: Evaluating Process and Outcome. Conclusions

- Health-Related Quality of Life Measures add value in individual-level management of chronic-care patients
- Health-Related Quality of Life Measures add value in the evaluation of clinical programs
- Health-Related Quality of Life Measures add value in tracking the health of the population