FACTORS ASSOCIATED WITH AMERICANS' RATINGS OF QUALITY OF HEALTH CARE:

What do the ratings tell us about the raters and about the current healthcare system?

Wen-ying Sylvia Chou, PhD, MPH

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Acknowledgement

- Project collaborators:
  - Lila Finny-Rutten, PhD, MPH
  - Lin Wang, BS
  - Rick Moser, PhD
  - David Nelson, MD, MPH
  - Bradford Hesse, PhD
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Background

- Patient satisfaction ratings represent the most commonly used measure of healthcare quality in health research and practice.
- To date, research on factors affecting satisfaction ratings have yielded mixed results.
- Identifying population-level predictors of ratings will help us understand the relative influence of demographic and health factors and inform policy-making and clinical practice.

Research aims

- Using a nationally representative data set, the Health Information National Trends Survey (HINTS 2007), this study aims to identify factors associated with patients' ratings of healthcare quality.

HINTS 2007 Survey

- Conducted in January – April 2008
- Sample size N=7674
- 2 separate sampling frames:
  - RDD/Phone completes: N=4,092 (response rates ~ 24%)
  - Mail completes: N=3,582 (response rates ~ 40%)

Study variables

- **Independent variable**=overall ratings of health care quality

  "Overall, how would you rate the quality of health care you received in the past 12 months? Would you say… (excellent, very good, good, fair, or poor)"?

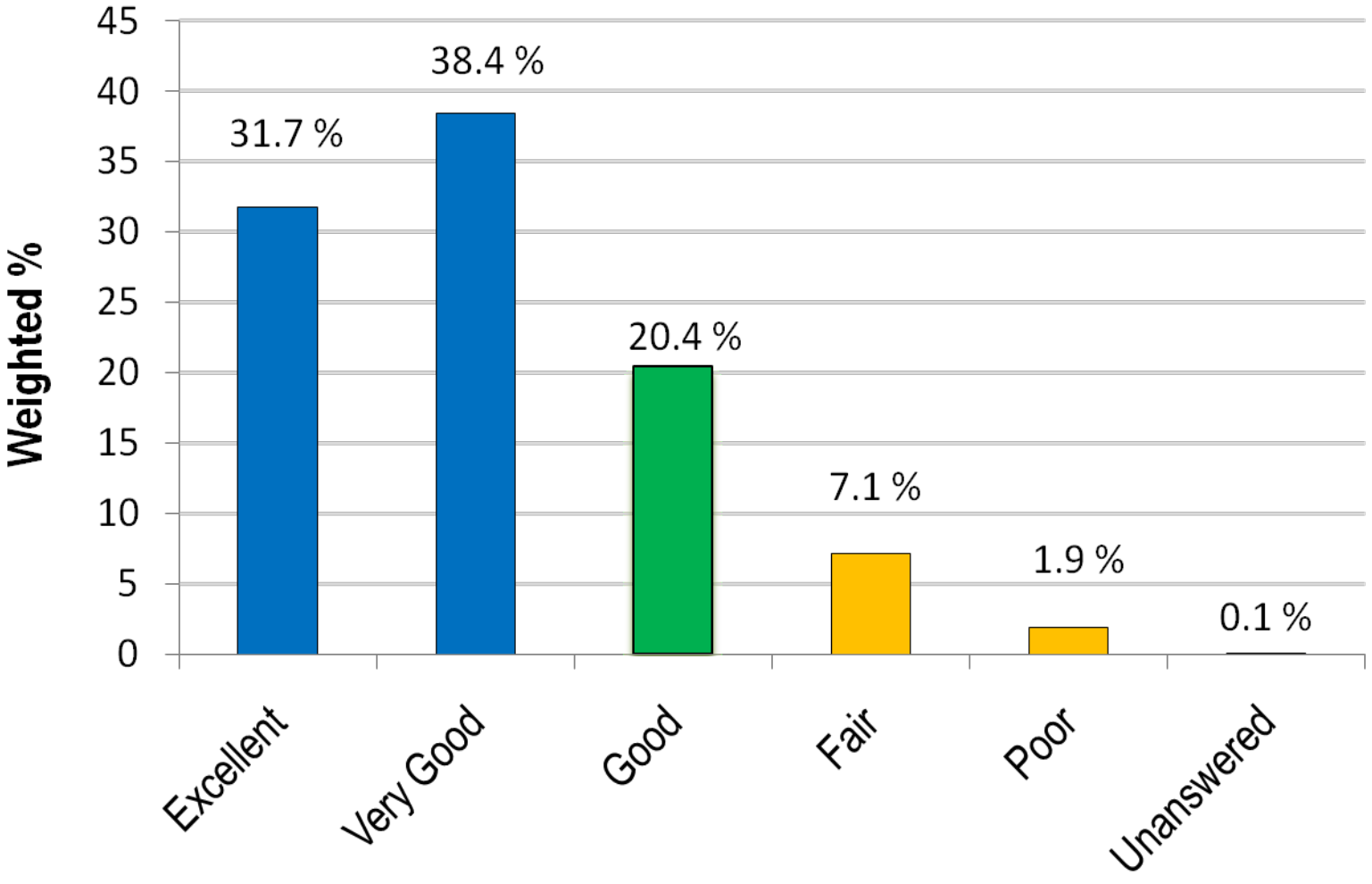
- **Dependent variables**:
  - **Demographic characteristics**: gender, age, race/ethnicity, and education;
  - **Health status**: general health, psychological distress, a cancer diagnosis;
  - **Healthcare access**: insurance status, having a regular provider;
  - **Perceptions of healthcare**: confidence in ability to take care of one's health, avoidance of doctors;

Analytic Method

- We conducted weighted bivariate analysis and multivariate multinomial logistic regression models with a cumulative logit link using SUDAAN 9.0.
- An ordinal outcome trichotomized into:
  - "very good" and "excellent"
  - "good"
  - "poor" and "fair"

Results

Quality of Care Ratings from HINTS 2007 Users



Weighted bi-variate associations

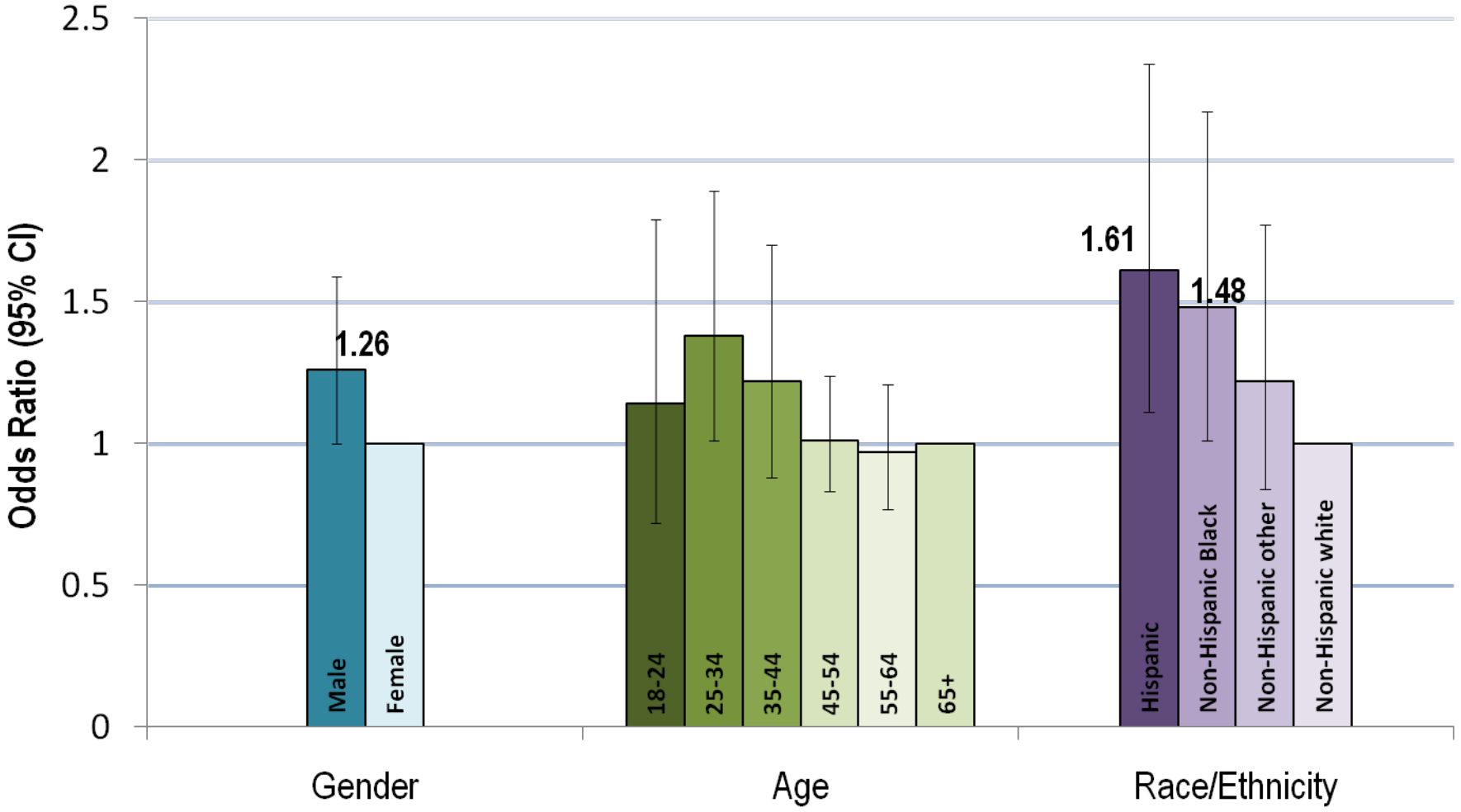
Variable	P Value*
Gender	0.099 ←
Age	<0.001
Race/Ethnicity	<0.001
Education	<0.001
Self-reported general health	<0.001
Psychological distress	0.0017
Personal cancer history	<0.001
Regular provider	<0.001
Insurance	<0.001
Confidence in self-care	<0.001
Avoidance	<0.001

* From chi-square tests

Ordinal multivariate logistic regression analysis

Odds of Rating Health Care as Poorer:

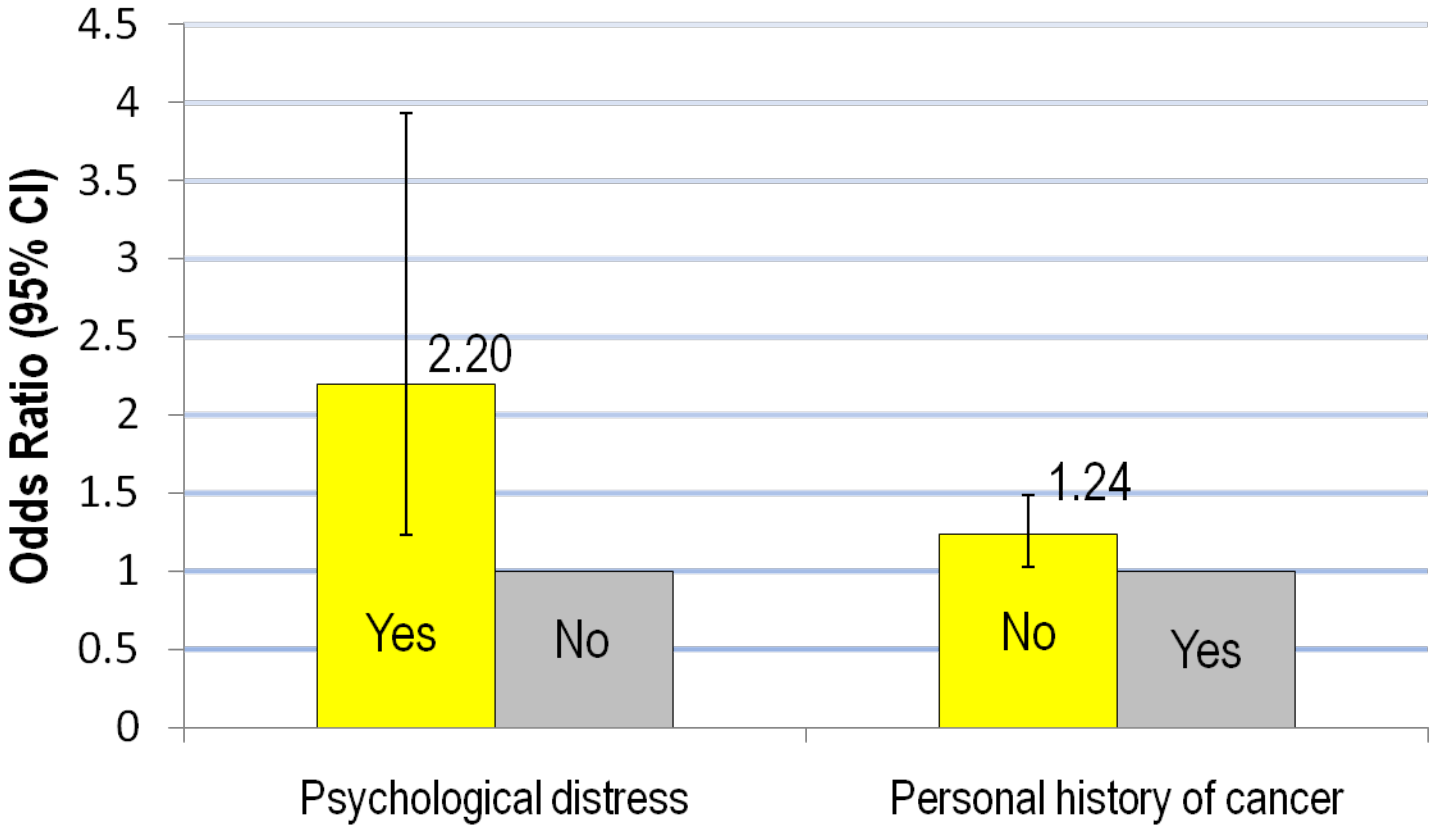
Demographic Characteristics



Model variables included: gender, age, race/ethnicity, education, self-reported general health, psychological distress, cancer diagnosis, confidence in ability to self care, insurance, having a regular provider, and health care avoidance.

Odds of Rating Care as Poorer:

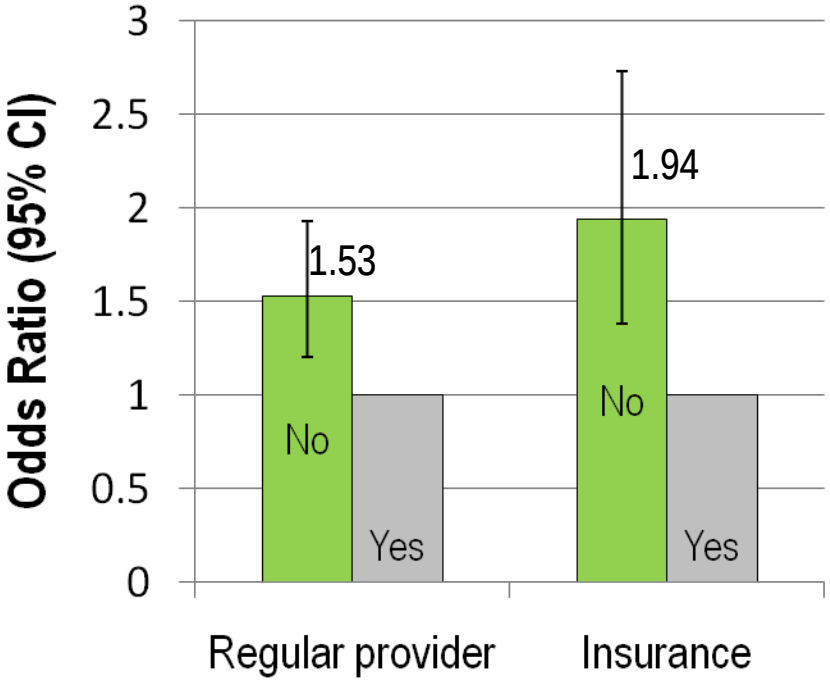
Health Status Indicators

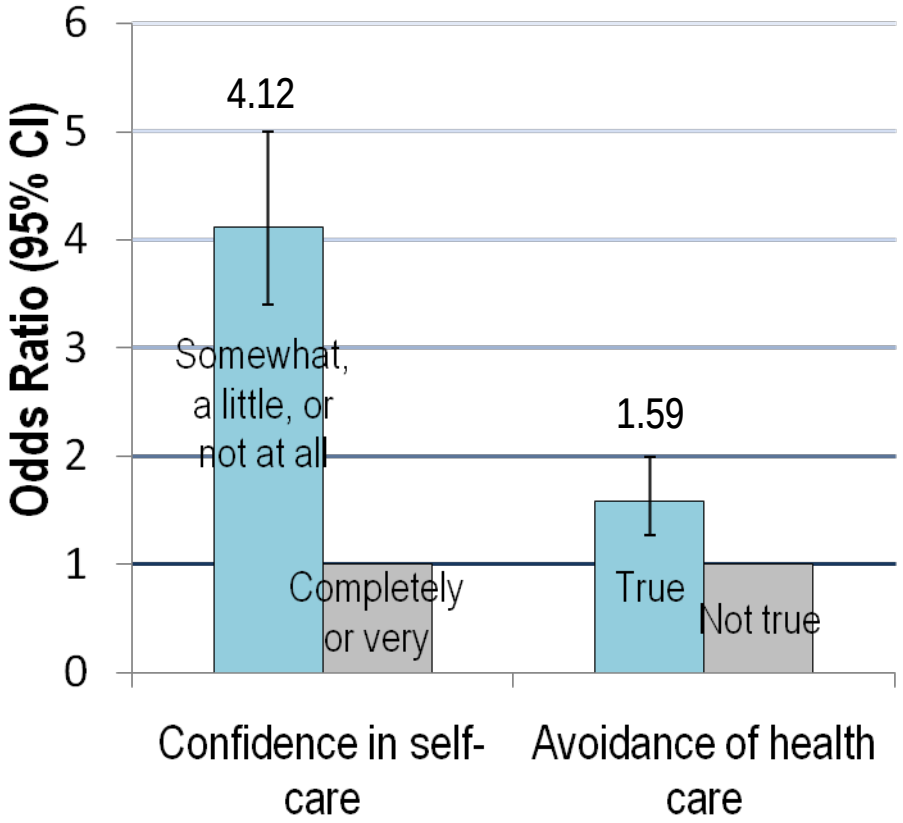


Model variables included: gender, age, race/ethnicity, education, self-reported general health, psychological distress, cancer diagnosis, confidence in ability to self care, insurance, having a regular provider, and health care avoidance.

Odds of Rating Care as Poorer:

Access and Perceptions of Healthcare





Model variables included: gender, age, race/ethnicity, education, self-reported general health, psychological distress, cancer diagnosis, confidence in ability to self care, insurance, having a regular provider, and health care avoidance.

DISCUSSIONS

Vulnerability

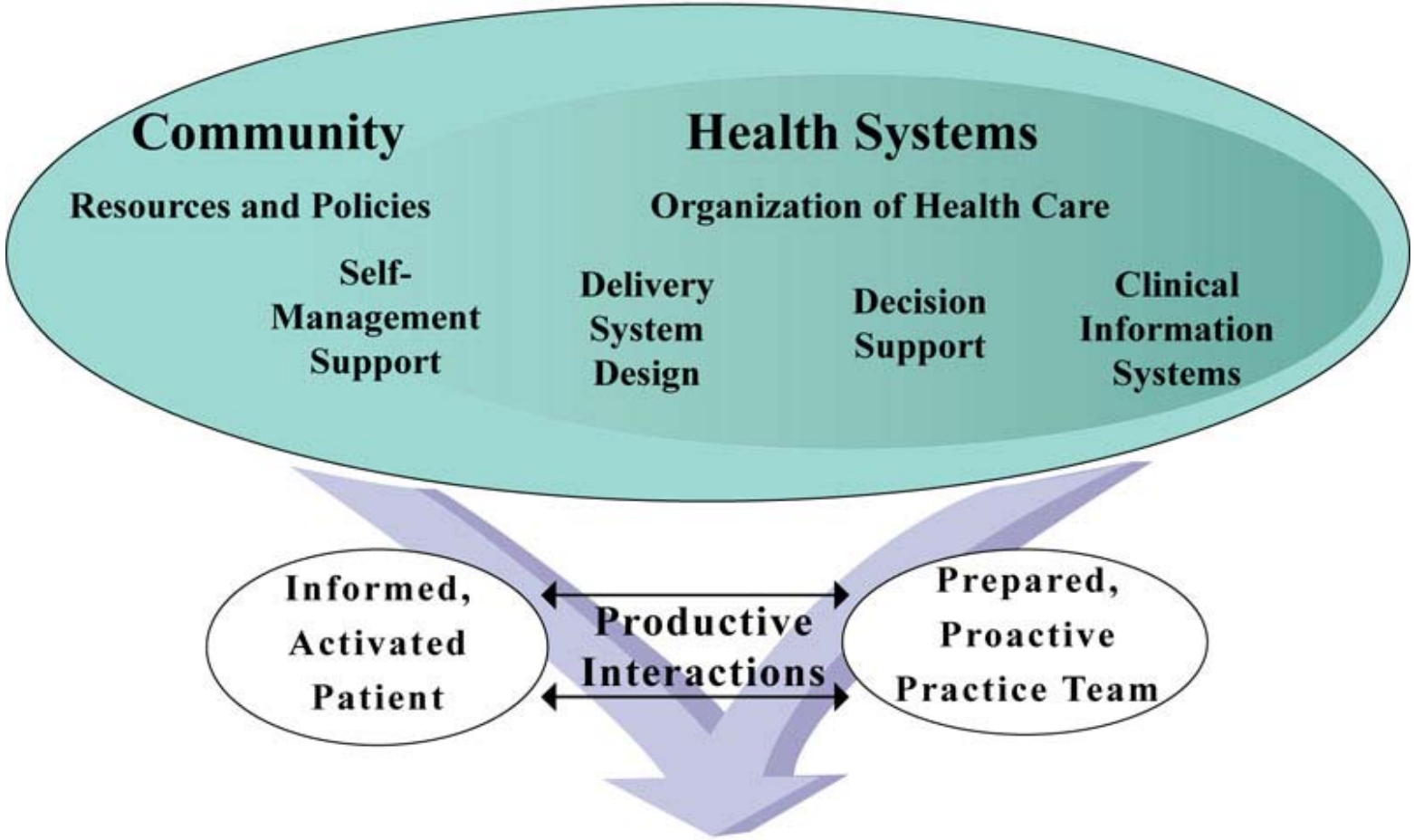
Those who reported little or no confidence in the ability to take care of one's health

Poorer ratings of care

associated with OR=4.12

- Sub-population with negative perceptions of health care AND lacking confidence in ability of take care of one's own health
  - a self-fulfilling prophecy?
- Opportunities for change:
  - Special attention to this vulnerable population
  - Patient navigation programs to encourage self advocacy
  - A responsive health services system to interact with *informed, activated* patients/consumers

The Chronic Care Model *



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* Wagner EH, Austin BT, Davis C, Hindmarsh M, Schaefer J, Bonomi A. Improving chronic illness care: translating evidence into action. Health Aff (Millwood). 2001;20:64-78.

The role of **negative affect**

Psychological distress
Lack of confidence in self care
Avoidance of health care

associated with

Poorer ratings of care

- Although the direction of causality is unknown in a cross-sectional study, systematic differences identified by patient-internal characteristics are clear.
- Triangulation of assessment methods, including:
  - Comparisons of reported quality of care among patients of different psychological statuses
  - Direct observations (ethnography)

Healthcare coverage and access

Not having healthcare coverage
Not having a regular provider

Poorer ratings of care

associated with

- This association suggests that healthcare coverage and access is fundamental to quality care as reported by patients

Further considerations on health care coverage

Comparing stratified models

Overall Model

Variable	Odds of Rating Care as Poorer (95% CI)
Gender -Male -Female	 1.26 (1.00-1.59) 1
Race/Ethnicity -Hispanic -non-Hispanic black -non-Hispanic other -non-Hispanic white	 1.61 (1.11-2.34) 1.48 (1.01-2.17) 1.22 (0.84-1.77) 1
Psychological distress -yes -no	 2.20 (1.23-3.93) 1
Personal cancer of history -no -yes	 1.24 (1.03-1.49) 1
Regular provider -no -yes	 1.53 (1.20-1.93) 1
Insurance -no -yes	 1.94 (1.38-2.73) 1
Confidence in self care -somewhat, a little, or not at all -completely or very	 4.12 (3.40-4.99) 1
Avoidance -true -not true	 1.59 (1.27-1.99) 1

Those **with** healthcare coverage N=5528

Variable	Odds of Rating Care as Poorer (95% CI)
Race/Ethnicity -Hispanic -non-Hispanic black -non-Hispanic other -non-Hispanic white	 1.95 (1.31-2.90) 1.65 (1.11-2.44) 1.33 (0.89-1.99) 1
Psychological distress -yes -no	 2.31 (1.16-4.62) 1
Personal cancer of history -no -yes	 1.27 (1.04-1.55) 1
Regular provider -no -yes	 1.49 (1.11-1.99) 1
Confidence in self-care -somewhat, a little, or not at all -completely or very	 4.39 (3.49-5.53) 1
Avoidance -true -not true	 1.54 (1.22-1.96) 1

Those **without** healthcare coverage N=463

Variable	Odds of Rating Care as Poorer (95% CI)
Confidence in self-care -somewhat, a little, or not at all -completely or very	 2.81 (1.51-5.25) 1
Avoidance -true -not true	 2.00 (1.00-4.03) 1

Other variables in the models included: gender, age, education, self-reported general health.

Cancer survivors

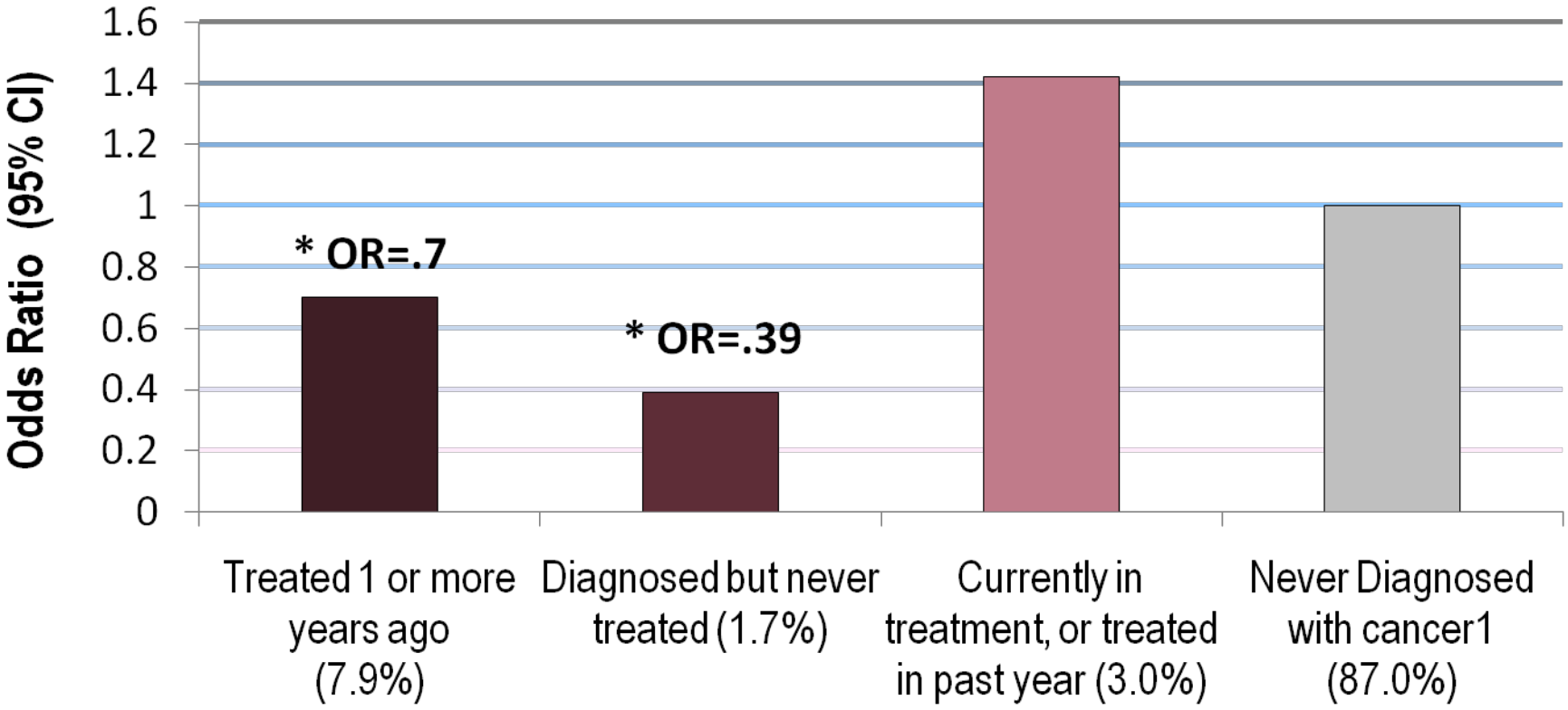
Being a cancer survivor

Higher ratings of care

associated with

- Survivor bias
- Is the level of engagement with the health care through cancer treatment/care impacting rating?
  - Analysis by current level of engagement in cancer care (based on time since treatment) shows that this observed rating difference is largely driven by survivors **no longer in treatment** rating care as better

Treatment Time since diagnosis: Odds of rating care as poorer



Conclusion

- The study has identified multiple patient psychological and behavioral characteristics associated with ratings of care, highlighting the interactive nature of healthcare delivery. Healthy interactions between **an activated patient** and a **responsive health care team** are vital to quality care.
- **Healthcare coverage** and **regular access** are fundamental to quality care.
- Finally, this exploration suggests the importance of using **multi-disciplinary assessment methods** to evaluate the quality of healthcare so that patient satisfaction represents one of multiple assessment approaches.

Thank you!

Sylvia Chou

chouws@mail.nih.gov