

Health-Related Quality of Life Assessment

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Resource Allocation Problem

Everyone in health care wants reimbursement for their services

Options range from acute surgery, prevention, to long term care

But there is a limited amount of money

How do we spend limited resources to enhance population health?

Cost Effective Care

Cost ☐



Effectiveness ☐

Health-Related Quality of Life is:

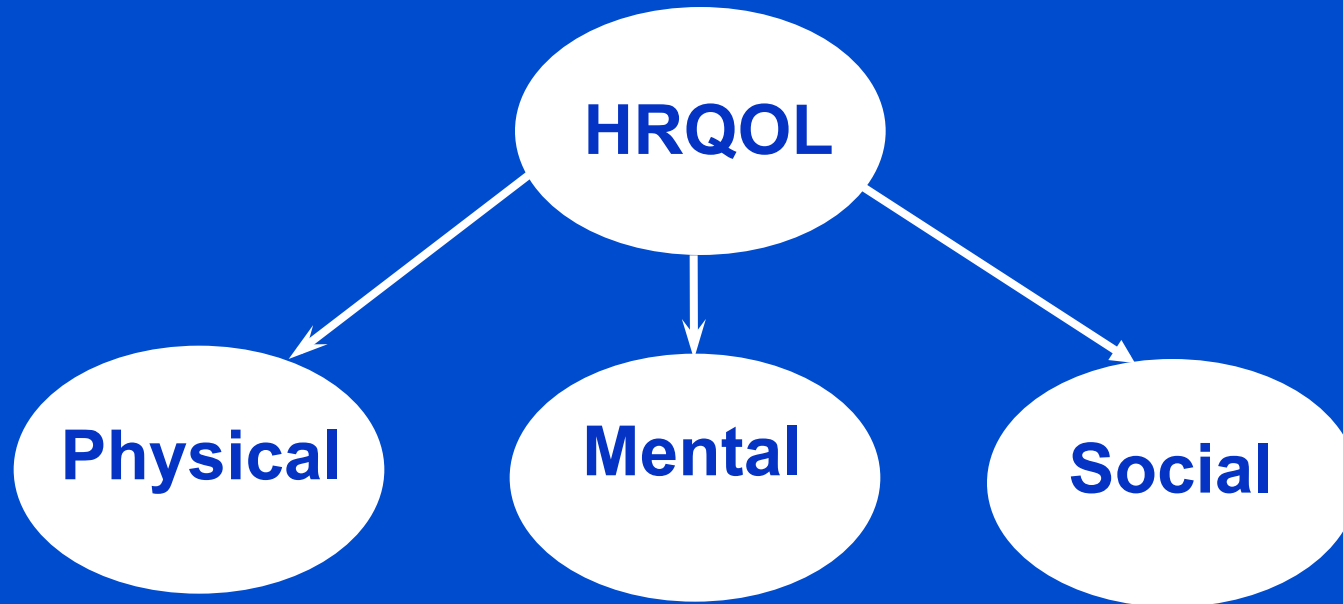
What the person can DO (functioning)

- Self-care
- Role
- Social

How the person FEELS (well-being)

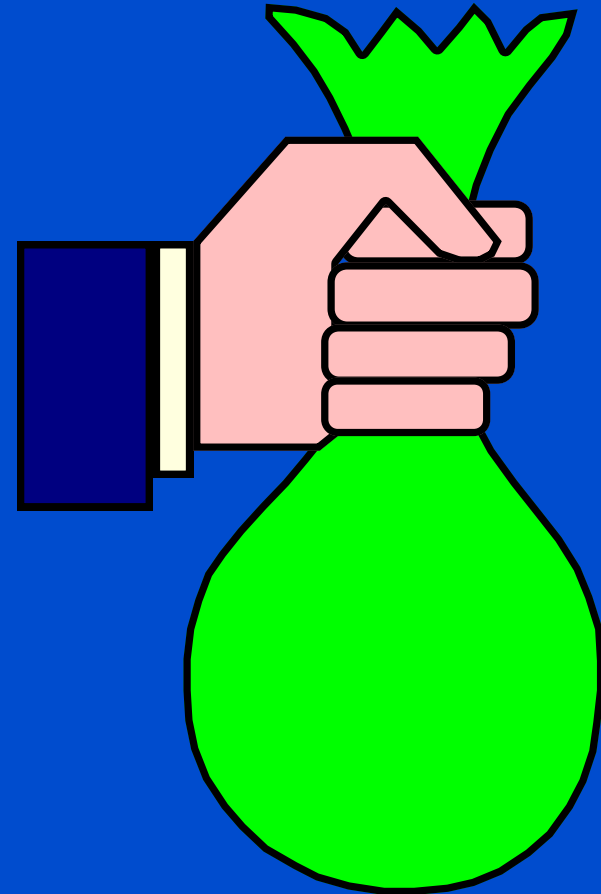
- Emotional well-being
- Pain
- Energy

HRQOL is Multidimensional

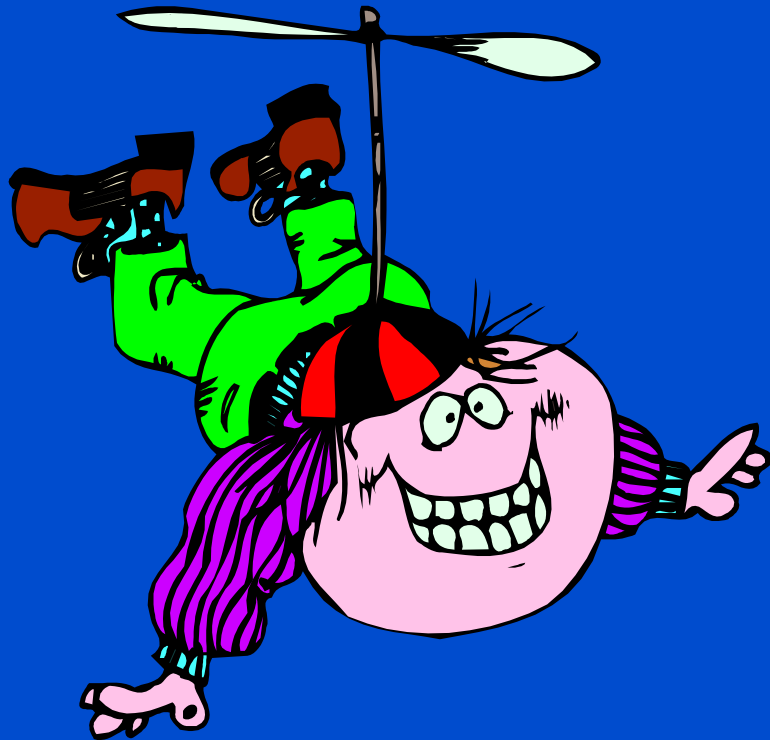


HRQOL is Not

- Quality of environment
- Type of housing
- Level of income
- Social Support



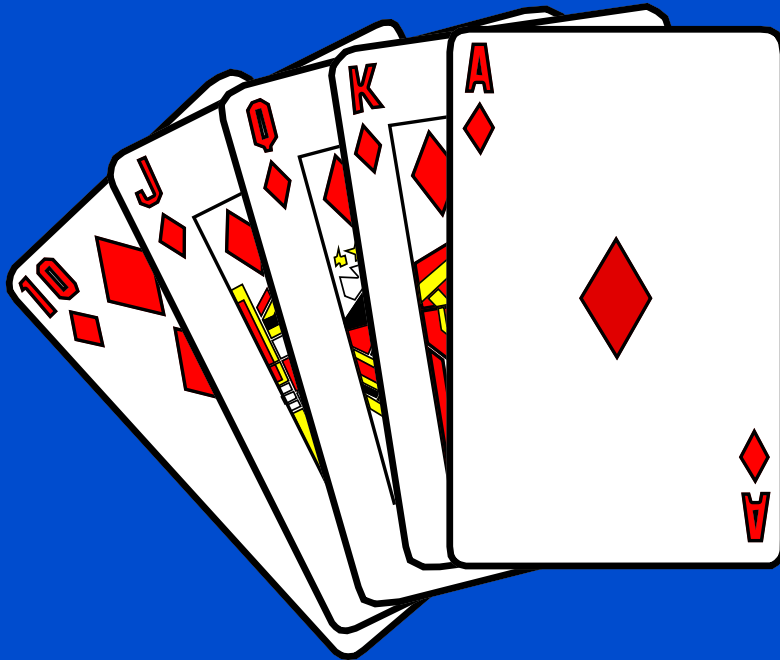
Types of HRQOL Measures



- Profile
 - Generic
 - Targeted
- Preference-based

Generic HRQOL Item

In general, would you say
your health is:



Excellent

Very Good

Good

Fair

Poor

General Health vs. Quality of Life

In general, would you say your health is ...?

How would you rate your overall health during the past week? (EORTC QLQ-C30)

=====

General health rating reflects physical health more than mental health.

Quality of Life vs. General Health

Overall, how would you rate your quality of life?

How would you rate your overall quality of life during the past week? (EORTC QLQ-C30)

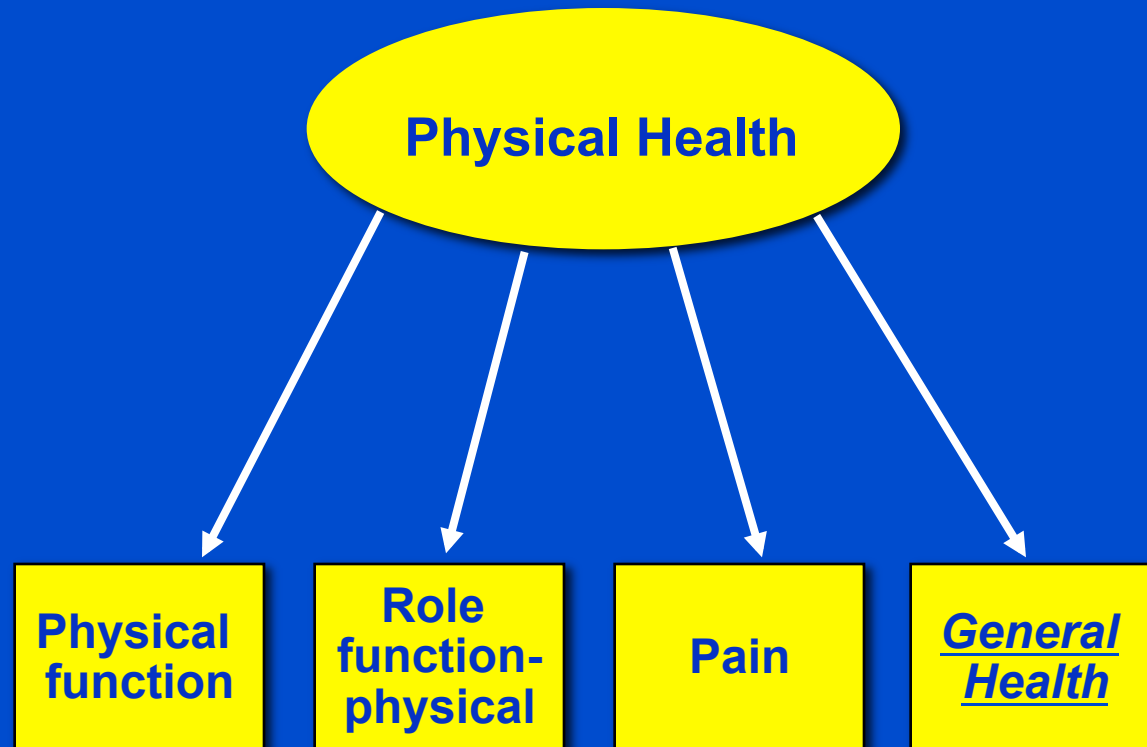
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Global quality of life reflects mental health

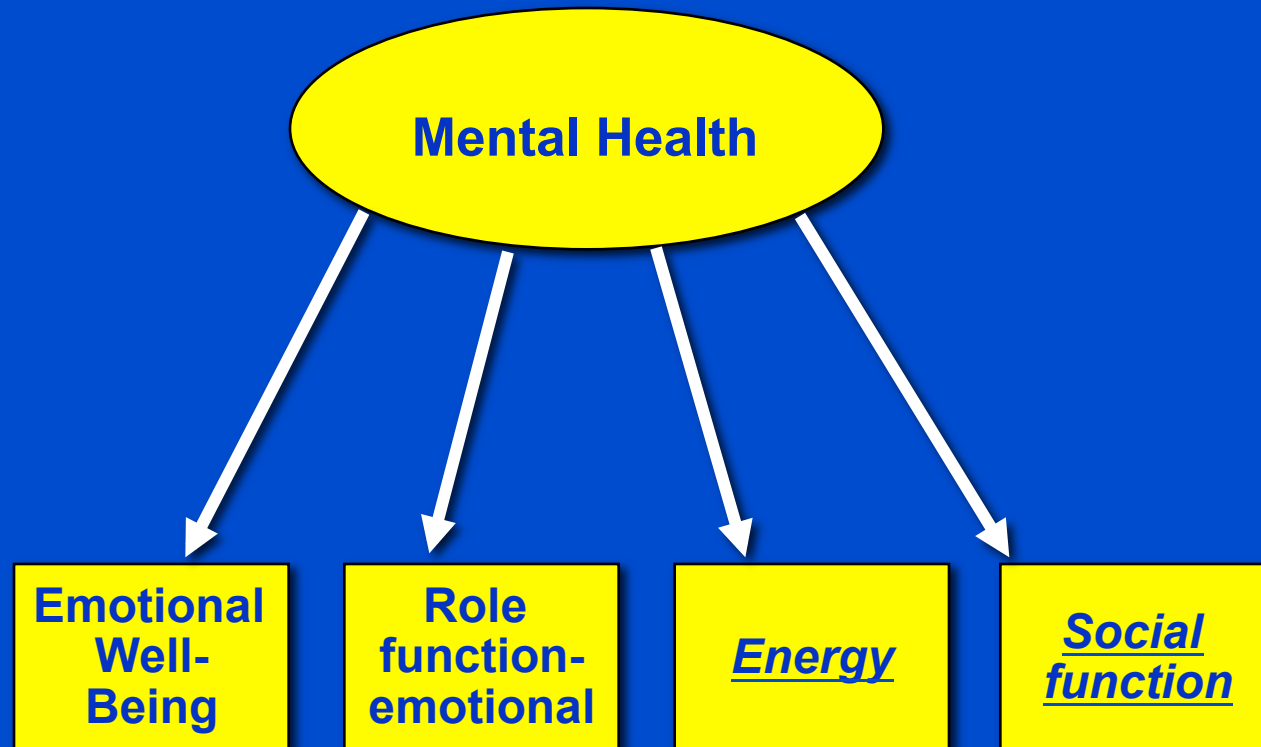
SF-36 Generic Profile Scales (Items)

- Physical functioning (10 items)
- Role limitations/physical (4 items)
- Pain (2 items)
- General health perceptions (5 items)
- Emotional well-being (5 items)
- Role limitations/emotional (3 items)
- Energy/fatigue (4 items)
- Social functioning (2 items)

Physical Health



Mental Health



Physical Functioning Item



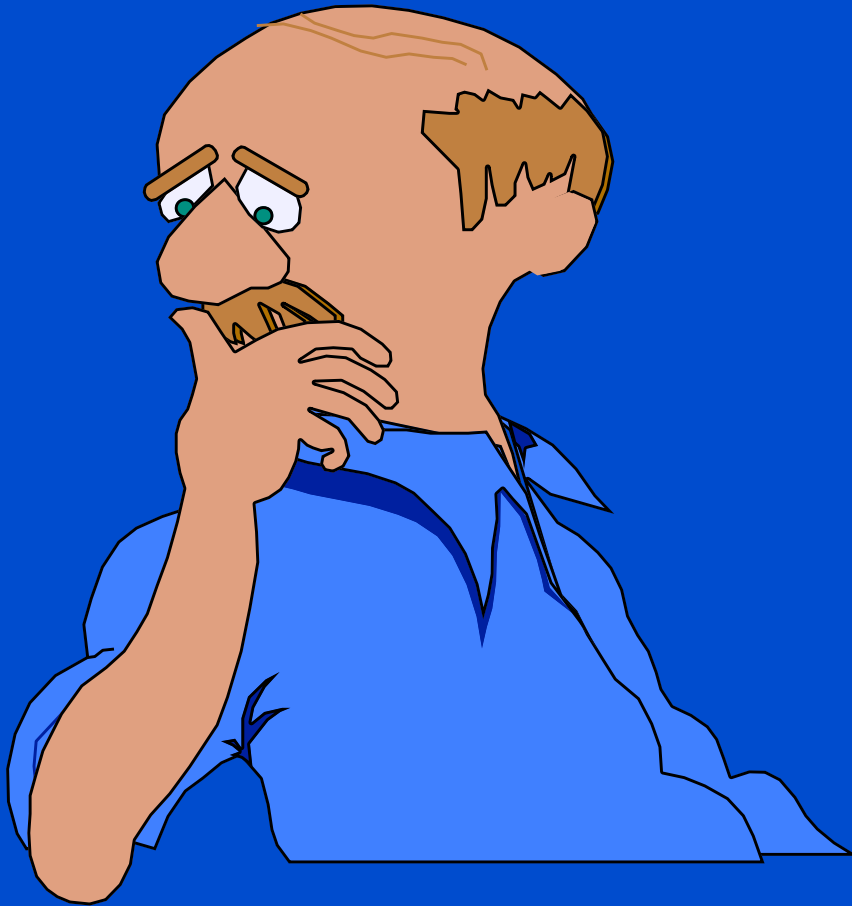
Does your health now
limit you in bathing or
dressing yourself?

Yes, limited a lot

Yes, limited a little

No, not limited at all

Emotional Well-Being Item



How much of the time during the past 4 weeks have you been a very nervous person?

- None of the time*
- A little of the time*
- Some of the time*
- A Good bit of the time*
- Most of the time*
- All of the time*

Scoring Generic HRQOL Scales

Average or sum all items in the same scale.

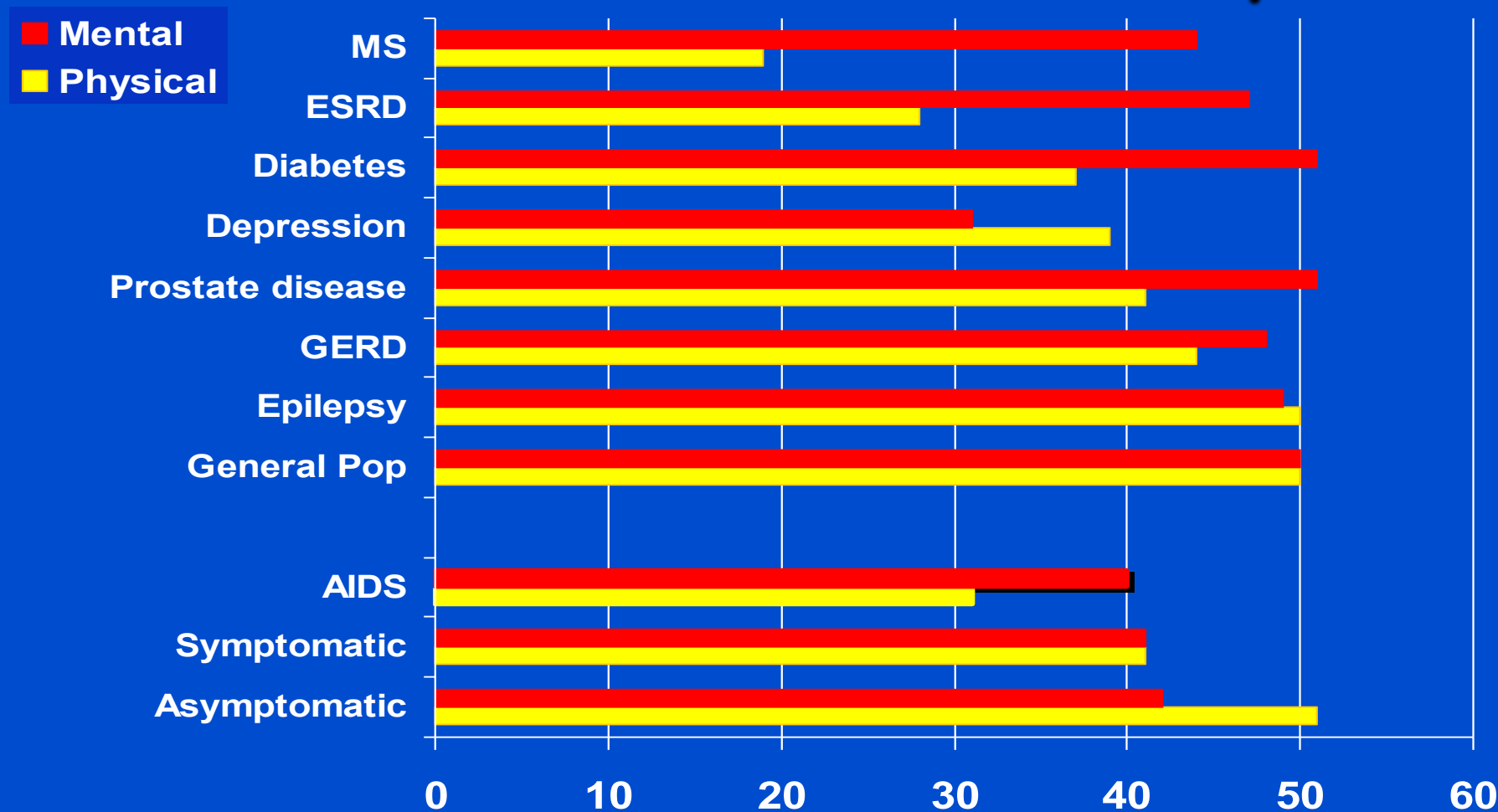
Transform raw average or sum linearly to

- 0-100 possible range
- T-score metric

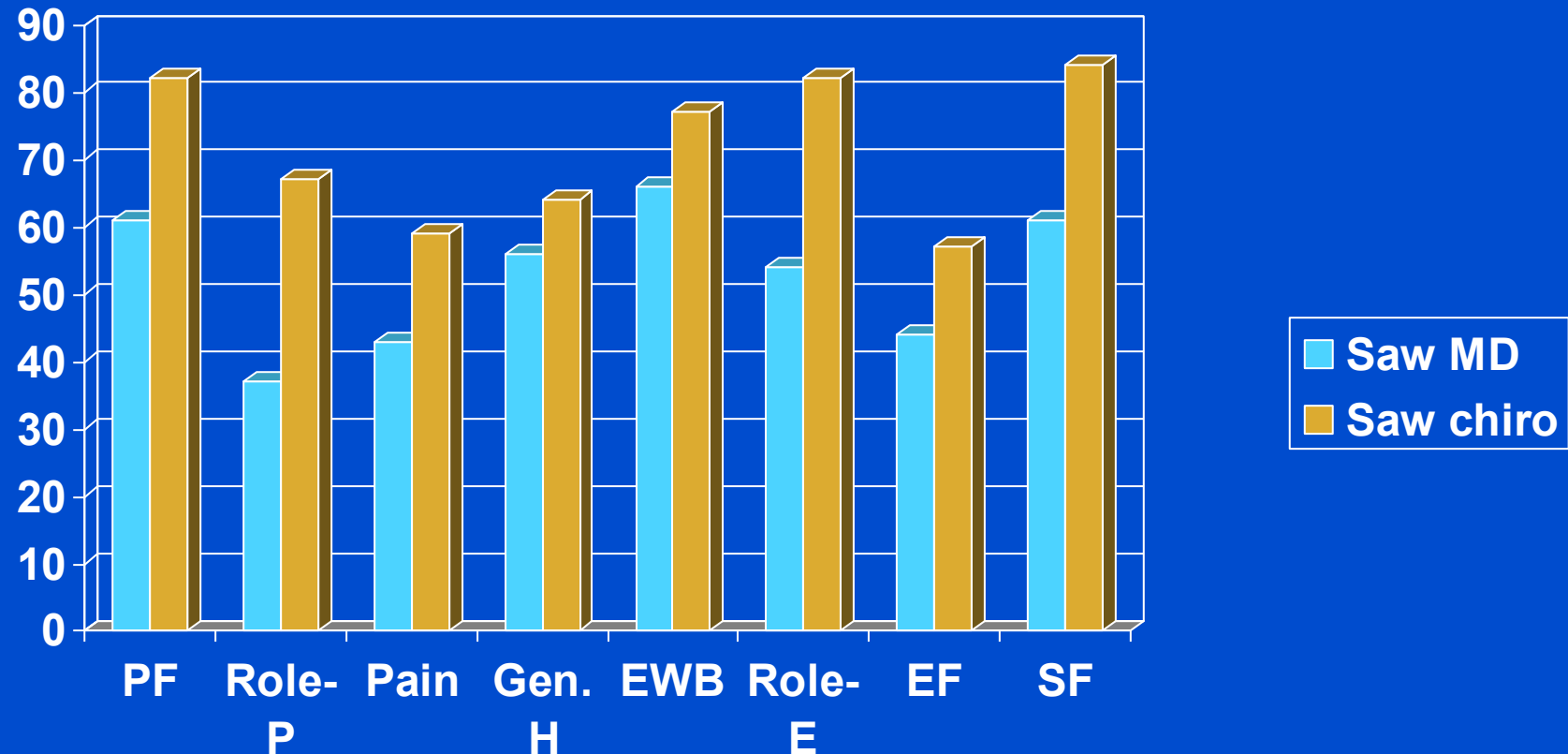
Generic Measures Allow

- Comparisons of different people
 - Profiles of diseases
- Examination of HRQOL antecedents
- Detection of unexpected effects

Emotional Well-Being and Physical Functioning of Those with HIV Compared with Other Chronic Illnesses and General Population

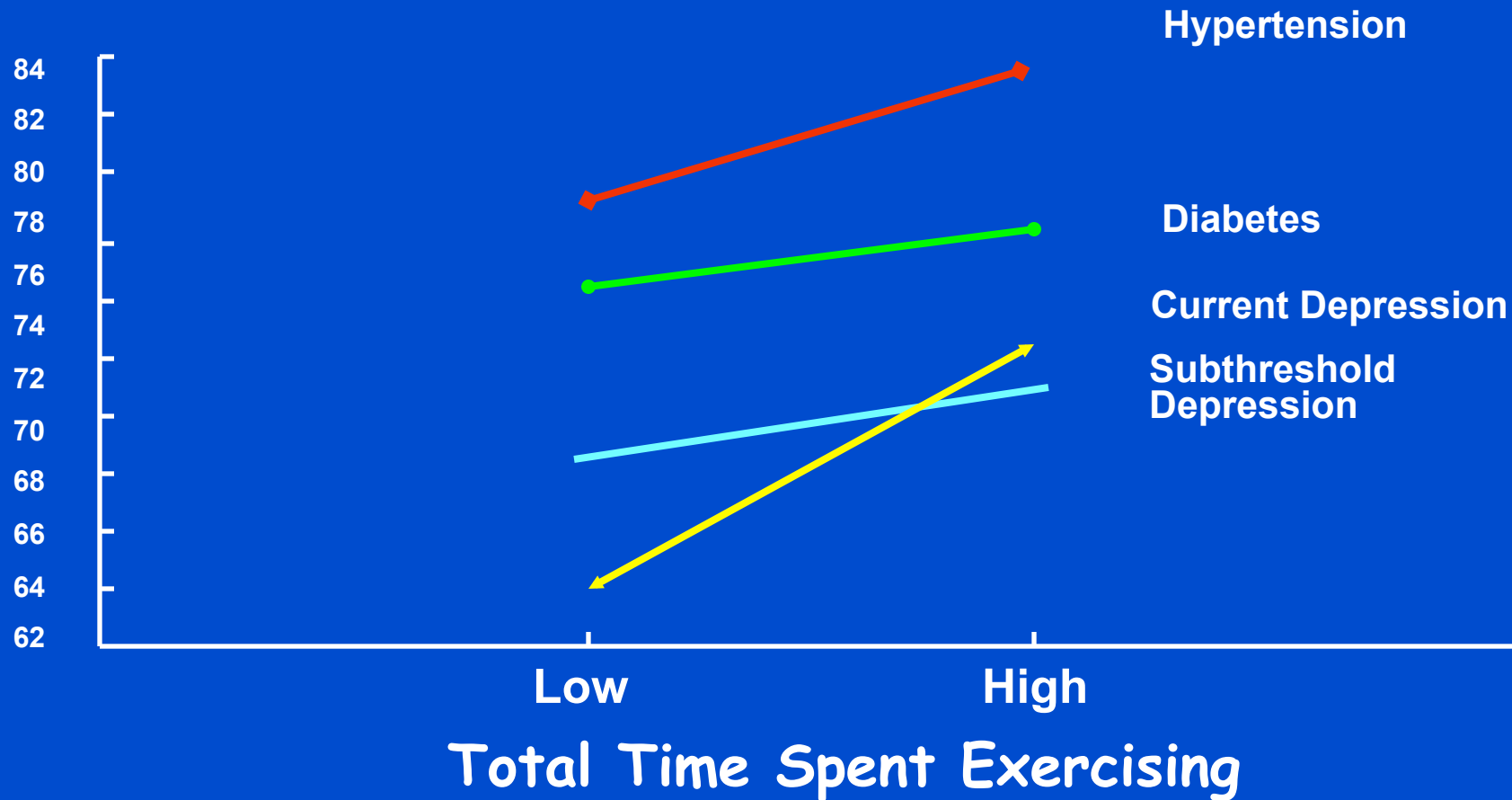


SF-36 Scores of Patients with Neck or Low Back Pain



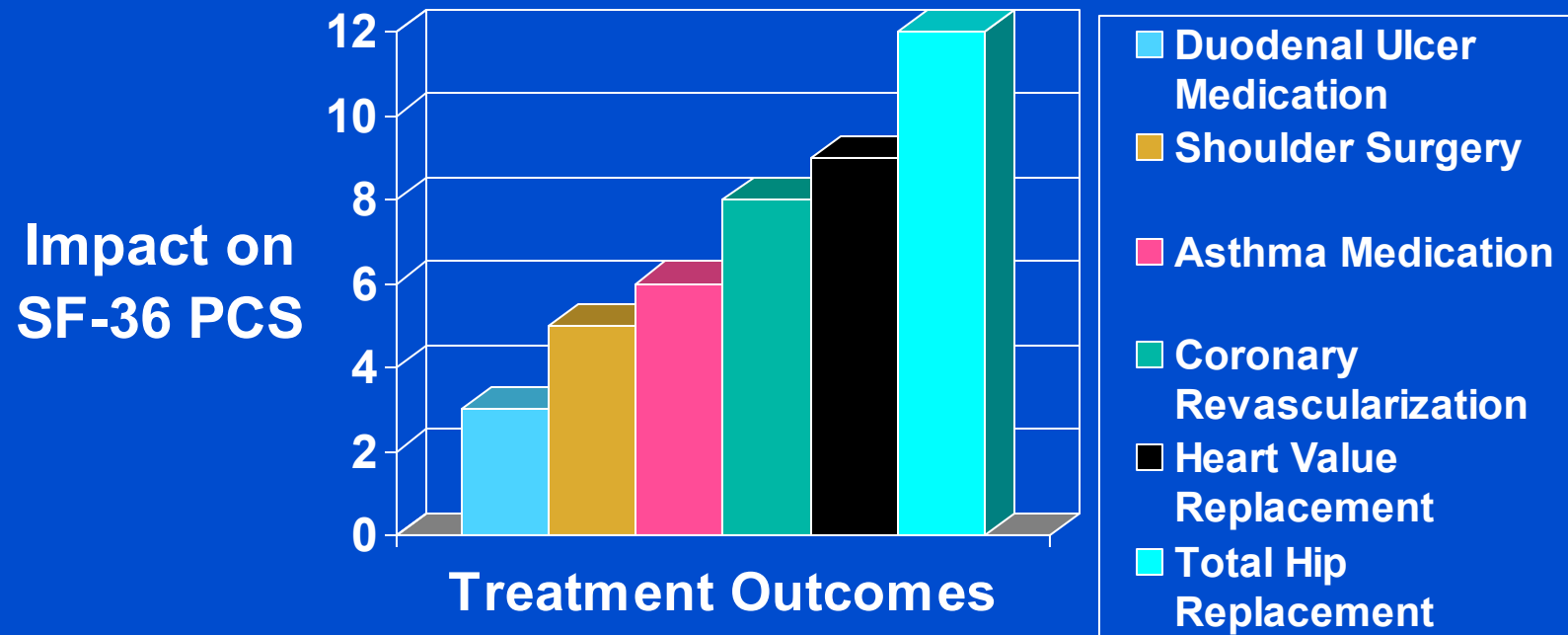
Cote, P. et al., Med Care, 2001
167 adults from Saskatchewan

Association of Exercise at Baseline with Physical Functioning 2-years Later (MOS)

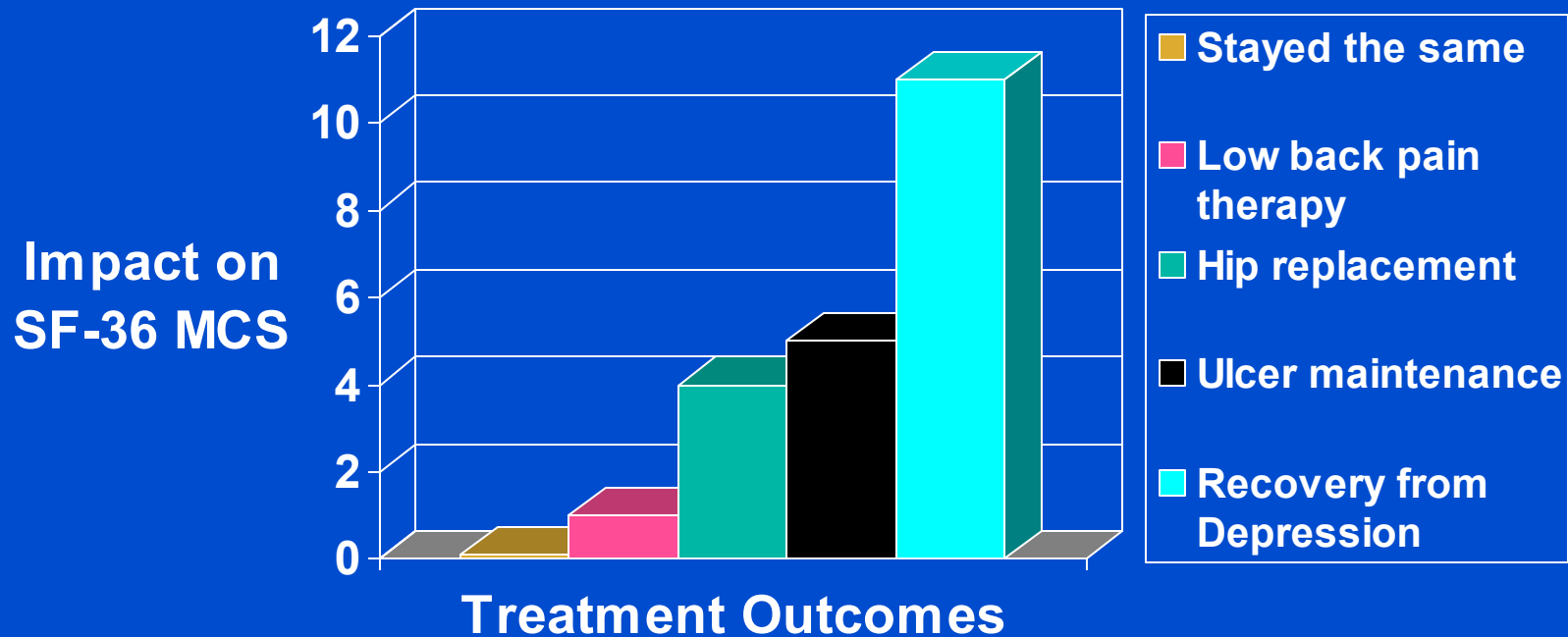


Stewart, A.L., Hays, R.D., Wells, K.B., Rogers, W.H., Spritzer, K.L., & Greenfield, S. (1994). Long-term functioning and well-being outcomes associated with physical activity and exercise in patients with chronic conditions in the Medical Outcomes Study. *Journal of Clinical Epidemiology*, 47, 719-730.

Treatment Impact on Physical Health



Treatment Impact on Mental Health



Targeted HRQOL Measures

- Designed to be relevant to particular group.
- Sensitive to small, clinically-important changes.
- More familiar and actionable.
- Important for respondent cooperation.

Kidney-Disease Targeted Items

During the last 30 days, to what extent were you bothered by each of the following ...

- Cramps during dialysis?
- Feeling washed out or drained?

(Not at all to Extremely)

Hays, R. et al. (1994). Development of the Kidney Disease Quality of Life (KDQOL) Instrument. Quality of Life Research, 3, 329-338.

NEI-RQL-42 Far Vision Item

How much difficulty do you have judging distances, like walking downstairs or parking a car?

No difficulty at all

A little difficulty

Moderate difficulty

A lot of difficulty

Hays, R. D. et al. (in press). Psychometric properties of the National Eye Institute--Refractive Error Quality of Life (NEI-RQL) Instrument. Ophthalmology.

IBS-Targeted Item

During the last 4 weeks, how often were you angry about your irritable bowel syndrome?

None of the time

A little of the time

Some of the time

Most of the time

All of the time

Combined Trastuzumab and Chemotherapy in Women with Metastatic Breast Cancer

400 women randomized: chemo only or chemo + trastuzumab

Treatment repeated every 3 weeks for total of six cycles unless toxicity or disease progression.

Main clinical trial efficacy study (Slamon et al., NEJM, 2001) found:

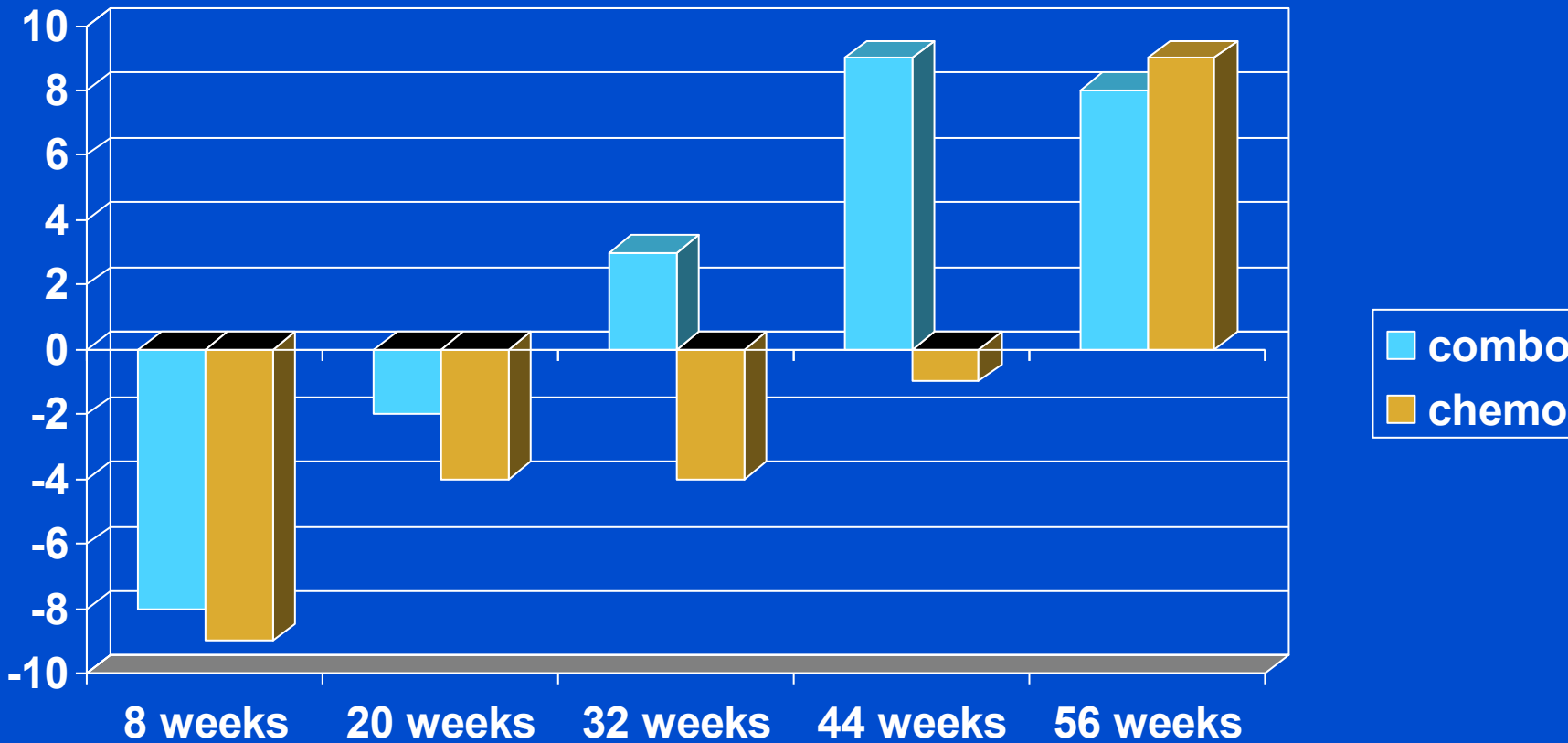
- decreases in tumor mass, longer maintenance of tumor response, and longer time to disease progression

Osoba et al. (J Clin Oncology, 2002)

EORTC QLQ-C30 (<http://www.eortc.be/home/qol/>)

- Physical, role, cognitive, emotional, and social functioning
- Fatigue, pain, and nausea/vomiting symptom scales
- Dyspnea, insomnia, anorexia, constipation, and diarrhea symptom items
- Administered at baseline, weeks 8, 20 and every 12 weeks after; cessation of therapy at 20 weeks
- Completed in clinic before administration of treatment

Change in Fatigue Score



Correlations between EORTC and SF-12

	Global	PF	RF	Fatig.	Pain	Emot
PCS	0.65	0.63	0.65	0.61	0.61	
MCS						0.59

Correlations >0.50 are shown.

Breast Cancer Module



EORTC QLQ-BR23

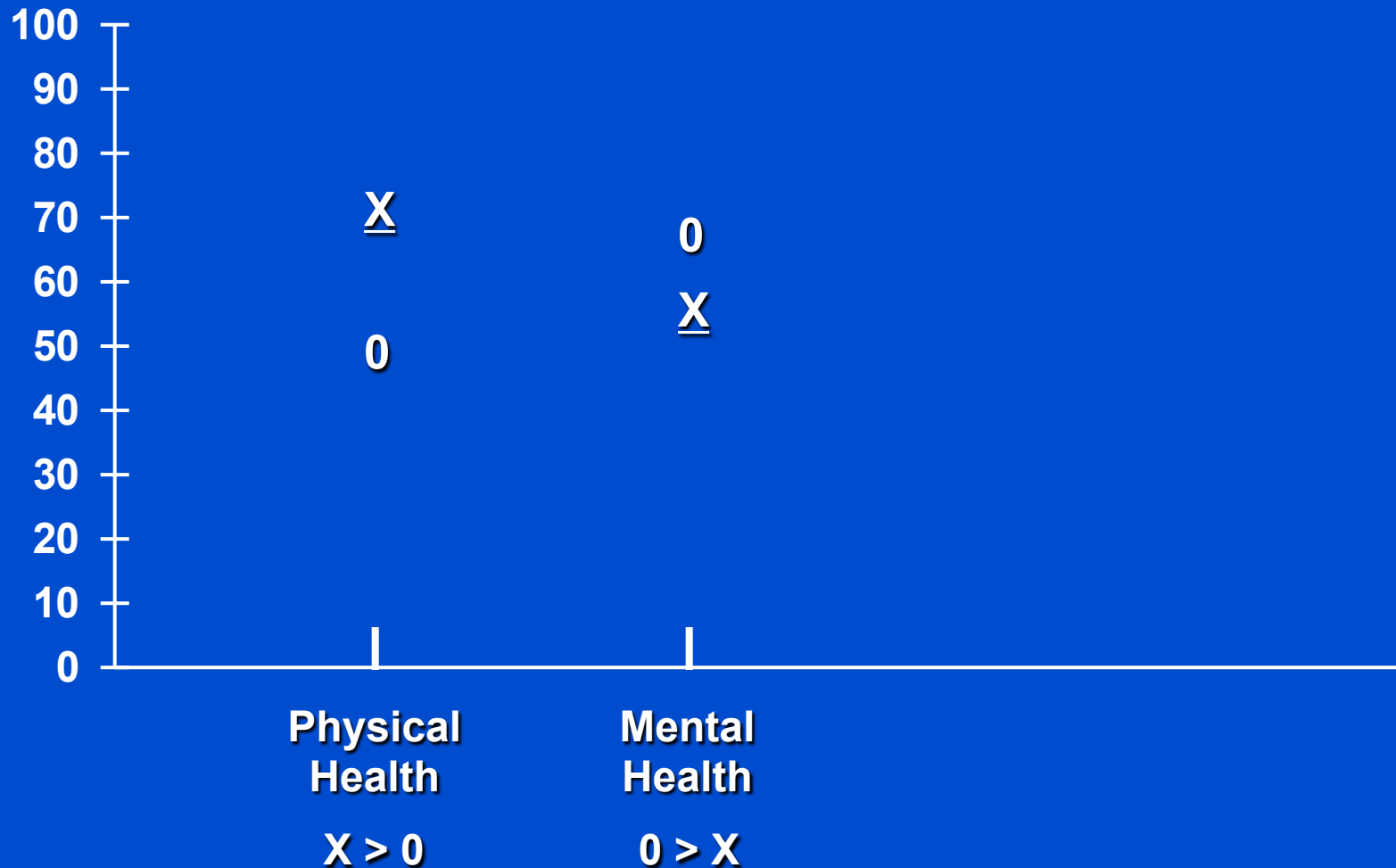
Patients sometimes report that they have the following symptoms or problems. Please indicate the extent to which you have experienced these symptoms or problems during the past week.

During the past week:	Not at all	A little	Quite a bit	Very much
1. Did you have a dry mouth?	1	2	3	4
2. Did food and drink taste different than usual?	1	2	3	4
3. Were your eyes painful, irritated or watery?	1	2	3	4
4. Have you lost any hair?	1	2	3	4
5. Answer this question only if you had any hair loss: Were you upset by the loss of hair?	1	2	3	4
6. Did you feel ill or unwell?	1	2	3	4
7. Did you have hot flushes?		2	3	4
8. Did you have headaches?	1	2	3	4
9. Have you felt physically less attractive as a result of your disease or treatment?	1	2	3	4
10. Have you been feeling less feminine as a result of your disease or treatment?	1	2	3	4
11. Did you find it difficult to look at yourself naked?	1	2	3	4
12. Have you been dissatisfied with your body?	1	2	3	4
13. Were you worried about your health in the future?	1	2	3	4

During the past four weeks:	Not at all	A little	Quite a bit	Very much
14. To what extent were you interested in sex?	1	2	3	4
15. To what extent were you sexually active? (with or without intercourse)	1	2	3	4
16. Answer this question only if you have been sexually active. To what extent was sex enjoyable for you?	1	2	3	4

[Please go on to the next page](#)

Is Intervention, X, Better Than Standard Care, O?



Is Being a Musician Related to Worse HRQOL?

ID	Musician?	HRQOL (0-100 scale)
1	No	dead
2	No	dead
3	No	50
4	No	75
5	No	100
6	Yes	0
7	Yes	25
8	Yes	50
9	Yes	75
10	Yes	100

Group	n	HRQOL
Not musician	3	75
Yes, musician	5	50

EQ-5D

Mobility

Self-care

Usual activities

Pain/discomfort

Anxiety/depression

- 243 states, 3 levels per attribute

Questions?



Appendix: URLs

www.rand.org/health/surveys.html

<http://gim.med.ucla.edu/kdqol/>

<http://gim.med.ucla.edu/facultypages/hays>

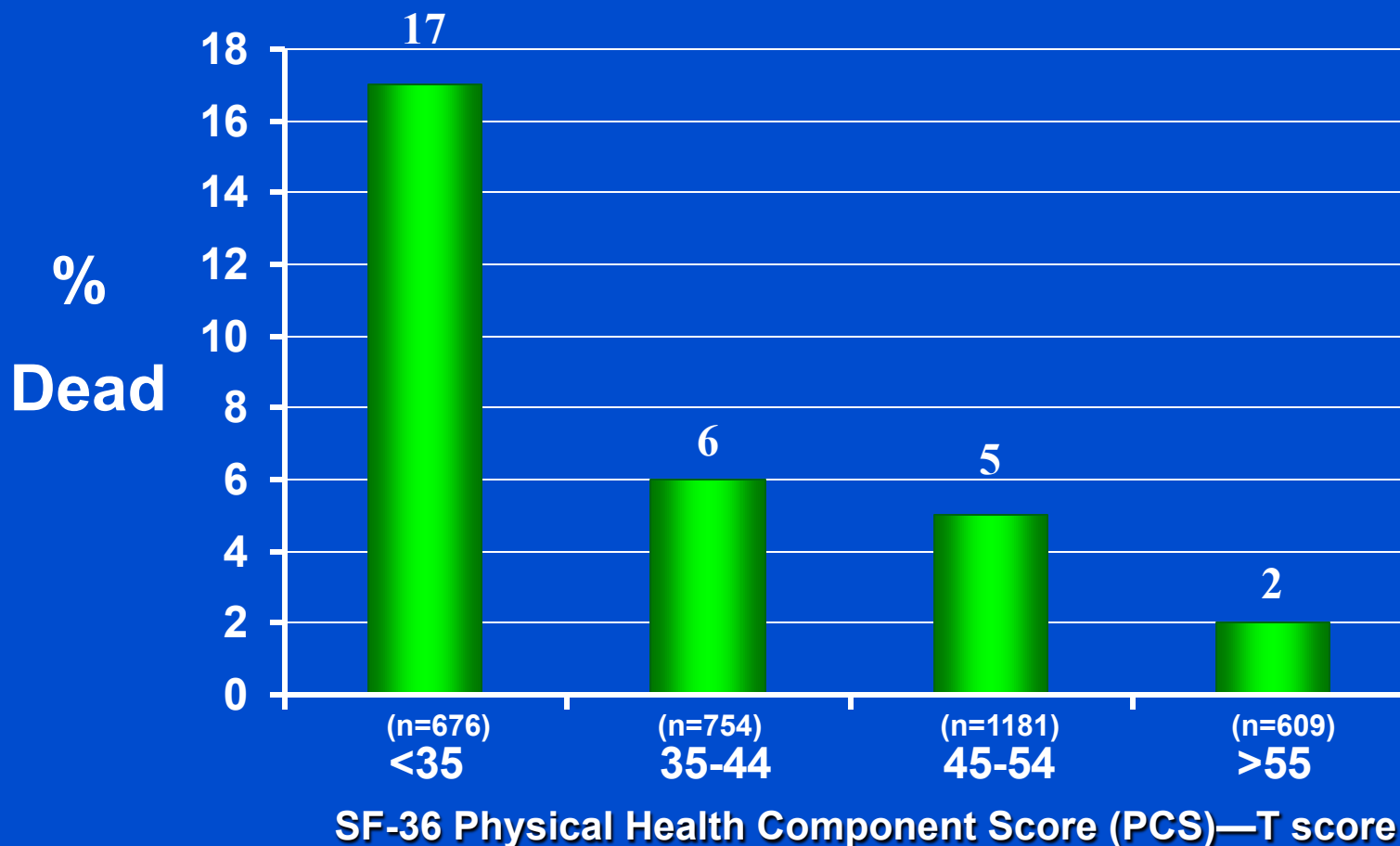
Targeted Areas of Interest to You

Breast cancer undergoing chemotherapy

Chronic low back and neck pain

Musicians

Five-Year Mortality Rates by Levels of Physical Health



Ware et al. (1994). SF-36 Physical and Mental Health Summary Scales: A User's Manual.