Transforming Health Care Delivery:
The Importance of Care Coordination to Population Health

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The Truth.....

Our nation’s health is unconscionably poor

We are the 9th heaviest nation on earth...

...resulting in 30% of our rising health care costs

We are the most disparate high resource country…..

…..with the highest income gap between highest & lowest quintiles

A higher percentage of U.S. occupants live alone than in any high resource nation in the world….

….and unmarried men, living alone, have a 10 year shorter life expectancy than married men

Tobacco use has declined…

…but percent of new adolescent smokers has stabilized

And, yes, we spend more money per person on health care than any other nation ….

….but rank 28th in healthy life expectancy

www.americashealthranking.org/2008

….and 19th in age-adjusted amenable mortality rates….out of 19 OECD (high resource) nations

www.americashealthranking.org/2008

….and 39th in infant mortality rates

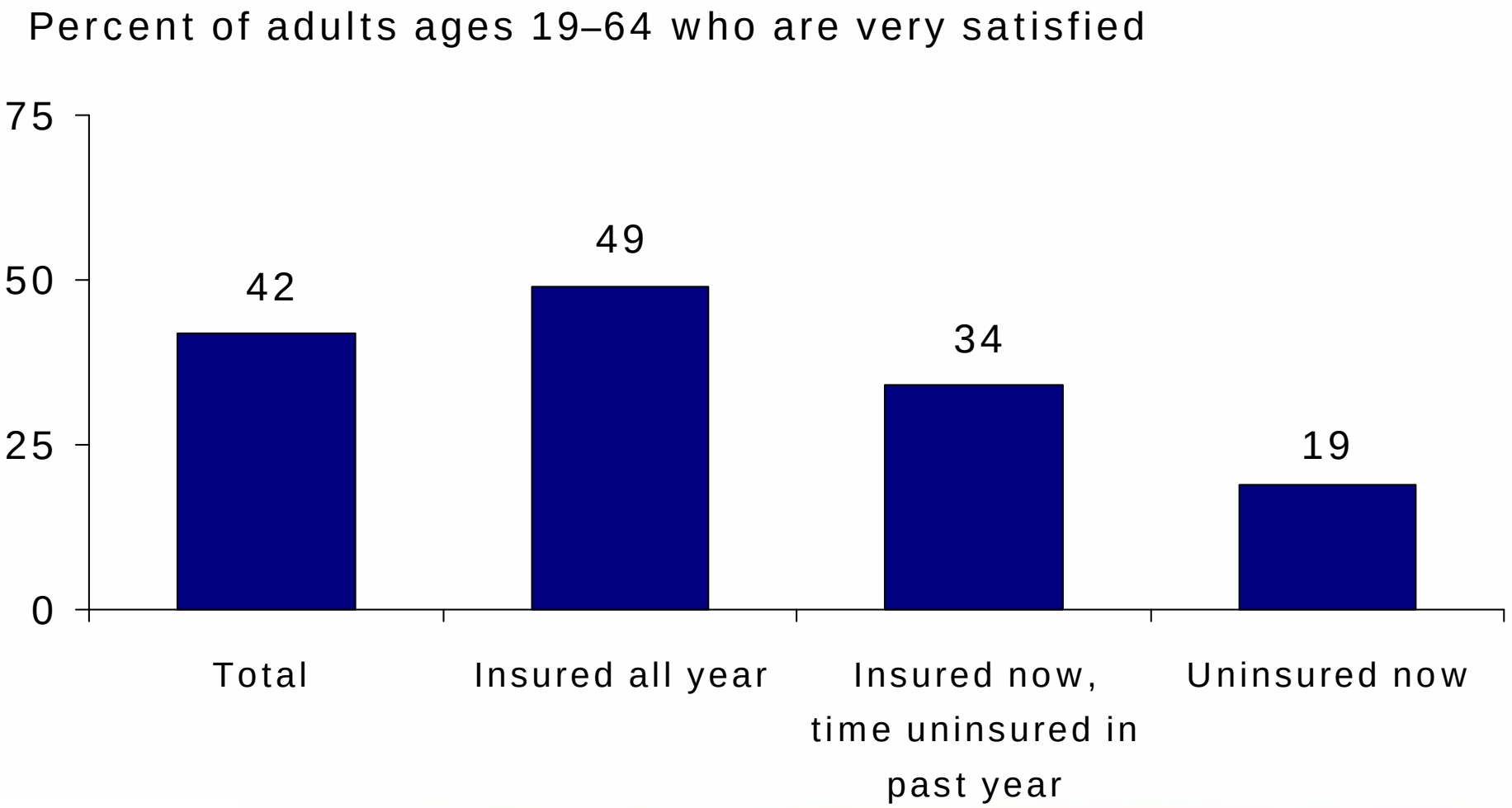
www.americashealthranking.org/2008

And that’s not all…

Without disruptive, dramatic health care insurance reform, today’s 45,000,000 uninsured Americans will grow to 54,000,000 by 2019

www.cbsnews.com/stories/2009

Only Two of Five Americans Are Very Satisfied with the Quality of Health Care



Jefferson

Source: The Commonwealth Fund Biennial Health Insurance Survey (2005).

Our economic crisis and our health crisis are inextricably linked

It is our health, not just our health care system that is frighteningly poor

Causes Of Rising Health Care Costs

Popular nominations

- Defensive medicine
- Aging of the population
- American attitude

The True Causes

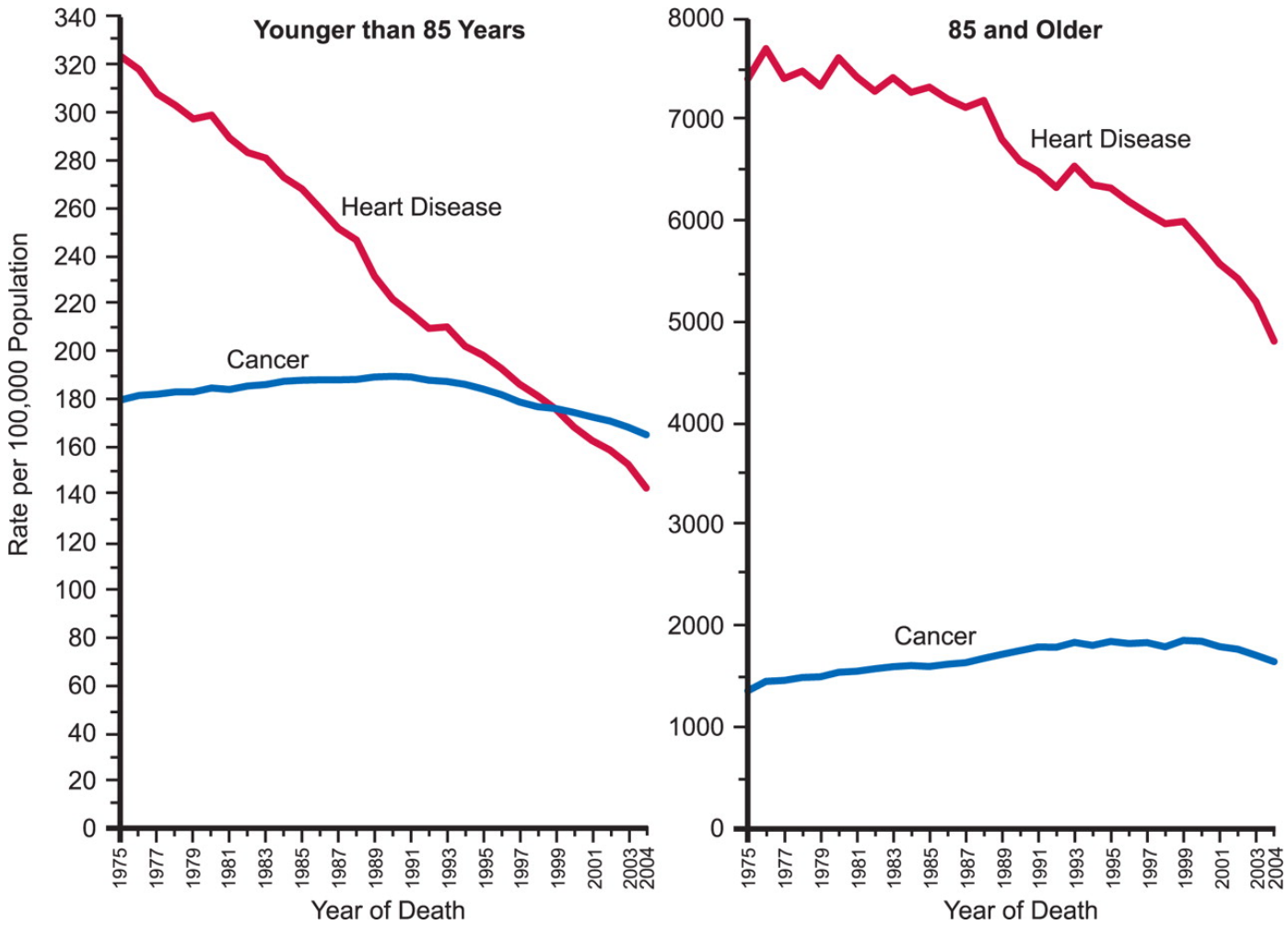
- Misaligned incentives
- Payment for volume of care and procedures
- Commercialization and profit seeking
- Emerging chronic illness burden

Rising Costs: The Bitter Truth

Ultimately, Costs Are Going Up Because Medical Interventions Actually…….

Work

FIGURE 6 Death Rates* for Cancer and Heart Disease for Ages Younger than 85 and 85 and Older, 1975 to 2004



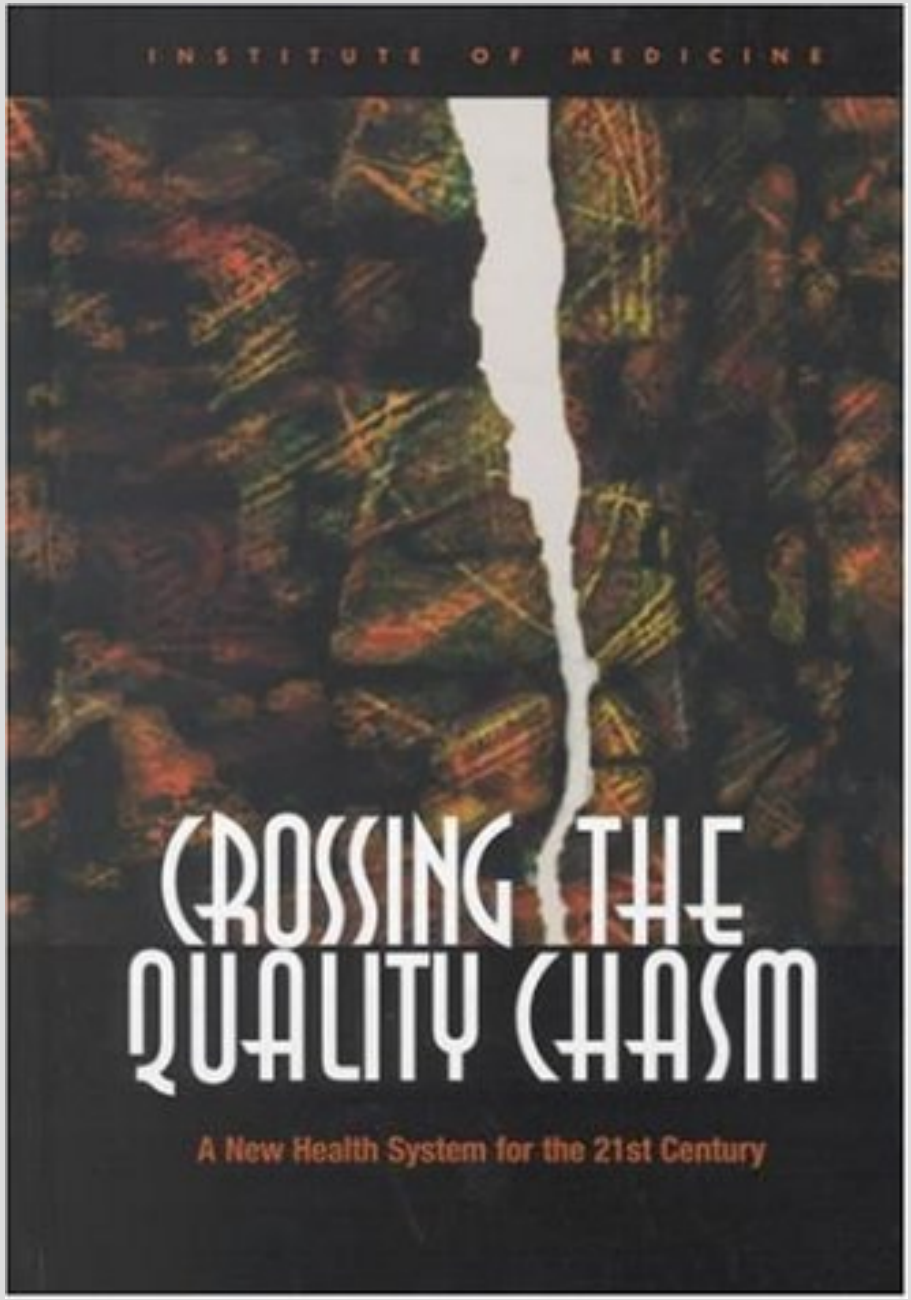
From Jemal, A. et al.
CA Cancer J Clin 2008;58:71-96.

Simply delivering the preventive and management services that are proven to work, can save millions of lives

The Impact of Prevention on Reducing the Burden of Cardiovascular Disease

- 78% of adults ages 20-80 are eligible for a prevention activity
- If 100% received these activities, 63% fewer MI's and 31% fewer CVA's would occur
- Bridging just half of the quality gap can prevent 36% of MI's and 20% of CVA's

Kahn R, Robertson RM, Smith R, Eddy D. Circulation 2008; 118:576-585


INSTITUTE OF MEDICINE
CROSSING THE QUALITY CHASM
A New Health System for the 21st Century

Crossing the Quality Chasm

Recommendation 1:

All health care organizations … should adopt as their explicit purpose to continually reduce the burden of illness, injury and disability, and to improve the health and functioning of the people of the United States

Recommendation 2:

All health care organizations … should pursue six major aims: specifically, health care should be safe, effective, patient-centered, timely, efficient and equitable

"Clinicians and institutions should actively collaborate and communicate to ensure an appropriate exchange of information and **coordination of care**."

Researchers at AHRQ contracted with Stanford to conduct a comprehensive review of care coordination. They propose this definition:

"Care coordination is the deliberate organization of patient care activities…to facilitate the appropriate delivery of health care services."

Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies
Technical Review (Publication No. 04(07), 0051-7) June 2007

This definition encompasses many diverse approaches and components

Does Care Coordination Improve Health?

Multiple systematic reviews provide evidence of patient benefit resulting from:

- multidisciplinary teams
- disease management
- case management

Care Coordination Works

- Improved service continuity for severely mentally ill patients
- Reduced mortality and hospital admissions for patients with CAD
- Symptom reduction for terminally ill patients
- Reduced mortality and dependency in stroke patients
- Reduced glyco-hemoglobin levels

And many others

Who Should Coodinate Care?

- Care coordination in its various forms has been provided by many entities:
  - Payers
  - Hospital case managers
  - Care management companies
  - Public health agencies
  - Foundations

Care Coordination Works –
But We Provide It Inconsistently

Most Americans can only get care coordination if they:

Have a specific condition … and are insured by a specific plan … or are part of a specific public health program or experiment

How Can We Provide Care Coordination for All?

Primary care practices as care coordinators …

an appealing idea

A Focus on Primary Care is Associated With:

- Better health outcomes
- Lower costs
- Greater equity in health

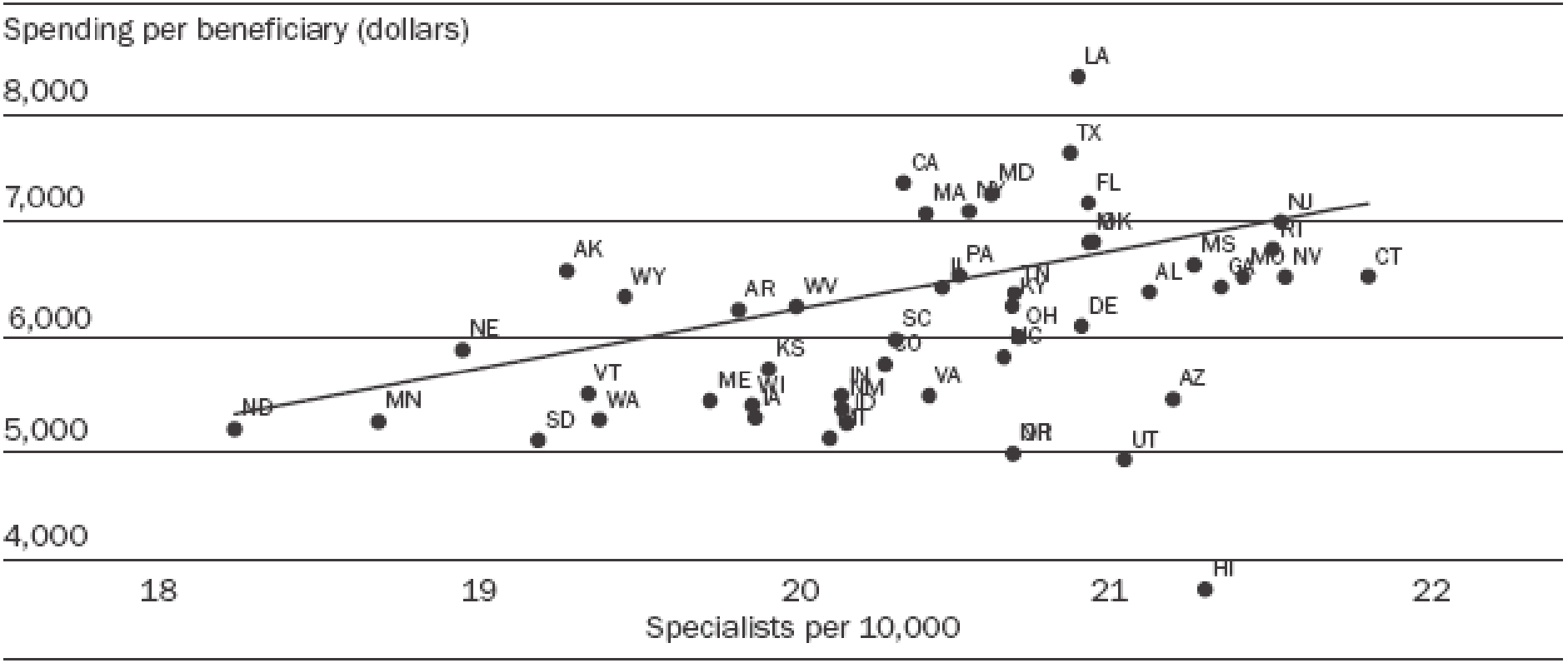
An orientation to primary care reduces sociodemographic and socioeconomic disparities (inequities)

- In access to health services
- In population health

More specialists mean higher spending

EXHIBIT 7

Relationship Between Provider Workforce And Medicare Spending: Specialists Per 10,000 And Spending Per Beneficiary In 2000



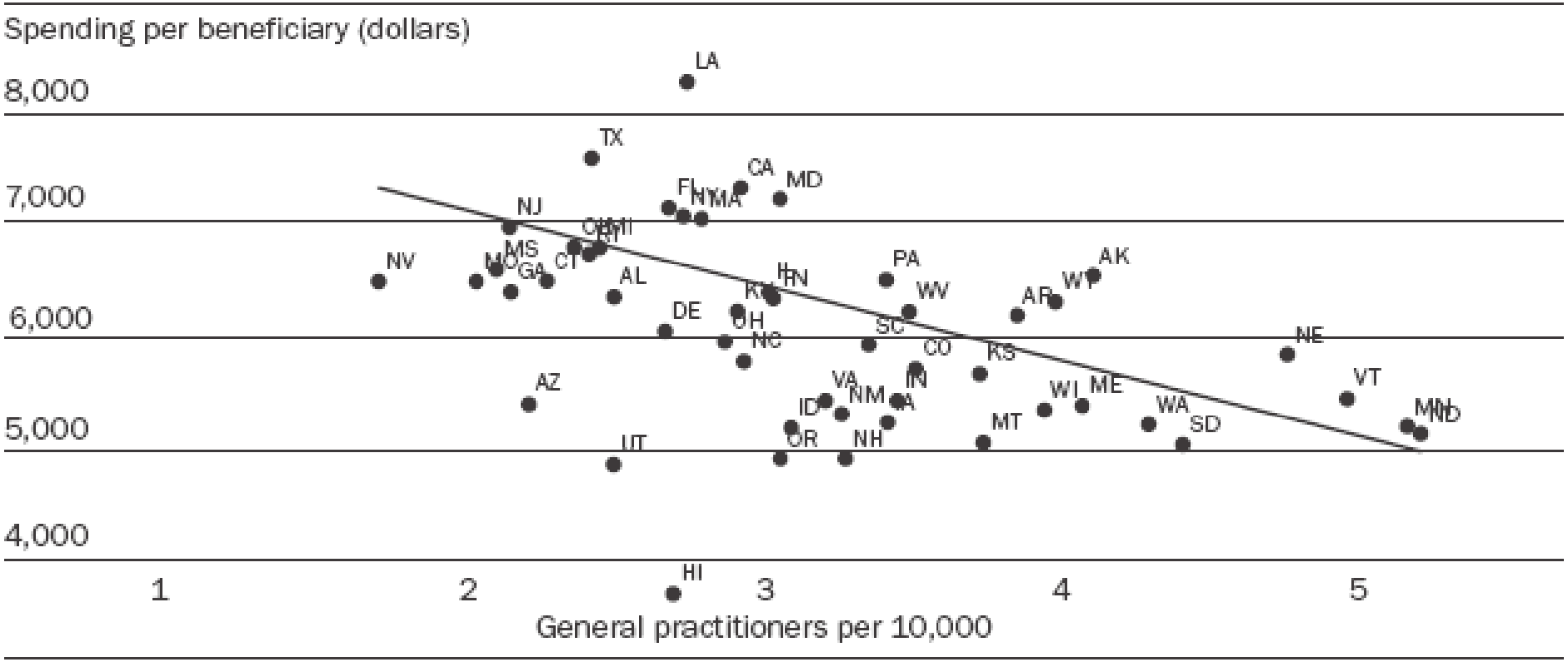
SOURCES: Medicare claims data; and Area Resource File, 2003.

NOTE: Total physicians held constant.

While GPs are associated with less spending

EXHIBIT 9

Relationship Between Provider Workforce And Medicare Spending: General Practitioners Per 10,000 And Spending Per Beneficiary In 2000

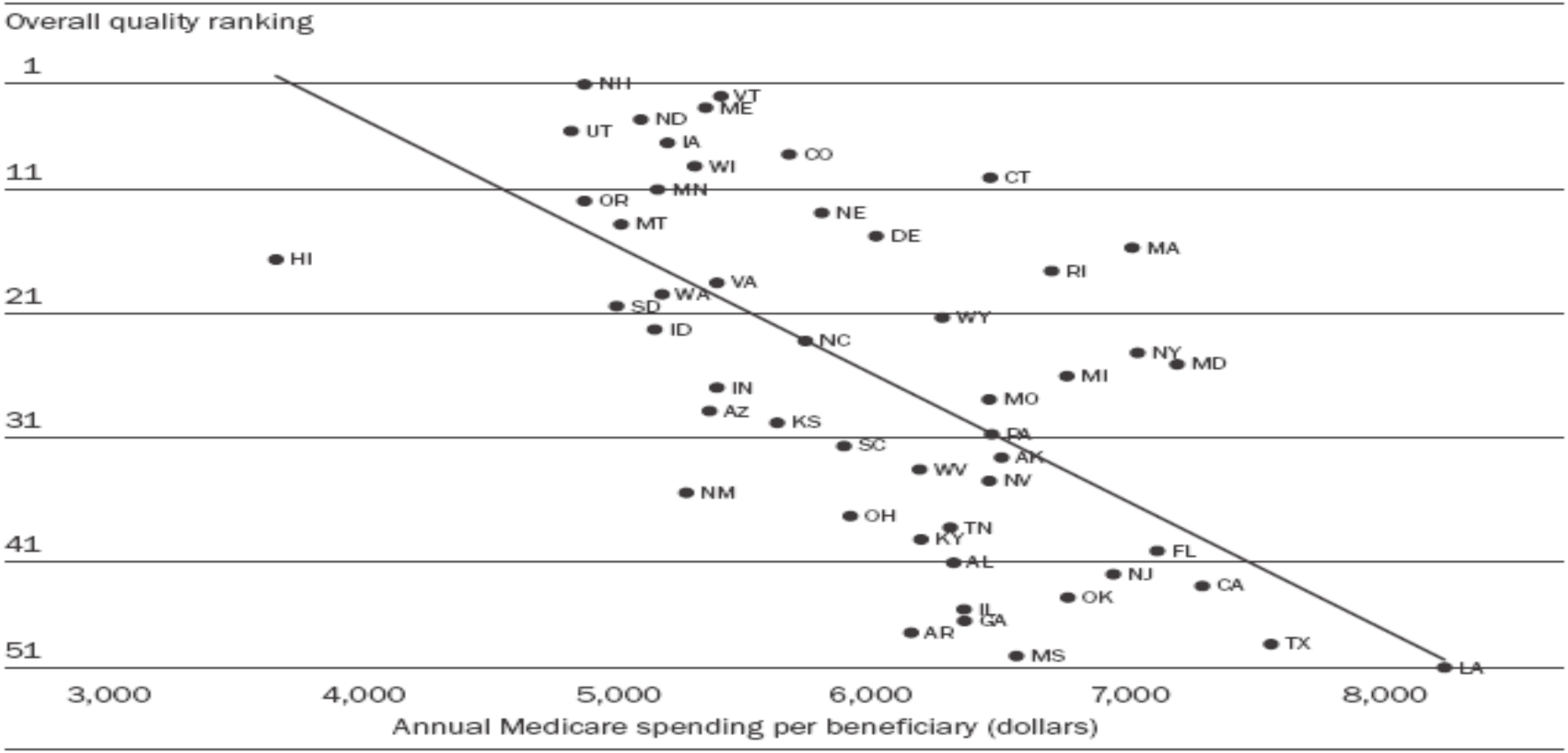


SOURCES: Medicare claims data; and Area Resource File, 2003.

NOTE: Total physicians held constant.

As it turns out, cost is *inversely* related to quality

EXHIBIT 1
Relationship Between Quality And Medicare Spending, As Expressed By Overall Quality Ranking, 2000–2001

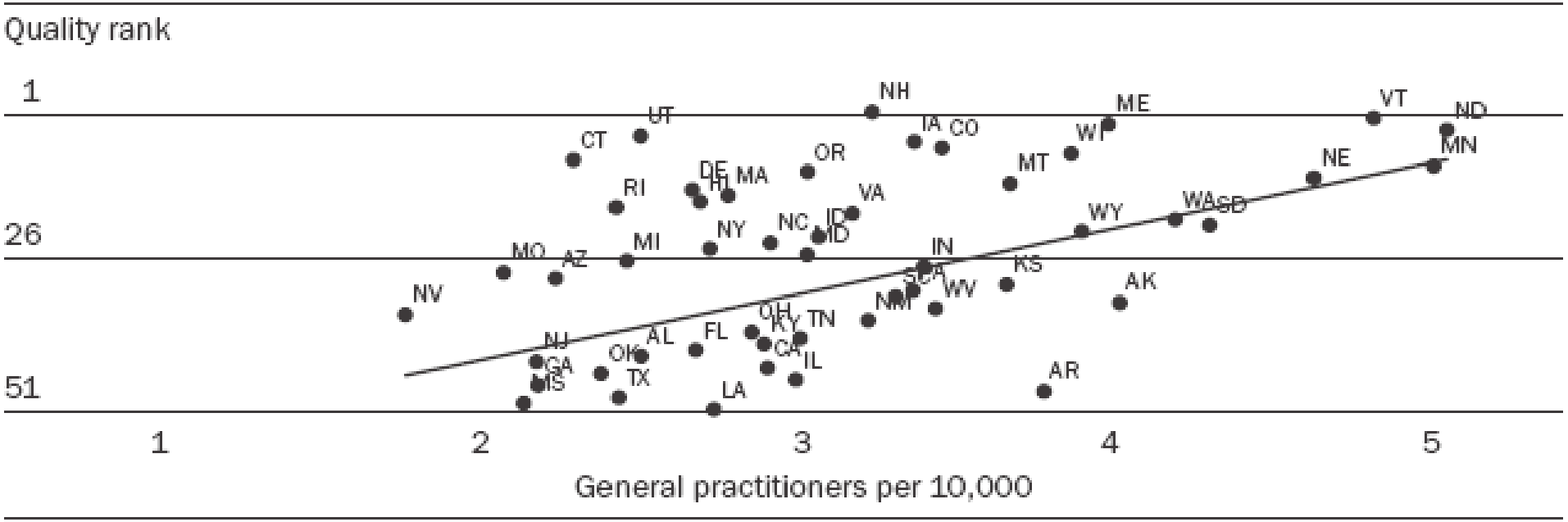


SOURCES: Medicare claims data; and S.F. Jencks et al., "Change in the Quality of Care Delivered to Medicare Beneficiaries, 1998–1999 to 2000–2001," *Journal of the American Medical Association* 289, no. 3 (2003): 305–312.
NOTE: For quality ranking, smaller values equal higher quality.

While more GPs predict higher quality ranking

EXHIBIT 8

Relationship Between Provider Workforce And Quality: General Practitioners Per 10,000 And Quality Rank In 2000



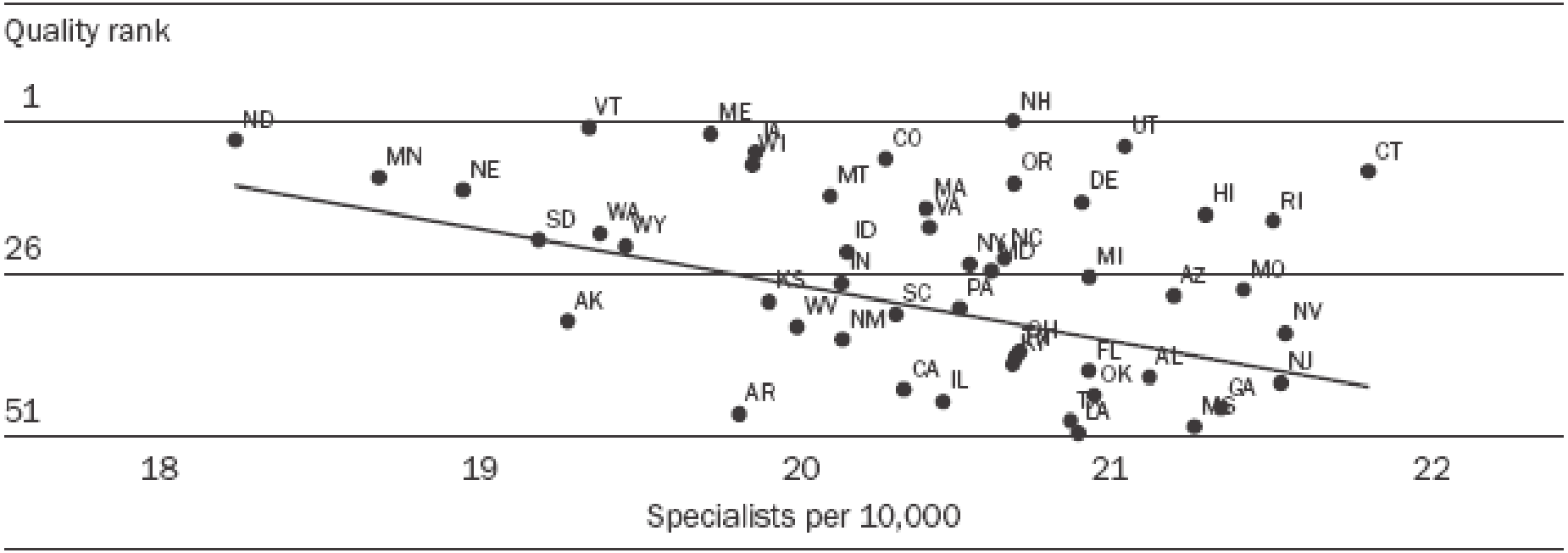
SOURCES: Medicare claims data; and Area Resource File, 2003.

NOTES: For quality ranking, smaller values equal higher quality. Total physicians held constant.

And more specialists predict lower quality ranking

EXHIBIT 6

Relationship Between Provider Workforce And Quality: Specialists Per 10,000 And Quality Rank In 2000



SOURCES: Medicare claims data; and Area Resource File, 2003.

NOTES: For quality ranking, smaller values equal higher quality. Total physicians held constant.

The Ecology of Medical Care

- Half of all physician visits are to generalist clinicians
- Most visits for common, serious conditions are to primary care practices
- Primary care infrastructure consists of small, relatively independent practices

Green LA, Freyer GE Jr, et al NEJM 344(2001):2021-25

Primary Care Practices:
Culture and Financial Reality

"Climates permeated with stress and overwork"

- Most work on margins of financial viability
  - Little time for self-reflection
  - Little or no training in quality improvement and organizational management

Crabtree BF. Healthcare Manage Rev, Vol 281(2003):279-83

Grumbach K and Bodenheimer J. JAMA (2002):889-93


The sun is rising on a new idea . . .

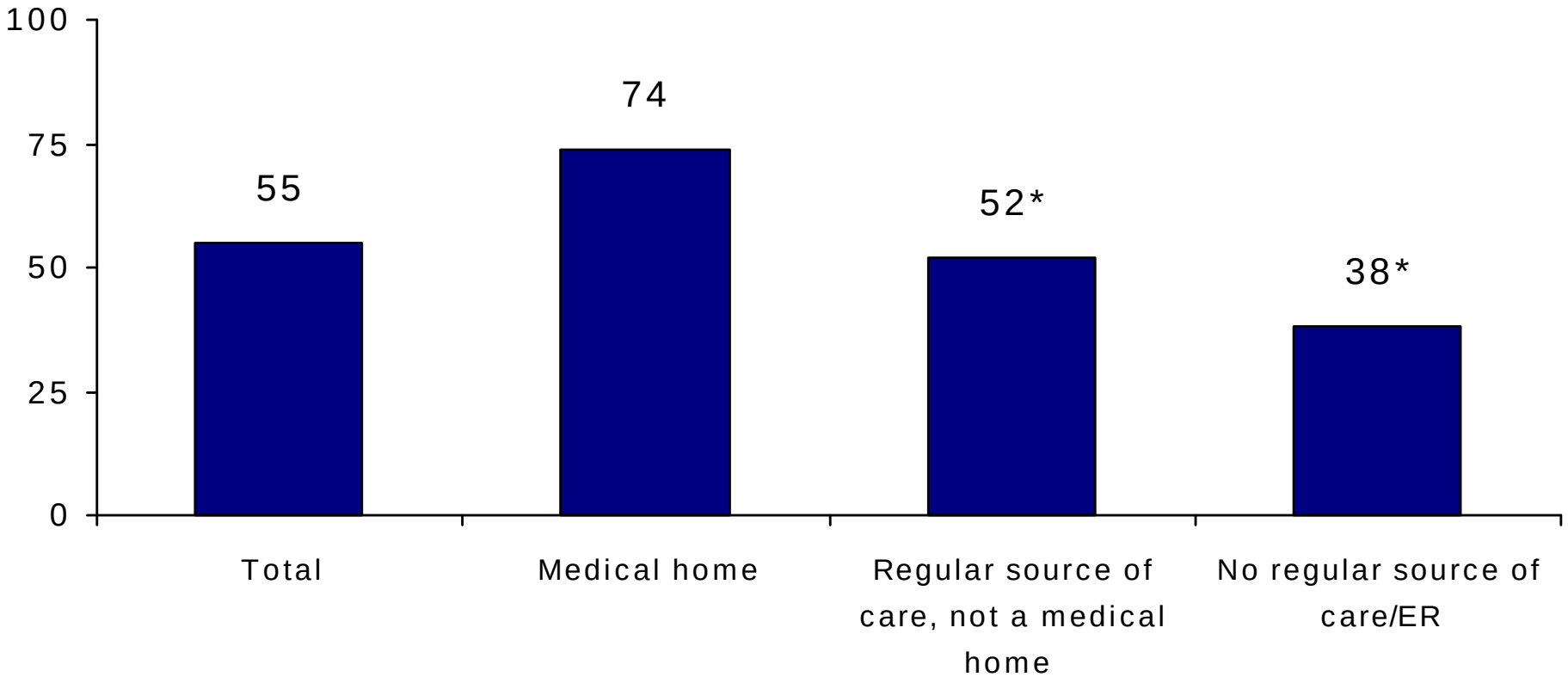

39
Your Medical Home

The Medical Home Is Something Qualitatively Different

Usual Primary Care		Medical Home
Relies on the clinician	→	Relies on the team
Care provided to those who come in	→	Care provided for all
Performance is assumed	→	Performance is measured
Innovation is infrequent	→	Innovation occurs regularly
Draws from the communities	→	Partners with communities
Refers to mental health services	→	Includes mental health services

The Majority of Adults with a Medical Home Always Get the Care They Need

Percent of adults 18–64 reporting always getting care they need when they need it



Note: Medical home includes having a regular provider or place of care, reporting no difficulty contacting provider by phone or getting advice and medical care on weekends or evenings, and always or often finding office visits well organized and running on time.

* Compared with medical home, differences remain statistically significant after adjusting for income or insurance.

Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

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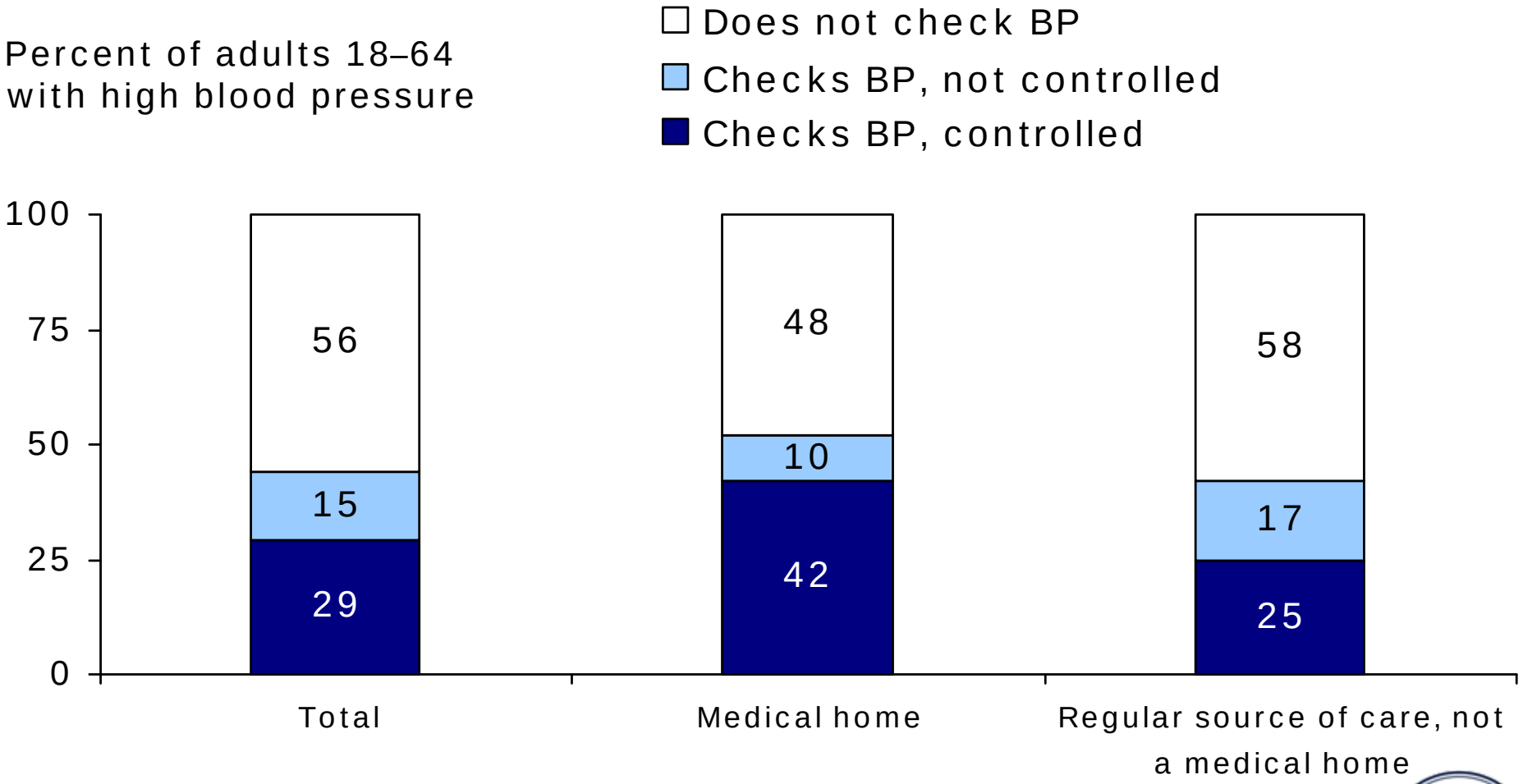
Adults with a Medical Home Are More Likely to Report Checking Their Blood Pressure Regularly and Keeping It in Control



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Source: Commonwealth Fund 2006 Health Care Quality Survey.

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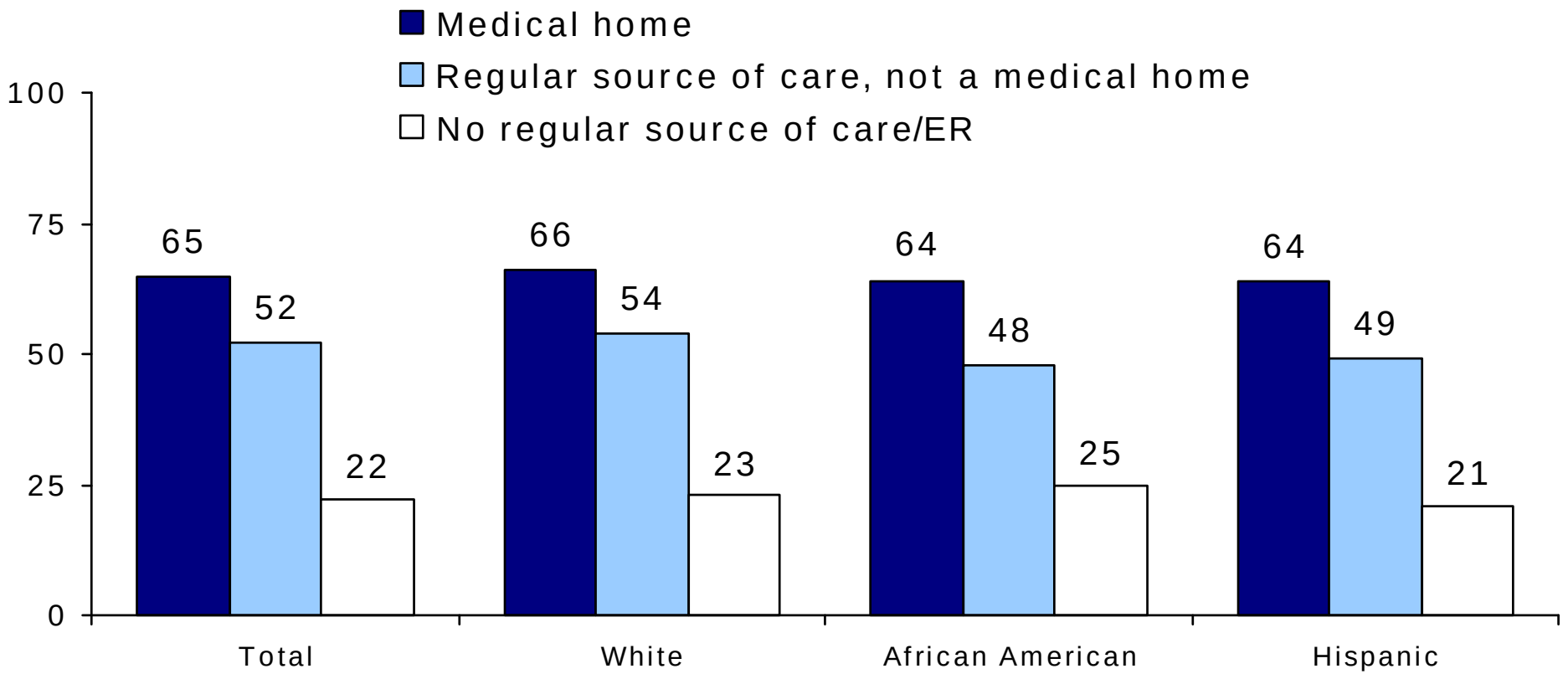
When African Americans and Hispanics Have Medical Homes They Are Just as Likely as Whites to Receive Reminders for Preventive Care Visits

Percent of adults 18–64 receiving a reminder to schedule a preventive visit by doctors' office



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Source: Commonwealth Fund 2006 Health Care Quality Survey.

Building A Medical Home
in an Academic Center:

10 Lessons Learned *…..in 5 minutes*

Background

- Pa. Chronic Care Commission Pilot Projects – 2008
- All non-Medicare insurers participating
- One of 32 practices chosen to participate in pilot project
  - One of three with a residency program
  - The largest practice (70 clinicians, 75,000 visits) in the collaborative

On January 29, 2009, we earned recognition as a Level 3 Patient Centered Primary Care Medical Home from the National Center for Quality Assurance (NCQA)

Lesson 1: Building and sustaining a medical home requires a business model

Business Models Supporting Medical Homes

- 9 enhanced payment models are being used around the country
- Each uses some combination of:
  - NCQA recognition
  - Pay for performance
  - Upfront investment (e.g. support for case manager)
  - Shared savings

Lesson 2: Wise investment of enhanced payment is needed to achieve optimal outcomes

Where to Invest

- The right people yield greatest results (as opposed to technology)
  - Case management
  - Patient outreach
  - Health education
  - Mental health worker
  - Quality coordinator

Lesson 3: "If you build it, they will come"

Since We've Started, Lots of People Want In

- Community-based private mental health company
- Jefferson Department of Psychiatry
- A patient education, empowerment, & decision support software company
- Community based tobacco cessation & physical activity project
- School of Pharmacy
- End-of-life pharmacy benefits & management not-for profit

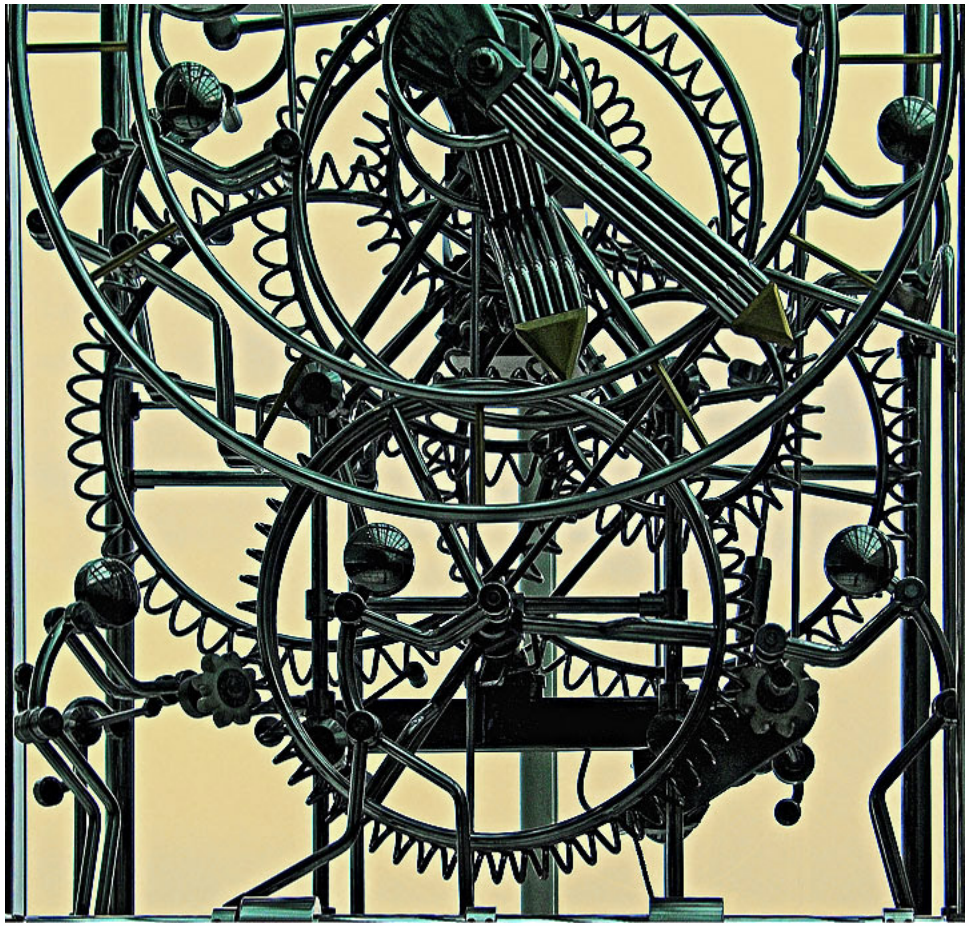
Lesson 4: “I hate measurement”

Quality Measurement

- If you've never measured it, the odds are your first score will be low
- You grow tough

Bring It On!

Lesson 5: All facets of the medical home matter



Do not overly focus on caring for a single chronic illness. Every aspect of the Medical Home Model matters:

- Enhanced access
- Opportunistic care
- Outreach
- Community partnership
- Case Management

Lesson 6: Financial supporters will want to see evidence of cost savings in a short time!

The two greatest risks to the success of the Medical Home initiative are:

- They will be judged too quickly
- They will be judged only by cost saving

We are seeing both things happen

Lesson 7: If you do a fabulous job …but only for the patients who come in for visits, you'll get good solid, not spectacular, outcomes

- Outreach, outreach, outreach
- Outreach requires resources
- Medical Homes require a business model

Lesson 8: Don’t feel confined by the primary goal of the project

We’ve deployed our new staff to address vaccination rates, cancer screening & diabetic care

Lesson 9: You need to free up staff and give them time to think, plan and innovate

We’ve had fantastic non-financial return on this investment. Time will tell regarding financial return

Lesson 10: This work demands the time, energy, and passion of leaders

This is one of the hardest jobs you'll ever take on …..and one of the most fun

Primary care clinicians cannot serve as care coordinators . . .

alone


www.foodfacts.info/blog
Dylan Tauber

Primary care is the bridge between...

Public Health

Community Engagement

Clinical Care Delivery

What Will It Take To Coordinate Care?

- Purchasers should request and expect it
- Insurers should pay for quality and provide the support and data to achieve it.
- Health systems need to invest in technology that facilitates communication and commit to improving population health
- We need new methods to provide quality incentives for specialists
- And we need Primary Care Clinicians to transform their practices to provide Medical Homes for all.

Care coordination demands a shared commitment to achieving optimal health outcomes

Care coordination demands Medical Homes functioning within a broader Medical Community


The country is watching
Now is the time…

NCQA Recognition: 9 Criteria

- Access and Communication
- Patient Tracking and Registry Functions
- Case Management
- Patient Self-Management Support
- Electronic Prescribing*
- Test Tracking
- Referral Tracking
- Performance Reporting and Improvement
- Advanced Electronic Communication*

* **Not Required**

High Hopes…

- Medical Homes are expected to:
  - Improve chronic illness by
    - Engaging patients
    - Mobilizing teams
    - Addressing prevention
    - Incorporating mental health services
    - Partnering with communities

  And…help control health care costs

Characteristics of High Performing Practice

- Leadership
- A culture of improvement
- Greater staff involvement
- Higher investment in people
  - Greater investment in technology has not, yet, been demonstrated to promote prevention, including CRC screening

Orzano AJ, et al. Improving outcomes for high risk diabetes using information systems. J Am B of Fam Med 20(3) 295-51 2007 May-Jun

On January 29, 2009, we earned recognition as a Level 3 Patient Centered Primary Care Medical Home from the National Center for Quality Assurance (NCQA)

- The first Department of Family Medicine in the nation to earn this recognition

It’s People That Make A Home

- Create a joyful practice
- Have fun trying new things
- Measure what you’re doing and see if it works

Indicators of a Medical Home
(adults 18–64)

	Total		Percent by Race			
Indicator	Estimated millions	Percent	White	African American	Hispanic	Asian American
Regular doctor or source of care	142	80	85	79	57	84
Among those with a regular doctor or source of care . . .						
Not difficult to contact provider over telephone	121	85	88	82	76	84
Not difficult to get care or medical advice after hours	92	65	65	69	60	66
Doctors' office visits are always or often well organized and running on time	93	66	68	65	60	62
All four indicators of medical home	47	27	28	34	15	26

Source: Commonwealth Fund 2006 Health Care Quality Survey.

Indicators of a Medical Home by Usual Health Care Setting (adults 18–64)

		Usual Health Care Setting		
Indicator	Total	Doctors' office	Community health center or public clinic	Other settings*
Regular doctor or source of care	80%	95%	78%	63%
Among those with a regular doctor or source of care . . .				
Not difficult to contact provider over telephone	85	87	77	77
Not difficult to get care or medical advice after hours	65	67	54	69
Always or often find visits to doctors' office well organized and running on time	66	68	56	60
All four indicators of a medical home	27	32	21	22

* Includes hospital outpatient departments and other settings.

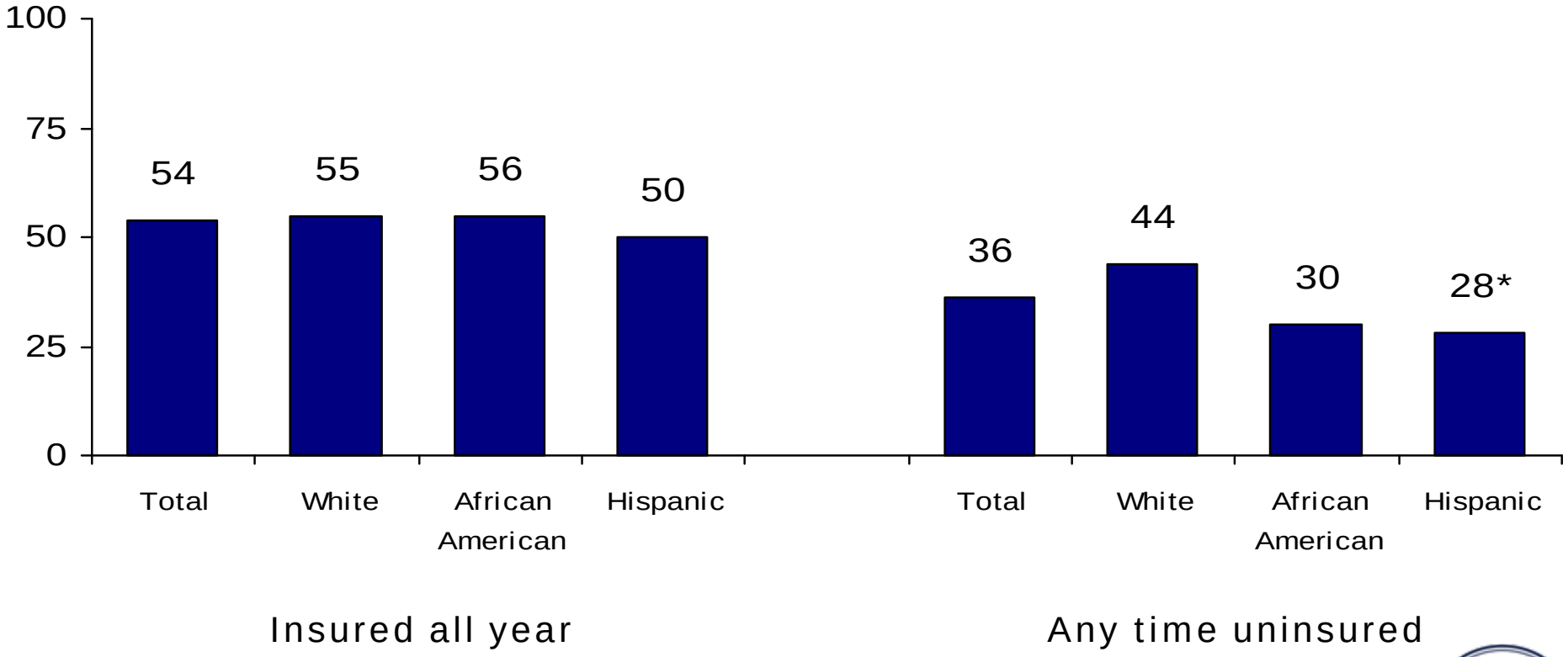
Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

THE COMMONWEALTH FUND

When Insured, Minorities Are Just as Likely as Whites to Receive Reminders for Preventive Care Visits; Rates Are Low for All Uninsured Adults, Especially Hispanics

Percent of adults 18–64 receiving a reminder to schedule a preventive visit by doctor's office



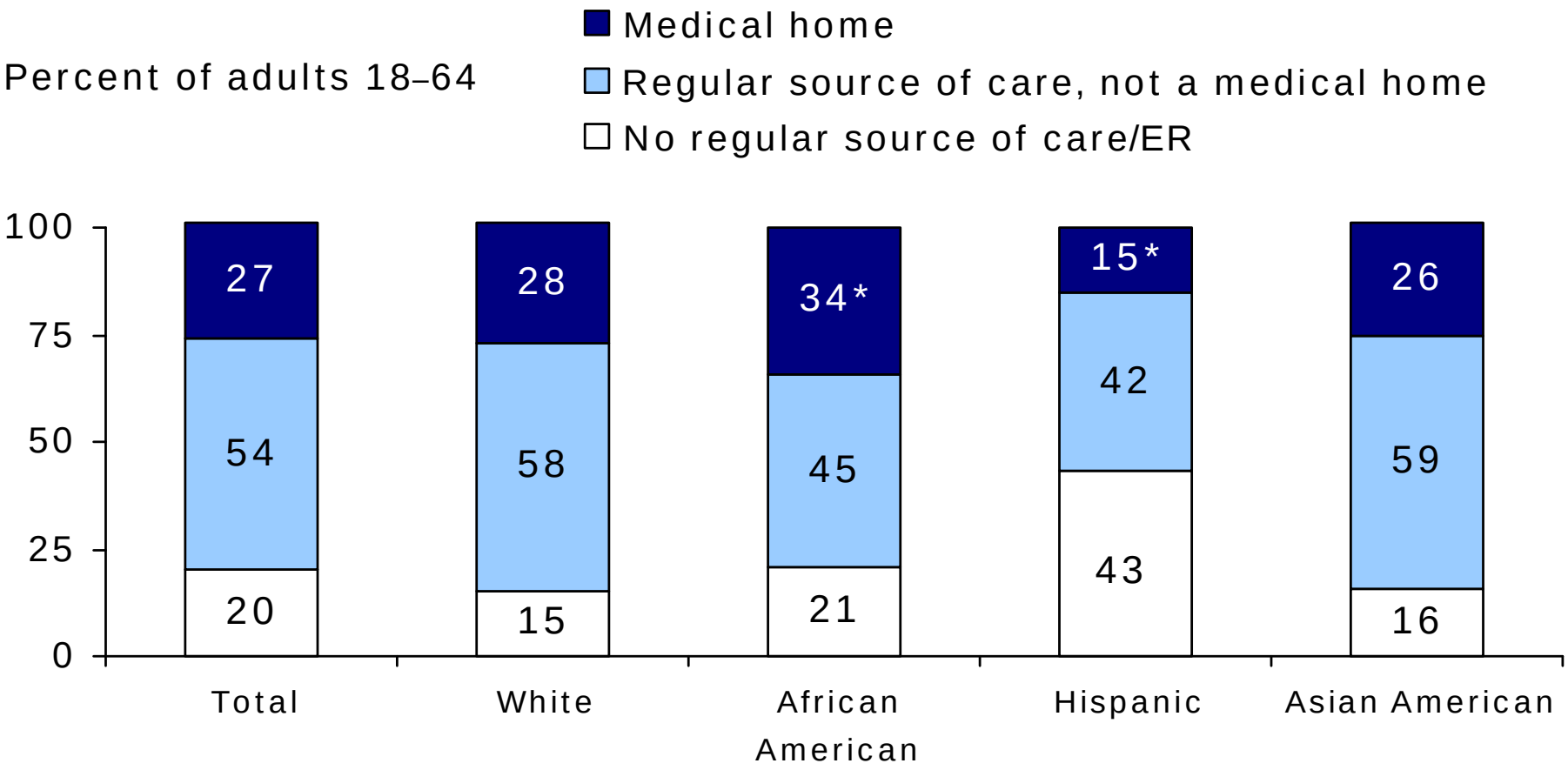
* Compared with whites, differences are statistically significant.

Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

THE COMMONWEALTH FUND

African Americans and Hispanics Are More Likely to Lack a Regular Provider or Source of Care; Hispanics Are Least Likely to Have a Medical Home



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Source: The Commonwealth Fund 2006 Quality of Care Survey

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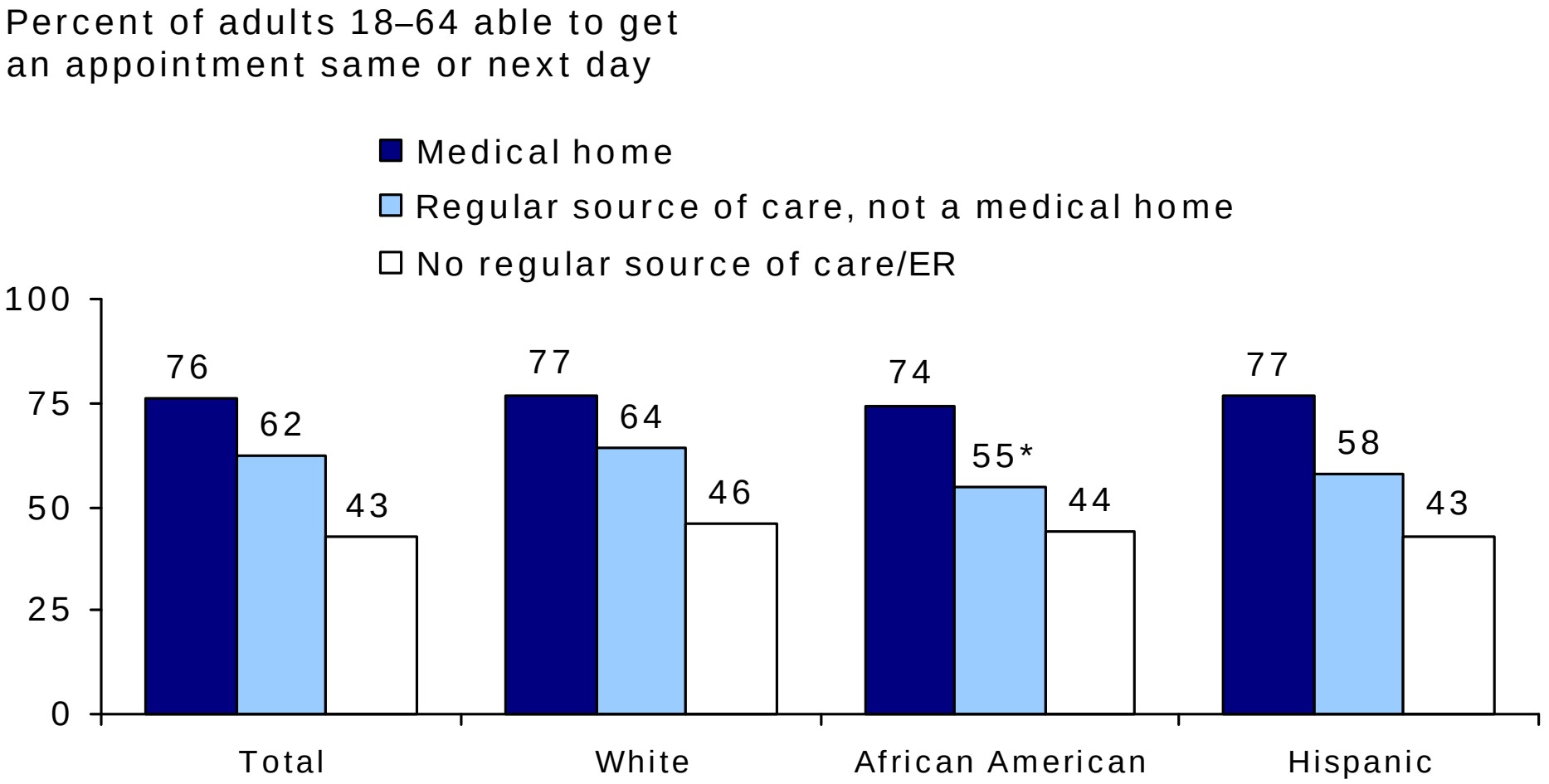
THE COMMONWEALTH FUND

African American and Hispanic Adults Who Have Medical Homes Have Rapid Access to Medical Appointments



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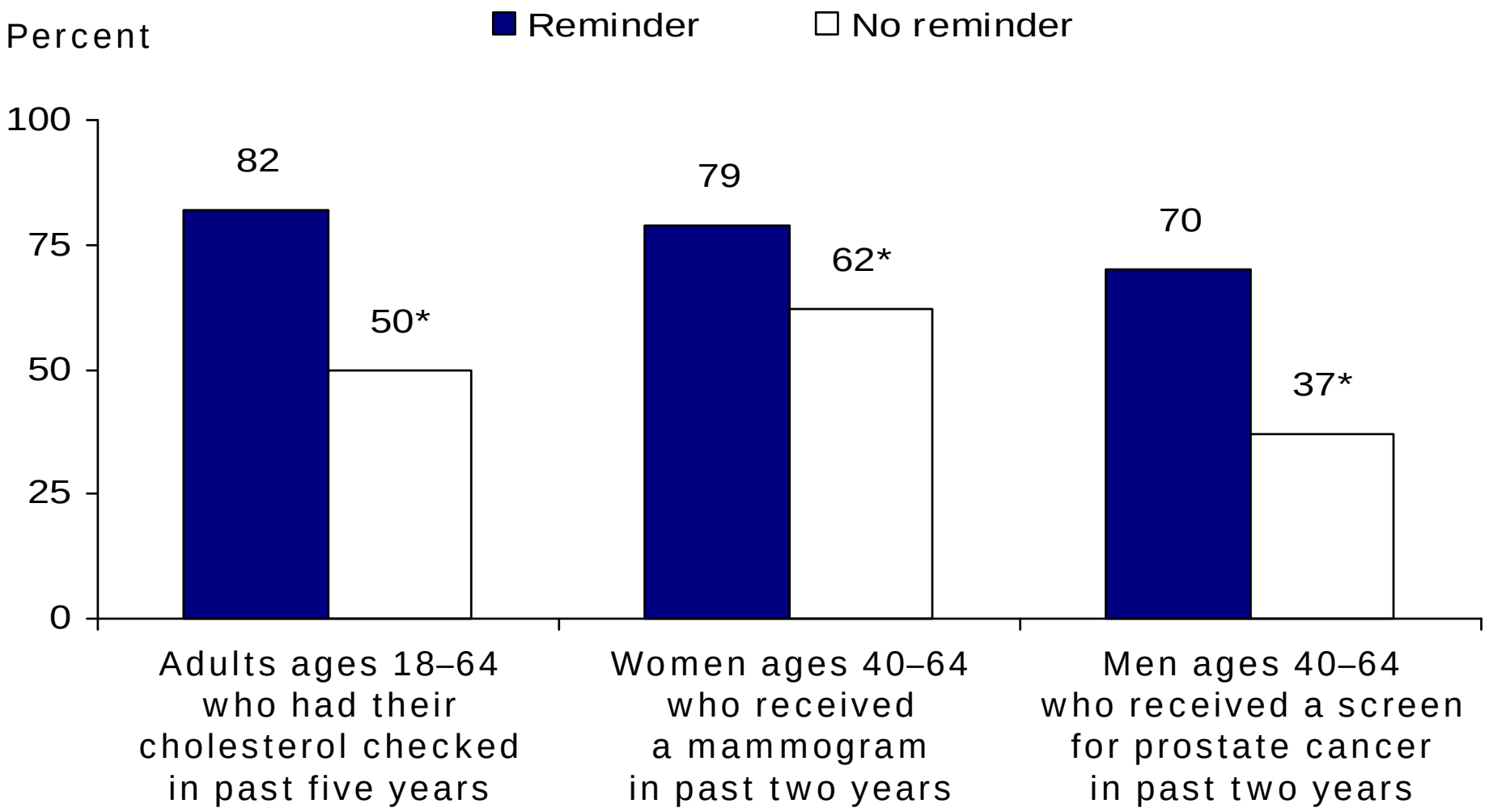
* Compared with whites, differences are significant within category of medical home.

Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

THE COMMONWEALTH FUND

Adults Who Are Sent Reminders Are More Likely to Receive Preventive Screening



* Compared with reminders, differences remain statistically significant after adjusting for income or insurance.

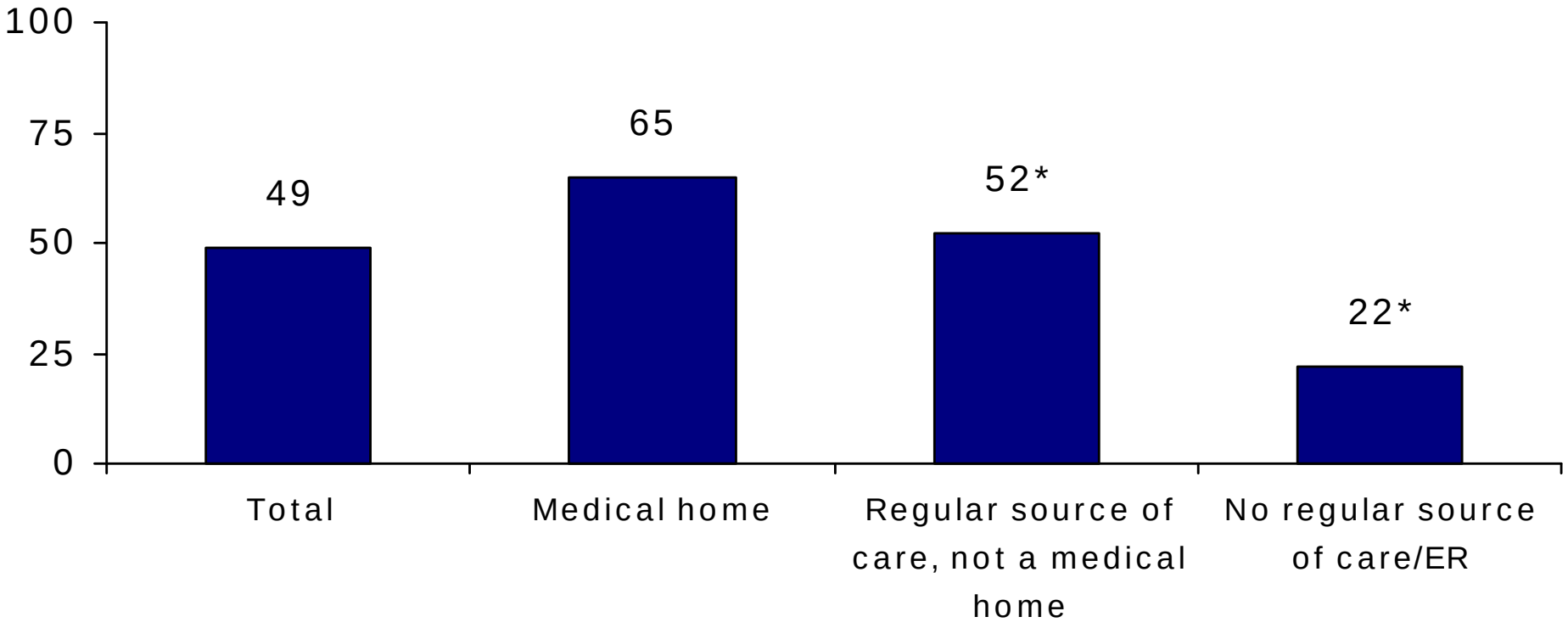
Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

THE COMMONWEALTH FUND

Nearly Two-Thirds of Adults with Medical Homes Receive Reminders for Preventive Care

Percent of adults 18–64 receiving a reminder to schedule a preventive visit by doctors' office



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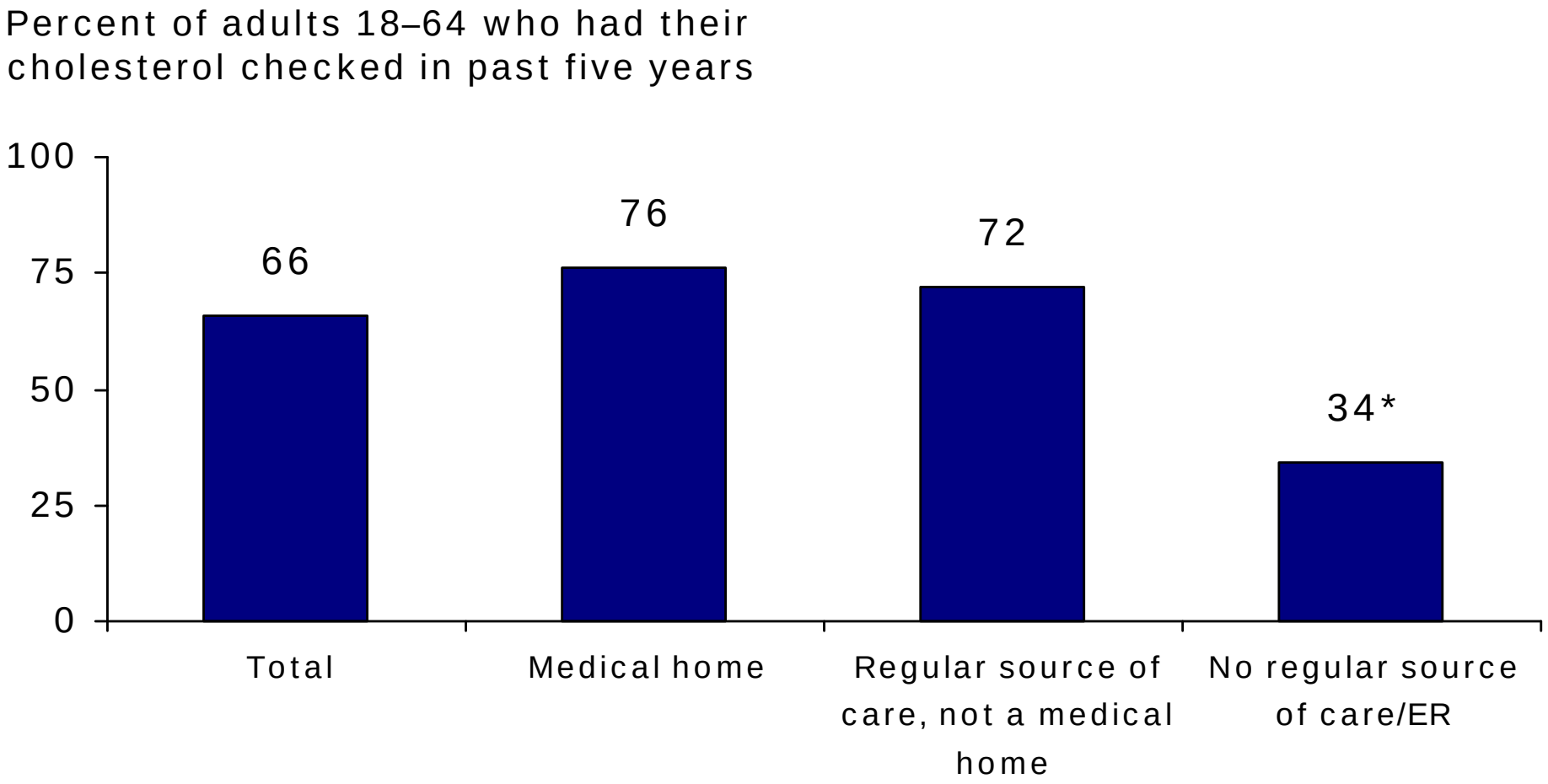
Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

THE COMMONWEALTH FUND

Missed Opportunities for Preventive Care for Adults Who Lack a Regular Source of Care: Just One-Third Had Their Cholesterol Screened



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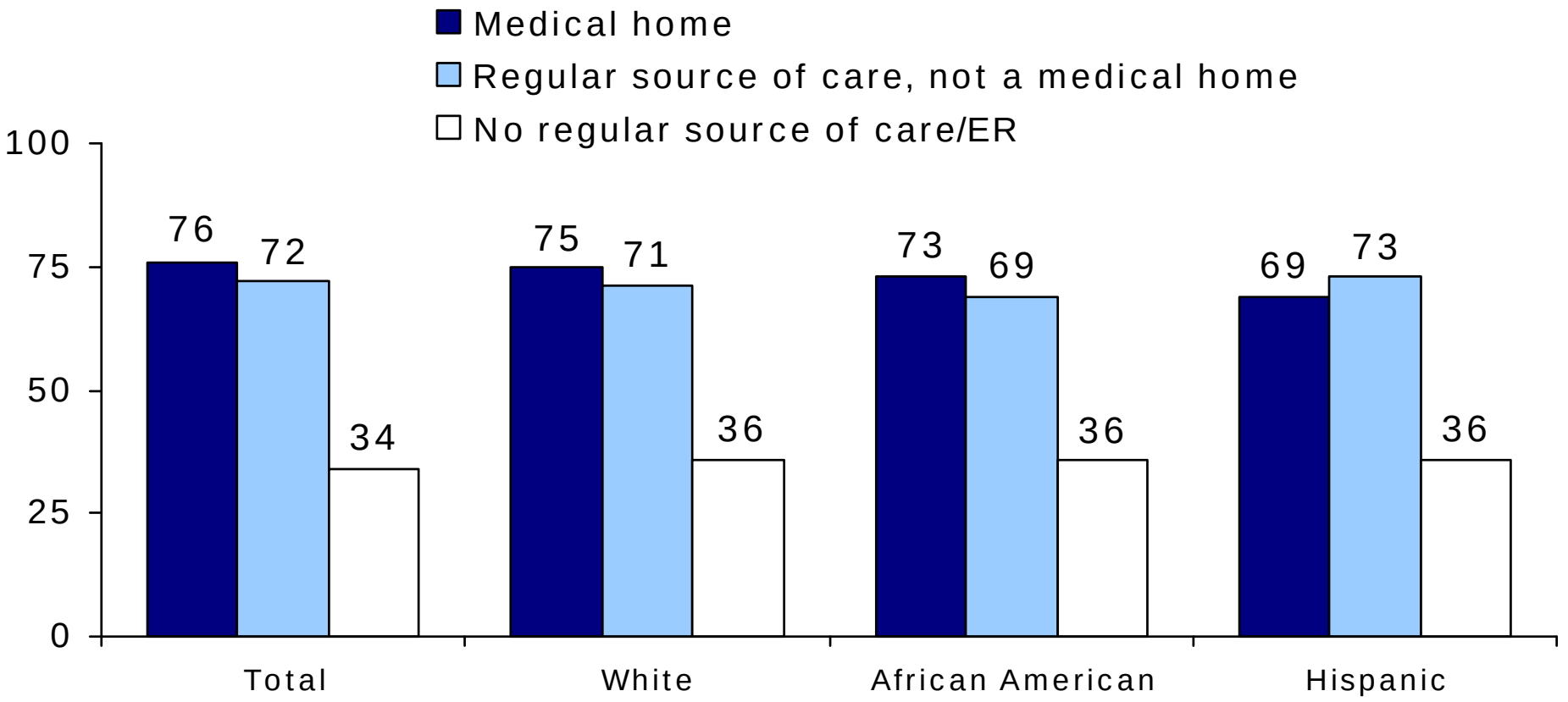
Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

THE COMMONWEALTH FUND

African Americans and Hispanics with Medical Homes Are Equally as Likely as Whites to Receive Cholesterol Checks

Percent of adults 18–64 who had their cholesterol checked in past five years



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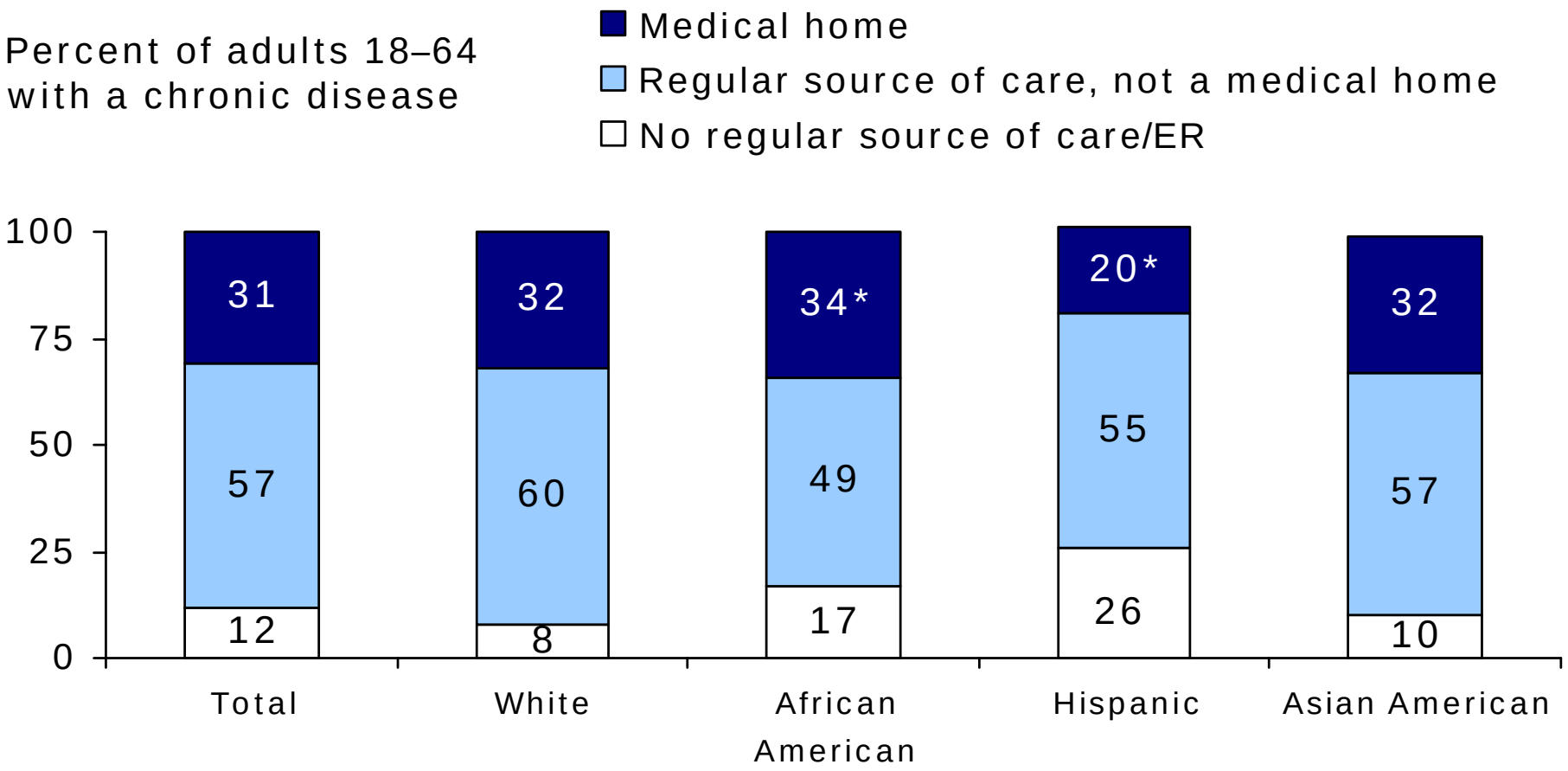
Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

THE COMMONWEALTH FUND

Only One-Third of Patients with Chronic Conditions Have Medical Homes; Hispanics Are Least Likely to Have a Medical Home



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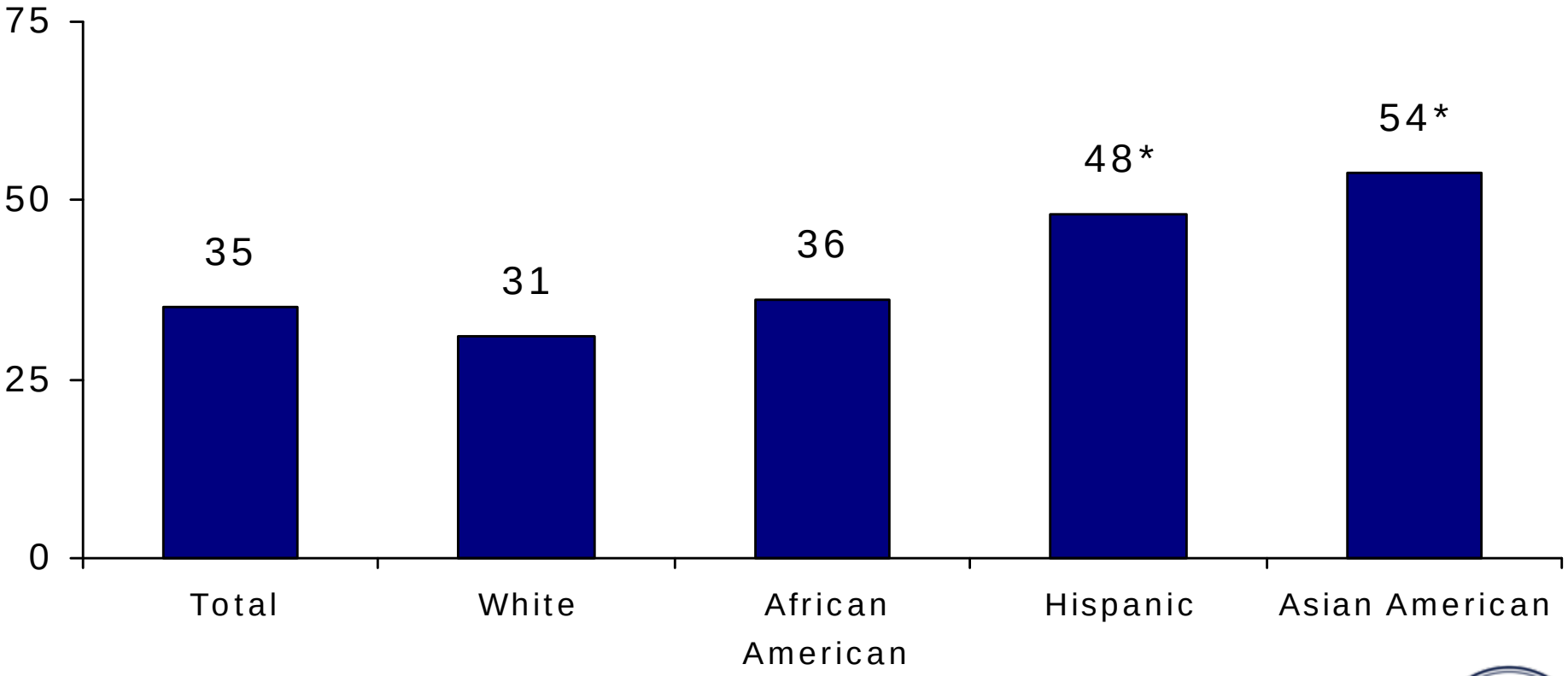
Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

THE COMMONWEALTH FUND

About Half or More of Hispanics and Asian Americans with Chronic Conditions Were Not Given Plans to Manage Their Condition at Home

Percent of adults ages 18–64 with any chronic condition who were *not* given a plan from a doctor or nurse to manage condition at home



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Source: Commonwealth Fund 2006 Health Care Quality Survey.

Less than One-Quarter of Adults with Medical Homes Did Not Receive Plans to Manage Their Conditions at Home

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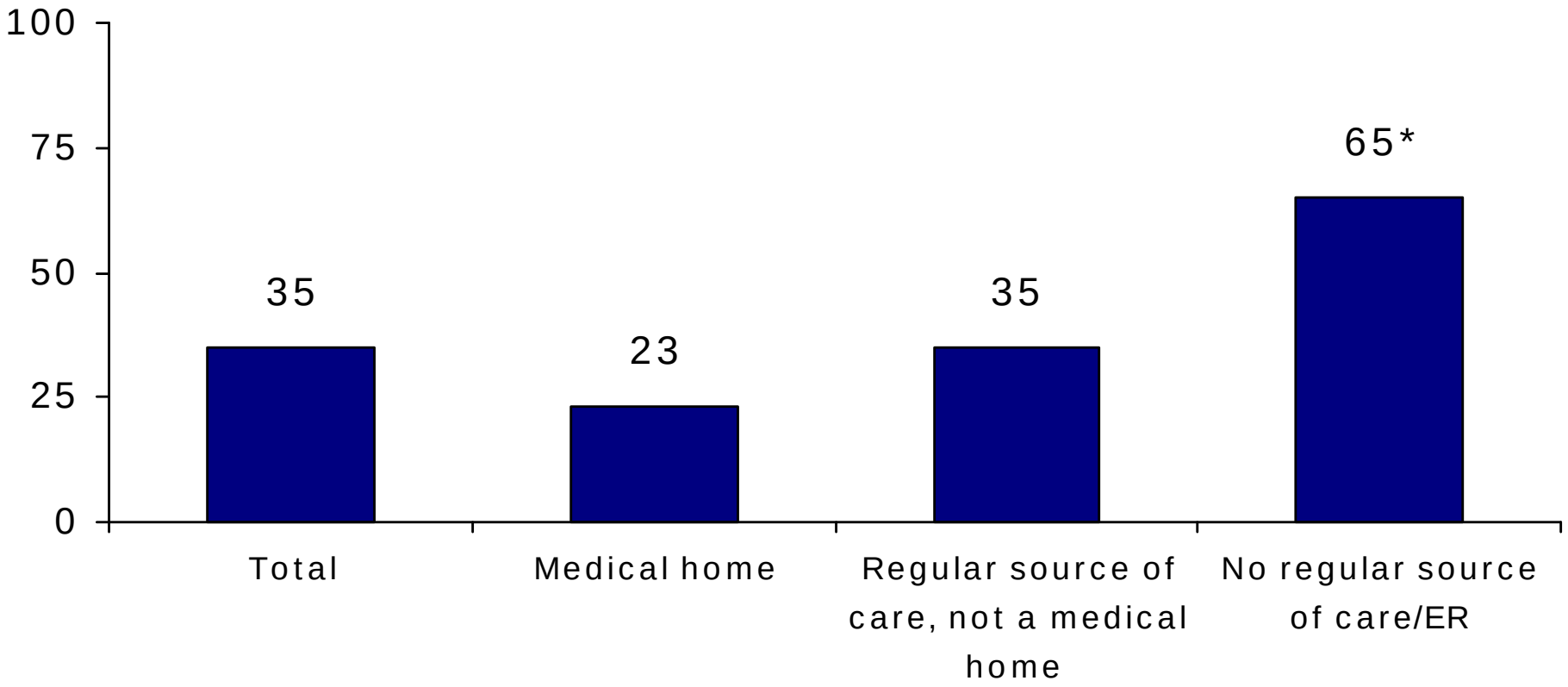

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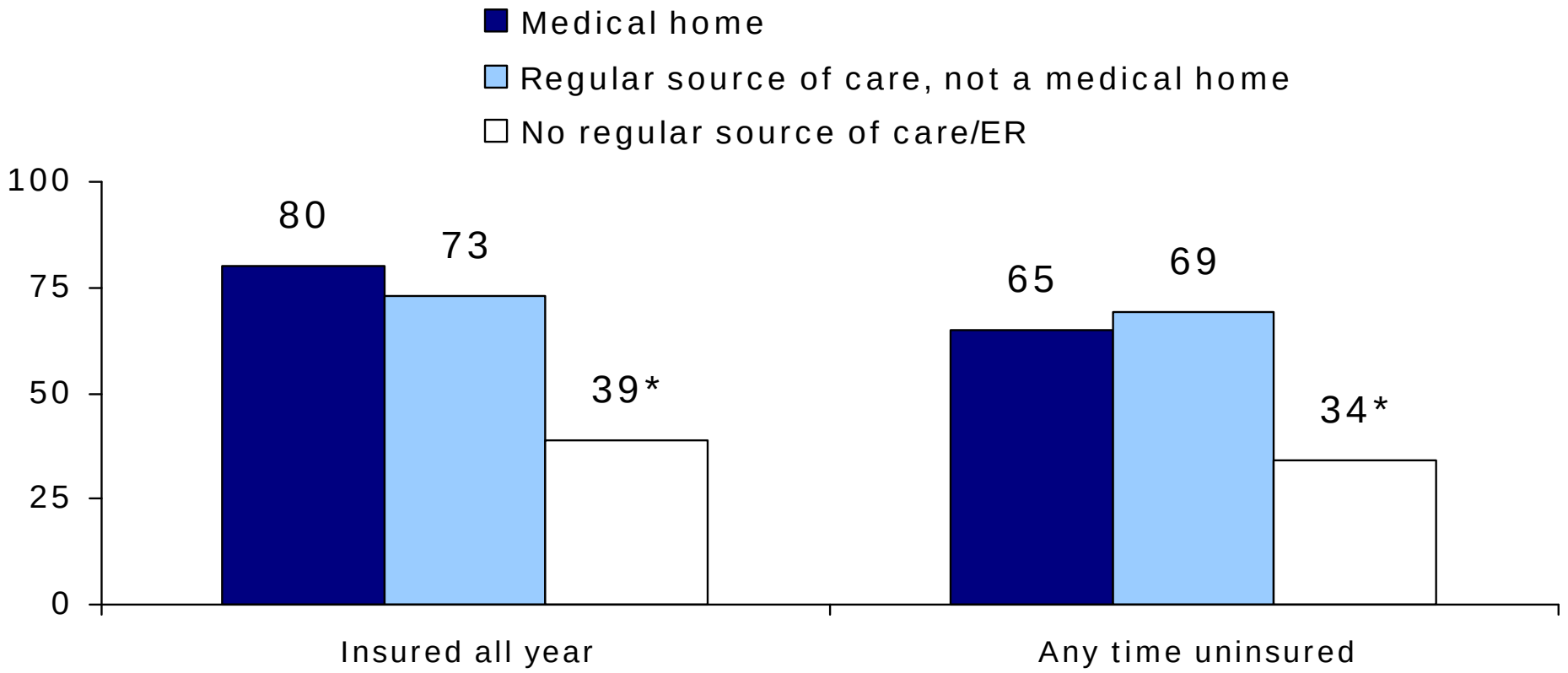
Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

THE COMMONWEALTH FUND

Adults with a Medical Home Have Higher Rates of Counseling on Diet and Exercise Even When Uninsured

Percent of obese or overweight adults 18–64 who were counseled on diet and exercise by doctor



Note: Medical home includes having a regular provider or place of care, reporting no difficulty contacting provider by phone or getting advice and medical care on weekends or evenings, and always or often finding office visits well organized and running on time.

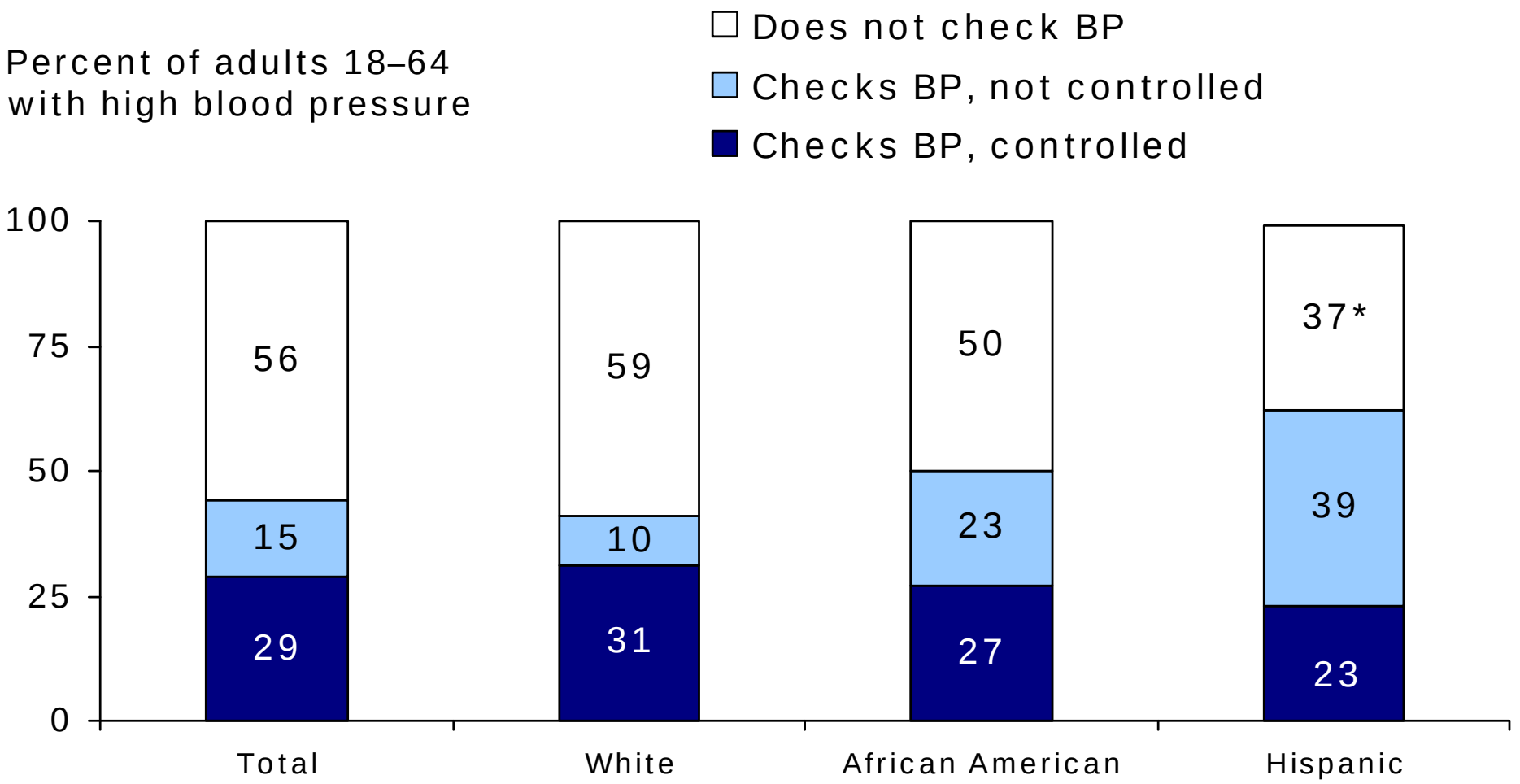
* Compared with medical home, differences are statistically significant.

Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

THE COMMONWEALTH FUND

Missed Opportunities for Blood Pressure Management Exist Across All Groups, Especially Hispanics



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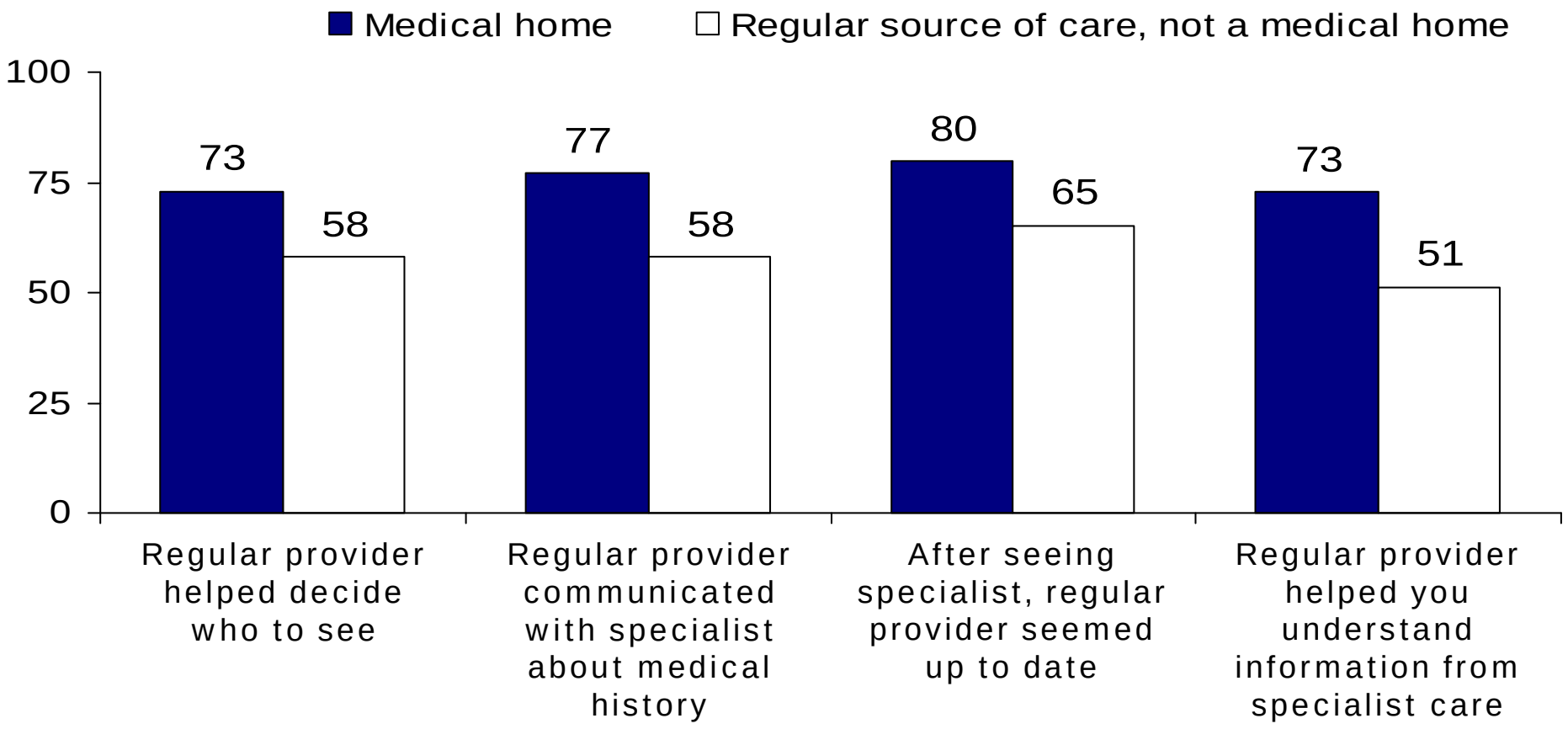
Patients with a Medical Home Report Better Coordination Between Their Regular Provider and Specialist

Percent of adults ages 18–64 who have seen a specialist in past two years



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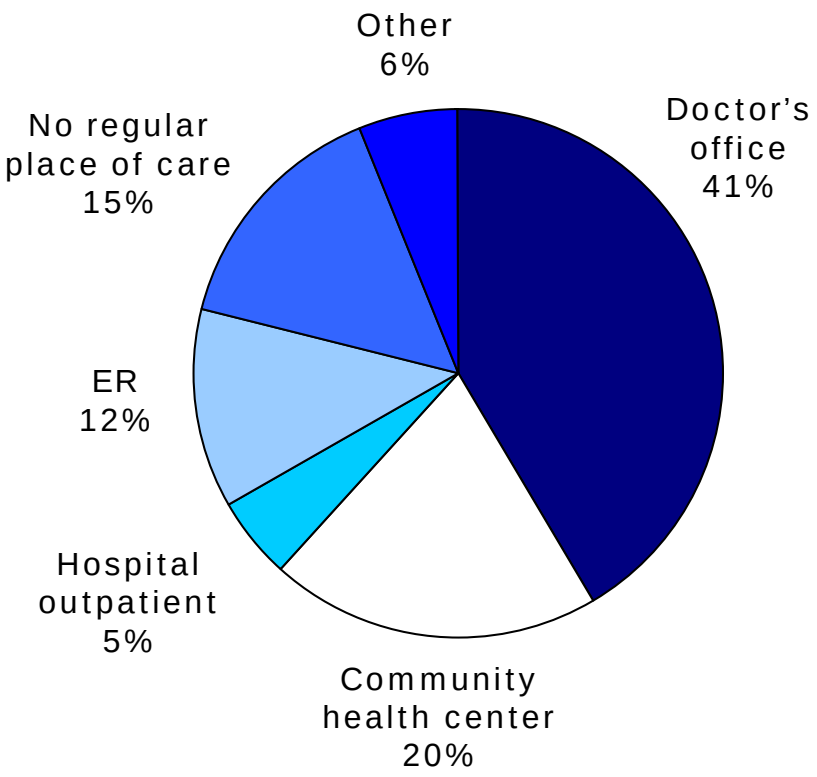
Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

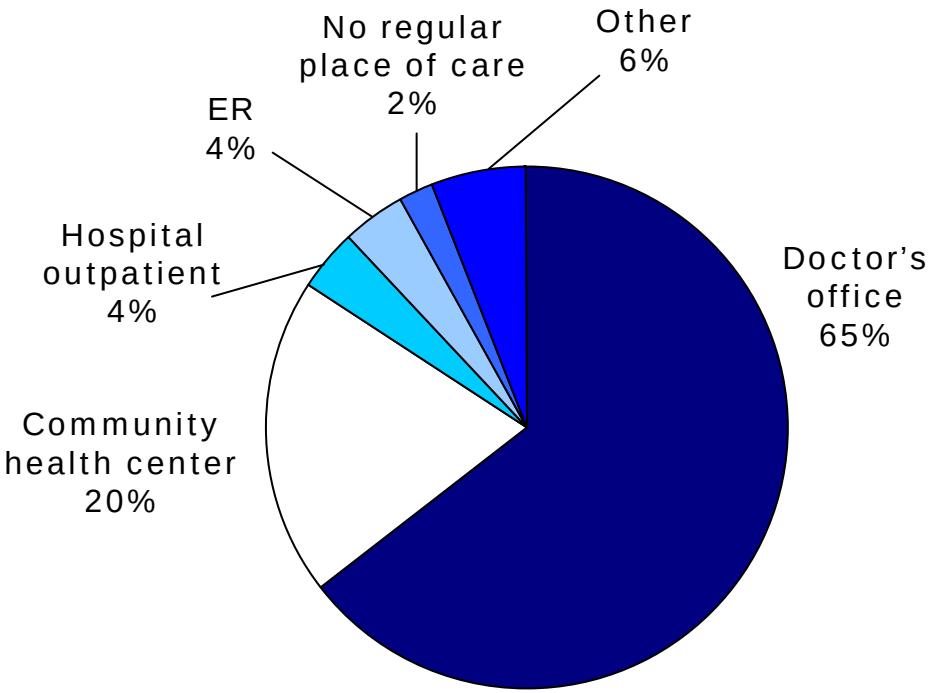
THE COMMONWEALTH FUND

Community Health Centers Serve Large Numbers of Uninsured Adults and Insured Adults with Low Incomes

Uninsured any time
46.8 million



Insured, income below 200% poverty
22.2 million



Note: Percentages may not sum to 100% because of rounding.

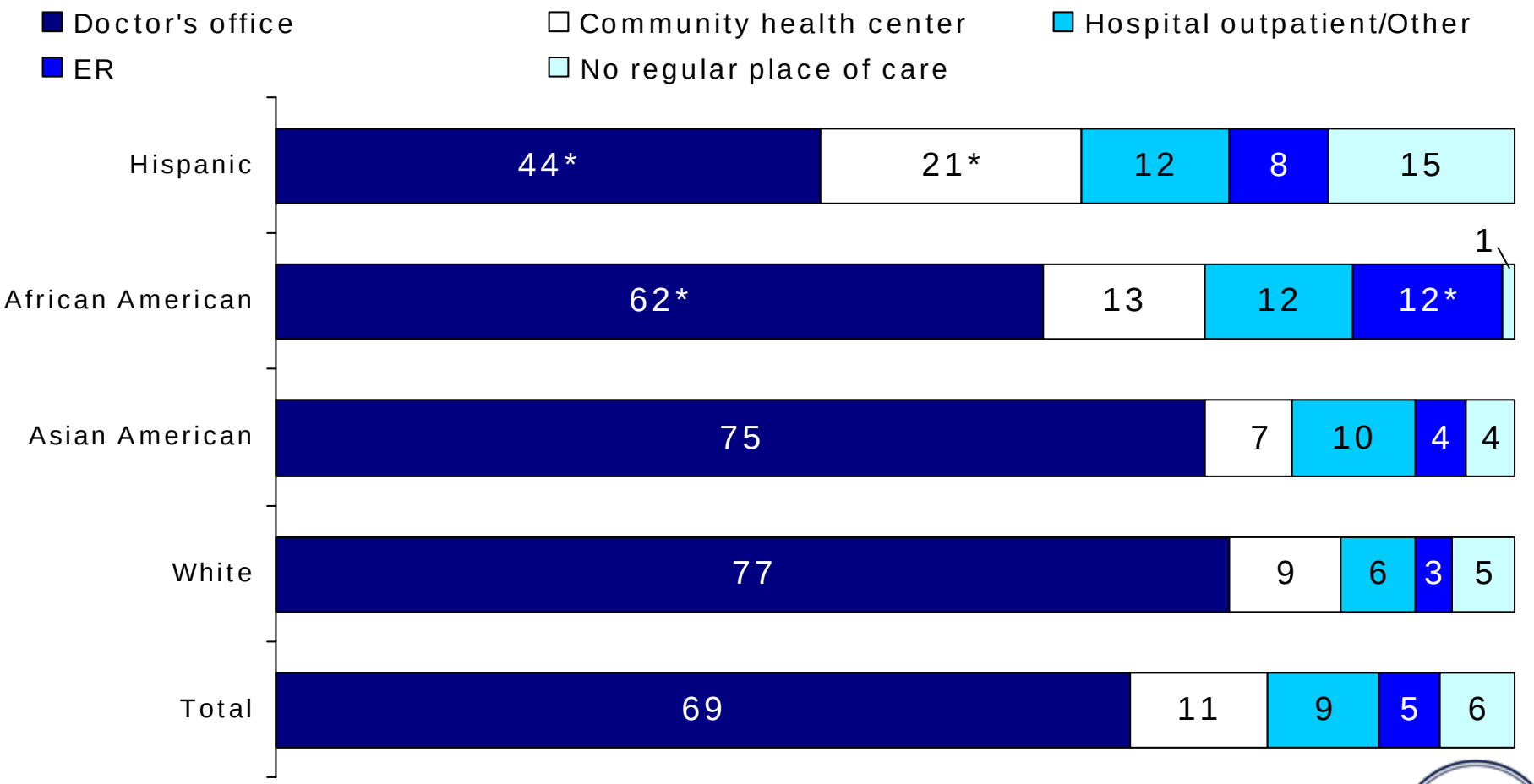
Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

THE COMMONWEALTH FUND

Hispanics and African Americans Are More Likely to Rely on Community Health Centers as Their Regular Place of Care

Percent of adults 18–64



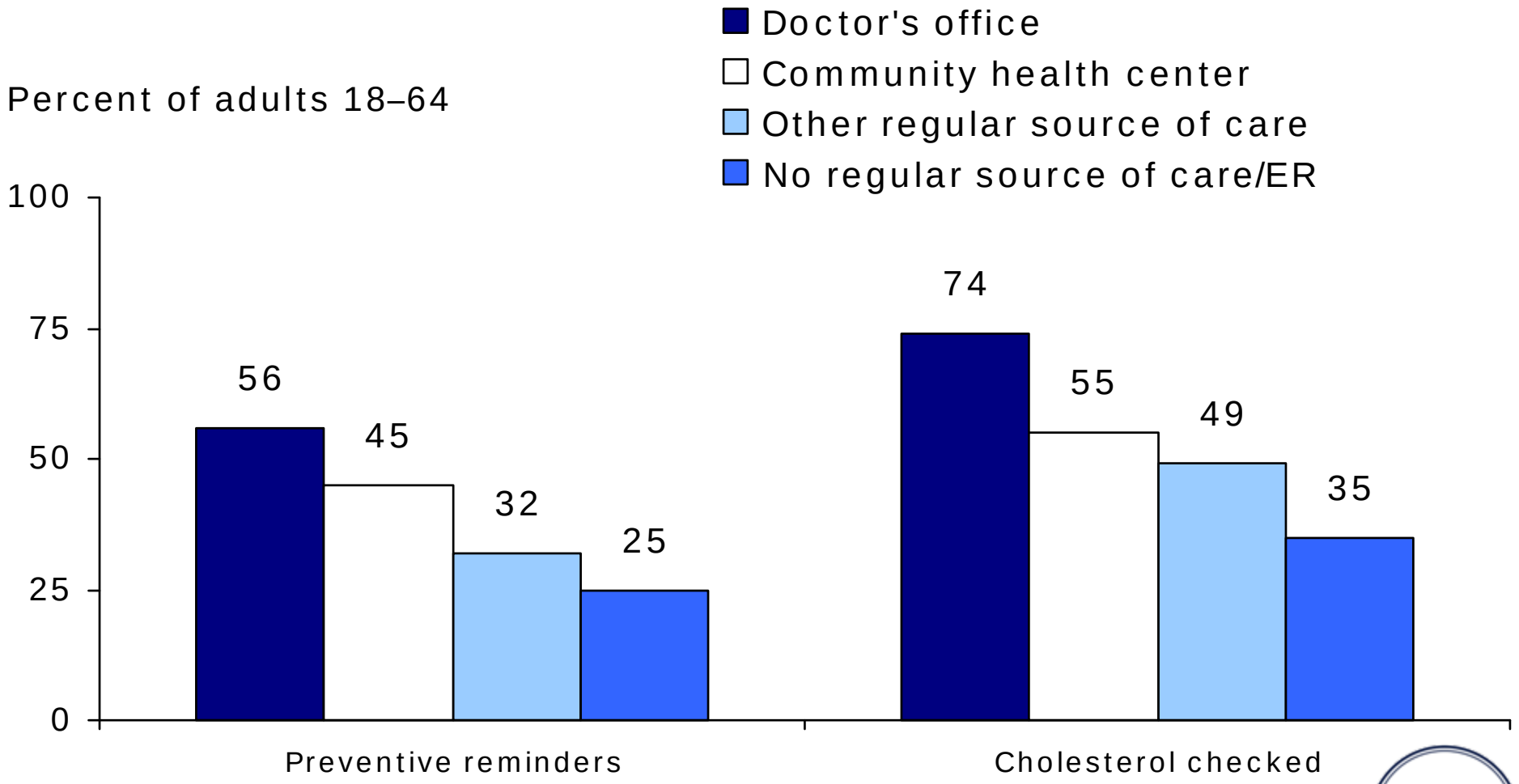
* Compared with whites, differences remain statistically significant after adjusting for insurance or income.

Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

THE COMMONWEALTH FUND

Preventive Care Reminders and Cholesterol Screening Are More Common in Doctors' Offices, But Community Health Centers Are Not Far Behind

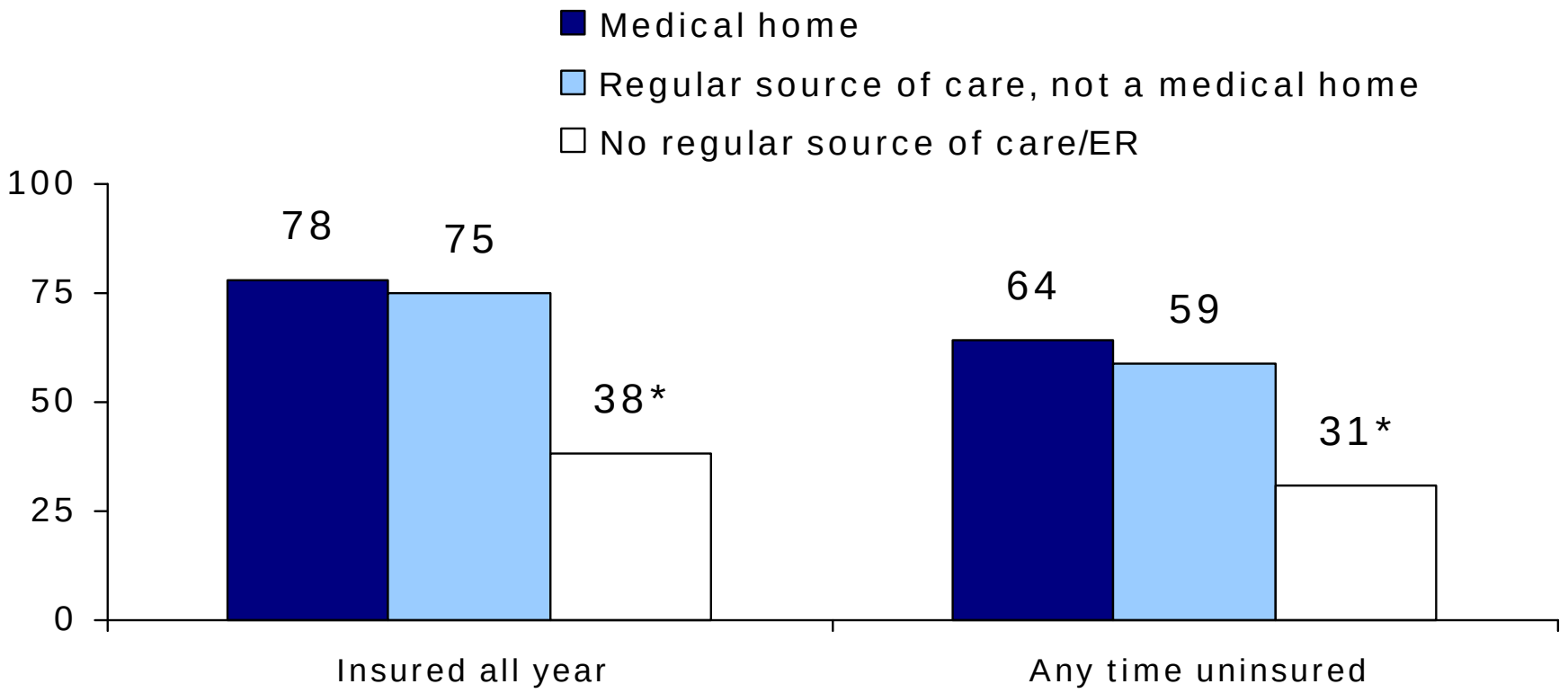


Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

Even When Uninsured, Adults with a Medical Home Have Higher Rates of Cholesterol Screening

Percent of adults 18–64 who had their cholesterol checked in past five years



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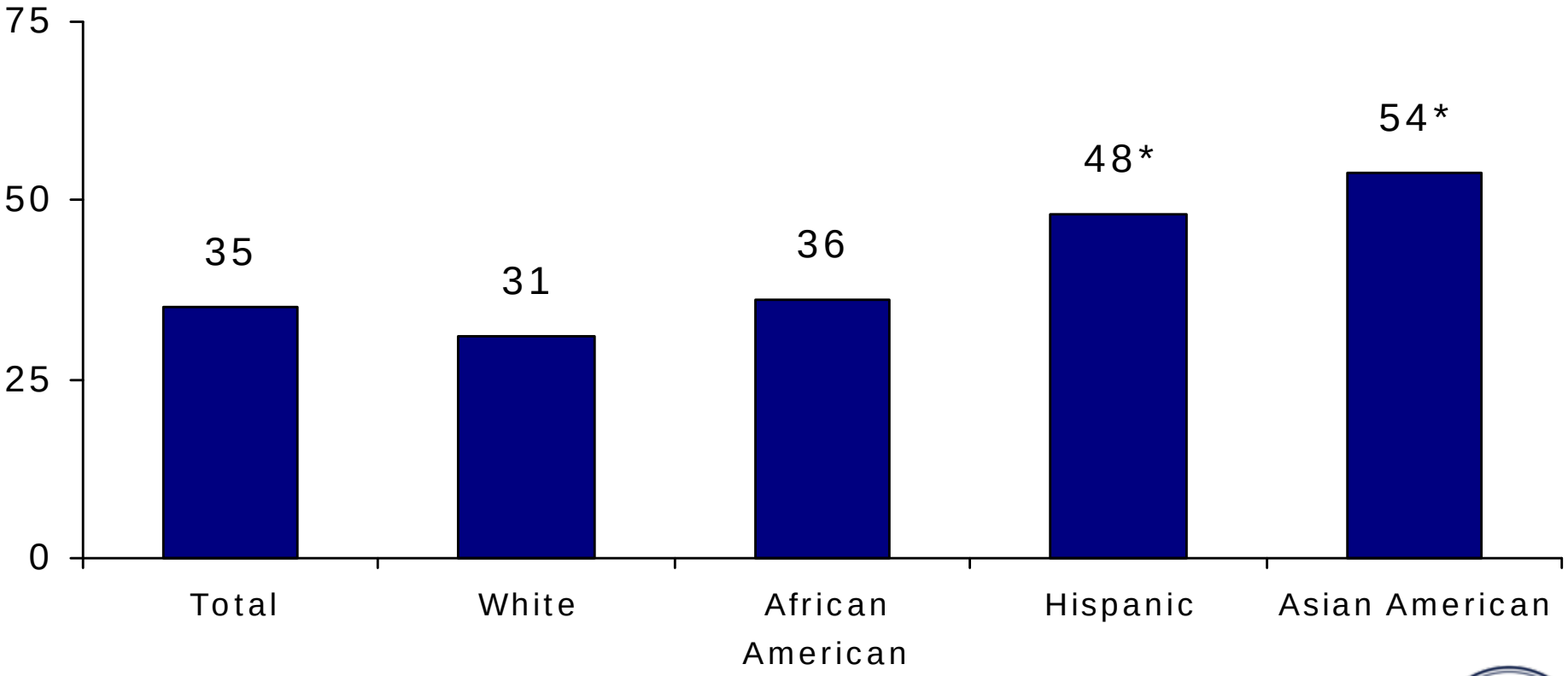
Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

THE COMMONWEALTH FUND

About Half or More of Hispanics and Asian Americans with Chronic Conditions Were Not Given Plans to Manage Their Condition at Home

Percent of adults ages 18–64 with any chronic condition who were *not* given a plan from a doctor or nurse to manage condition at home



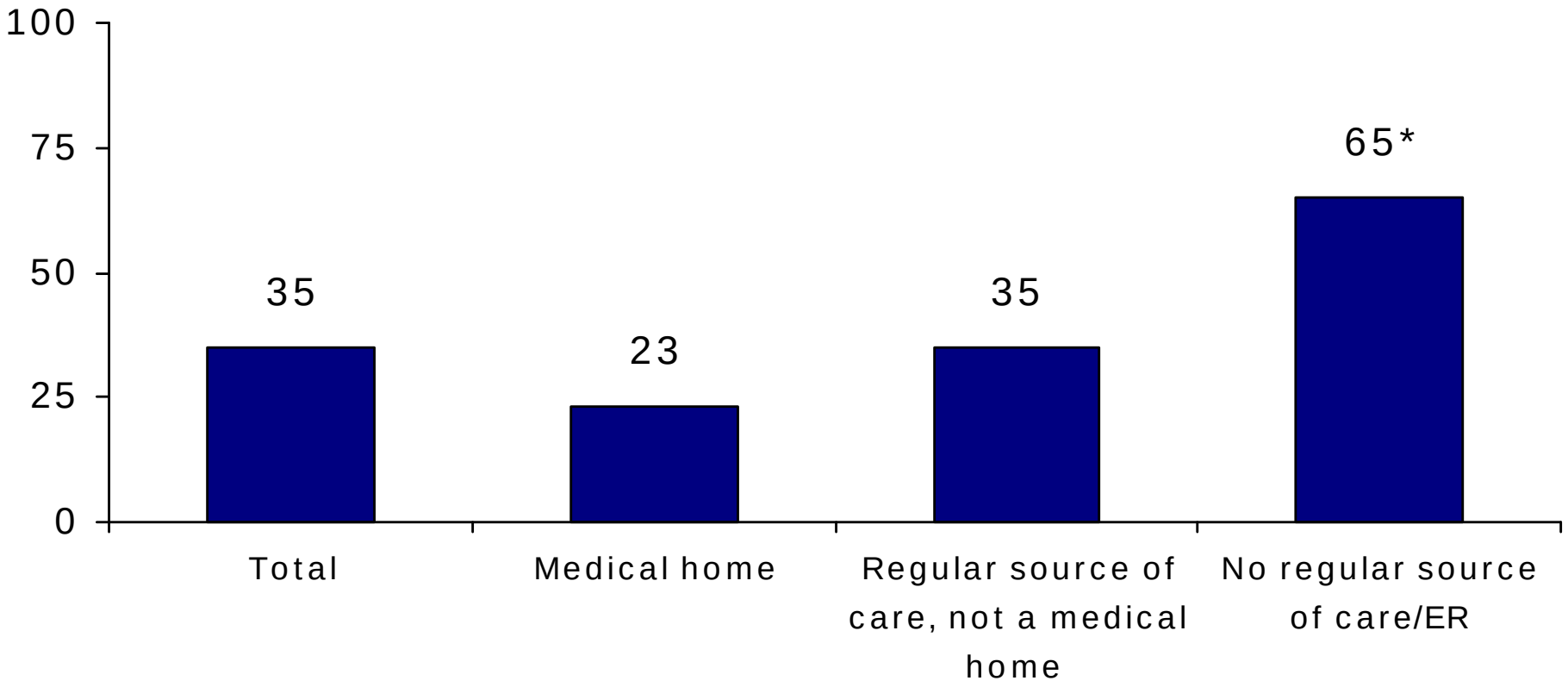
* Compared with whites, differences remain statistically significant after adjusting for income or insurance.

Source: The Commonwealth Fund 2006 Quality of Care Survey

Source: Commonwealth Fund 2006 Health Care Quality Survey.

Less than One-Quarter of Adults with Medical Homes Did Not Receive Plans to Manage Their Conditions at Home

Percent of adults ages 18–64 with any chronic condition who were *not* given a plan from a doctor or nurse to manage condition at home



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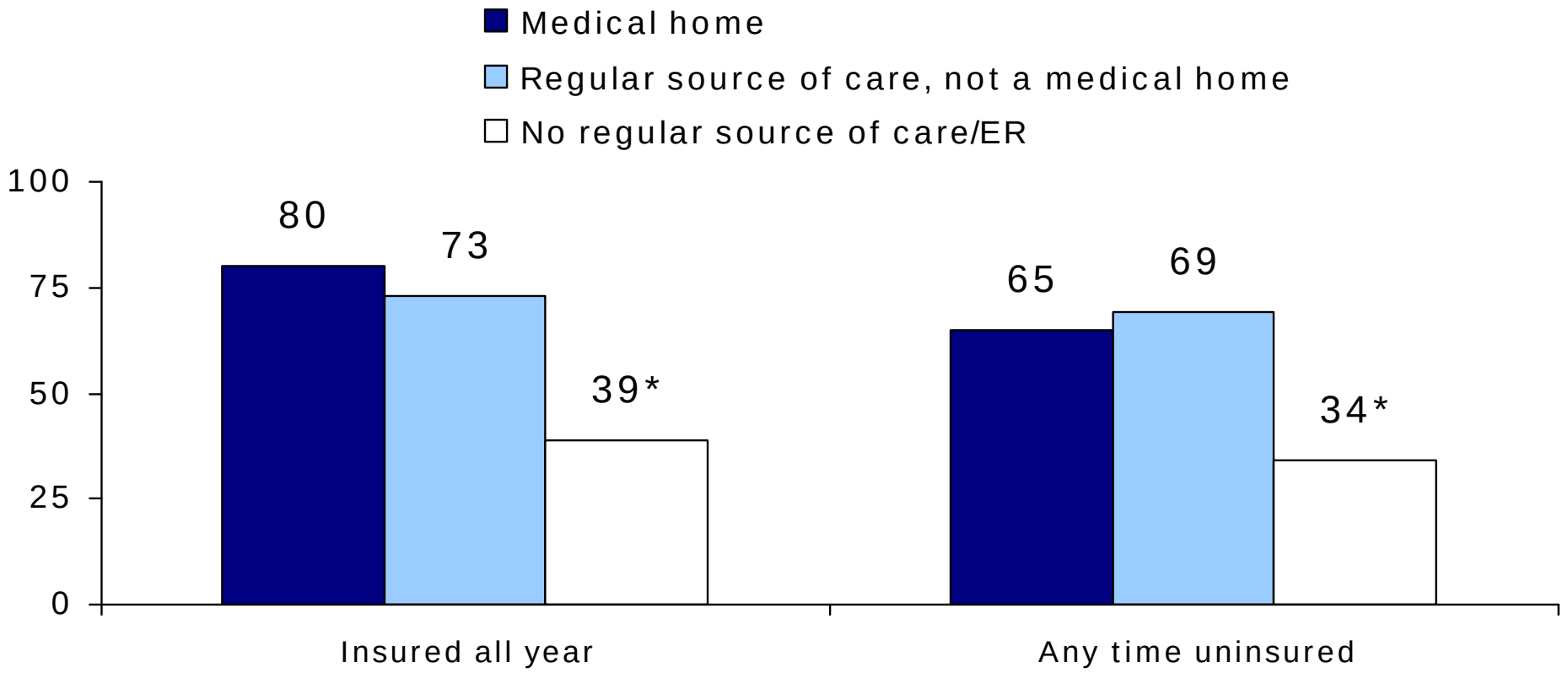

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THE COMMONWEALTH FUND

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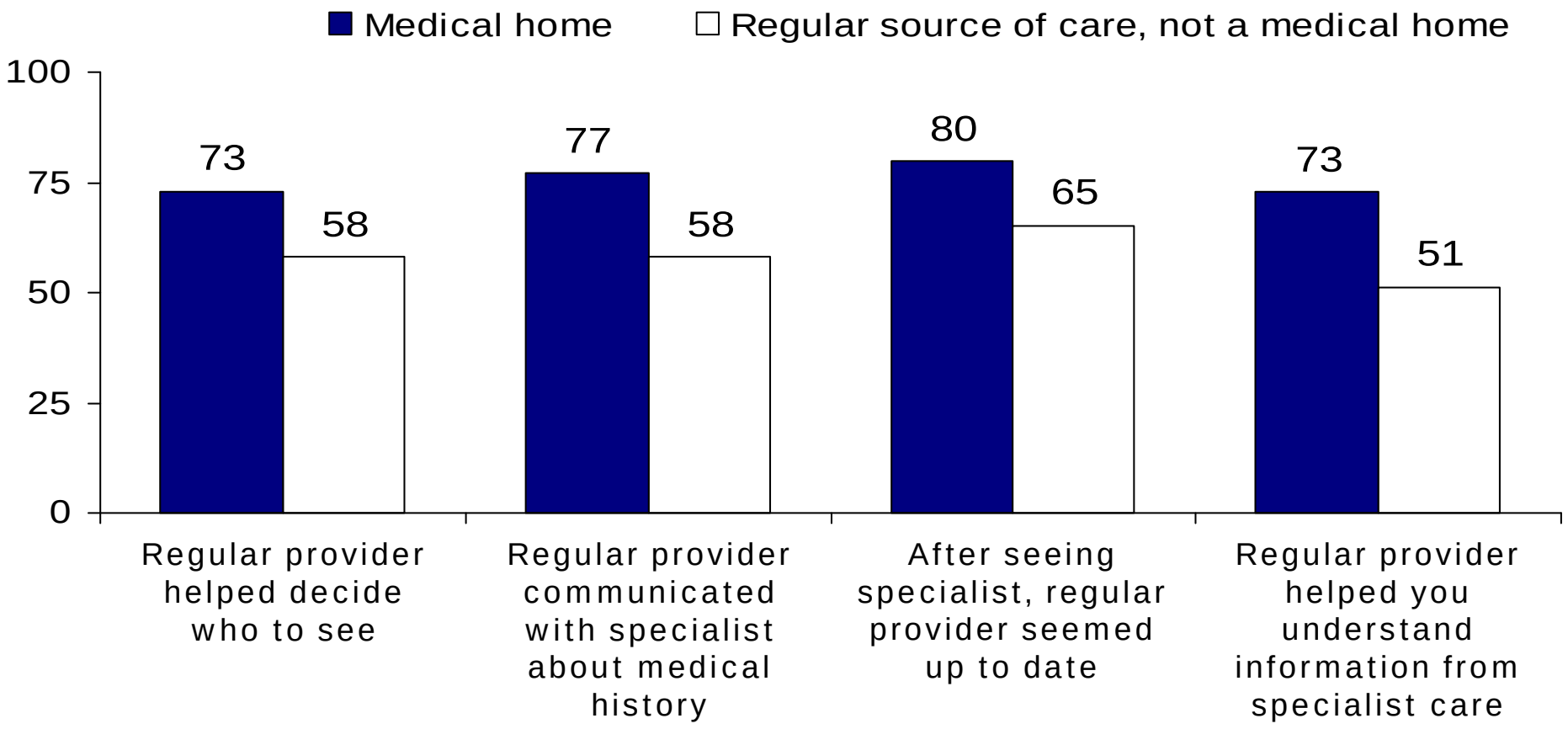

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THE COMMONWEALTH FUND

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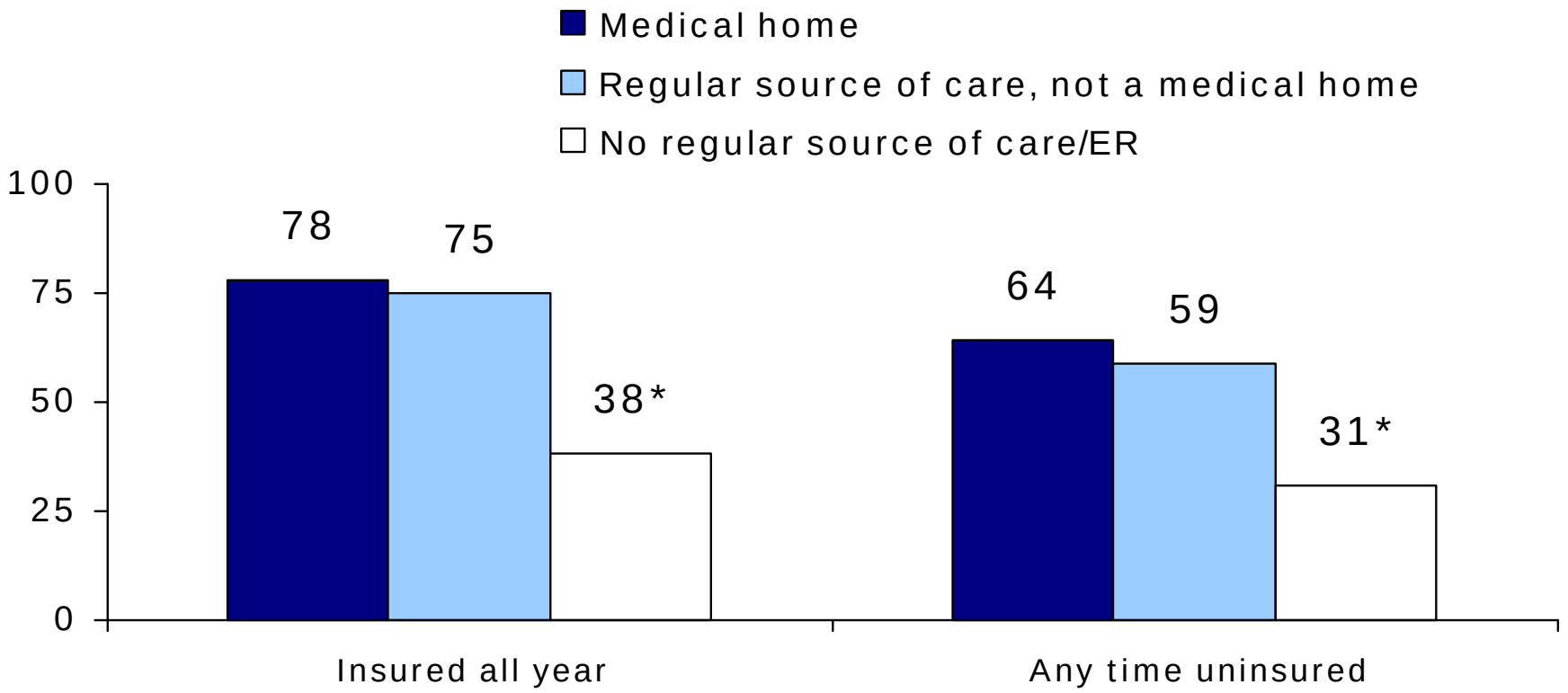

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Source: Commonwealth Fund 2006 Health Care Quality Survey.

THE COMMONWEALTH FUND

The Goals Of Health Care Delivery Transformation

- Extension of quality of life
  - With a measurable impact on public health
- Lessening of health disparities without compromising care of the majority
- Enhanced prevention
- Improved high quality, safe care for all

How Can We Affordably Enhance Preventive Care and Disease Management, Narrow Disparities, and Extend Quality of Life?

- We must facilitate community action and change
- We must provide high quality primary care for all

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substances

COMMUNITY MEDICINE/HEALTH



1) **Care to vulnerable populations**
2) **Health promotion through programs and community engagement and partnerships**

- Epidemiology
- Biostatistics
- Environmental Health
- Health Services Research
- Social/Behavioral Determinants

Public Health

Community Medicine / Health

Center for Urban Health

DFCM/TJU/TJUH

Primary Care

North Philadelphia

- •Project Home
- •Federation
- •Churches

West Philadelphia

- •TOCFWH
- •Belmont
- •Churches
- •Senior Centers

South Philadelphia

- •Point Breeze
- •Dixon House
- •South East Philadelphia Collaborative
- •Churches

- Mazzoni
- Jeff HOPE
- YES
- Refugee Clinic
- PATHWAYS
- Wellness Center
- Senior Centers

Why Must We Enhance Primary Care?

- Delivery
- Systems based on primary care achieve better health outcomes at lower cost
  - We can’t afford any other approach

Percent Spending On Primary Care

Program/Plan	% Spent on Primary Care
Most U.S. health care plans	6-7%
Kaiser Permanente and Group Health	12-13%
Geisinger Clinic	8.3%
Britain	24%
Kaiser Permanente Northwest	21%


The sun is rising on a new idea . . .

The Research Revolution

Department of Family and Community Medicine

Richard C. Wender, MD

Alumni Professor and Chair

Jefferson™
Medical College

An analysis of more then 50 years of research funding from the NIH suggests that it has helped to avert up to 1.35 million deaths per year from: cardiovascular disease, stroke, cancer and diabetes

Menton, KG et al. www.pnas.org/cgi/

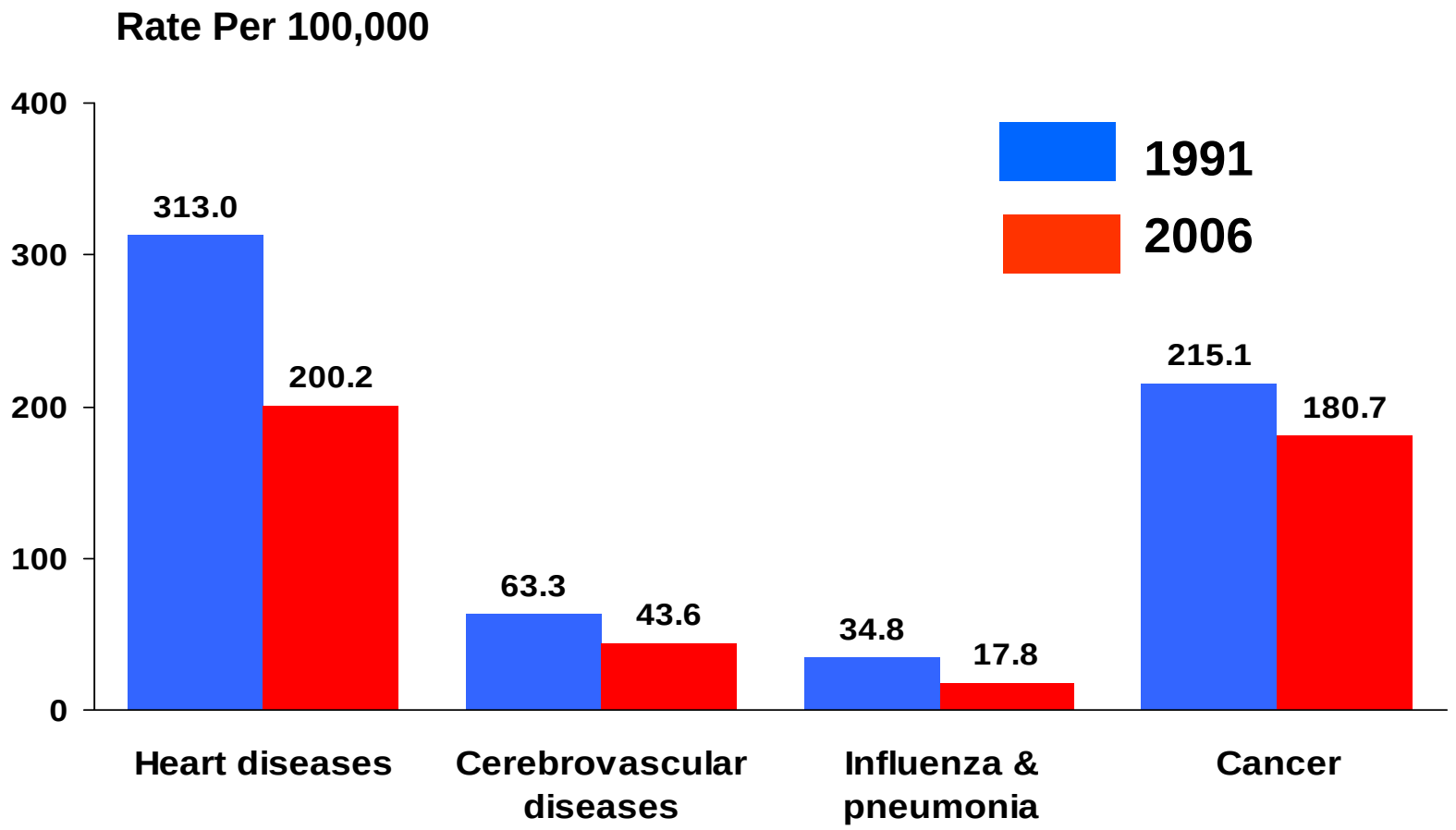
NIH funding has had a dramatic positive effect on public health

.....or not

The Research Engine

And shouldn't we ultimately judge the success of our research enterprise by the health outcomes of our population?

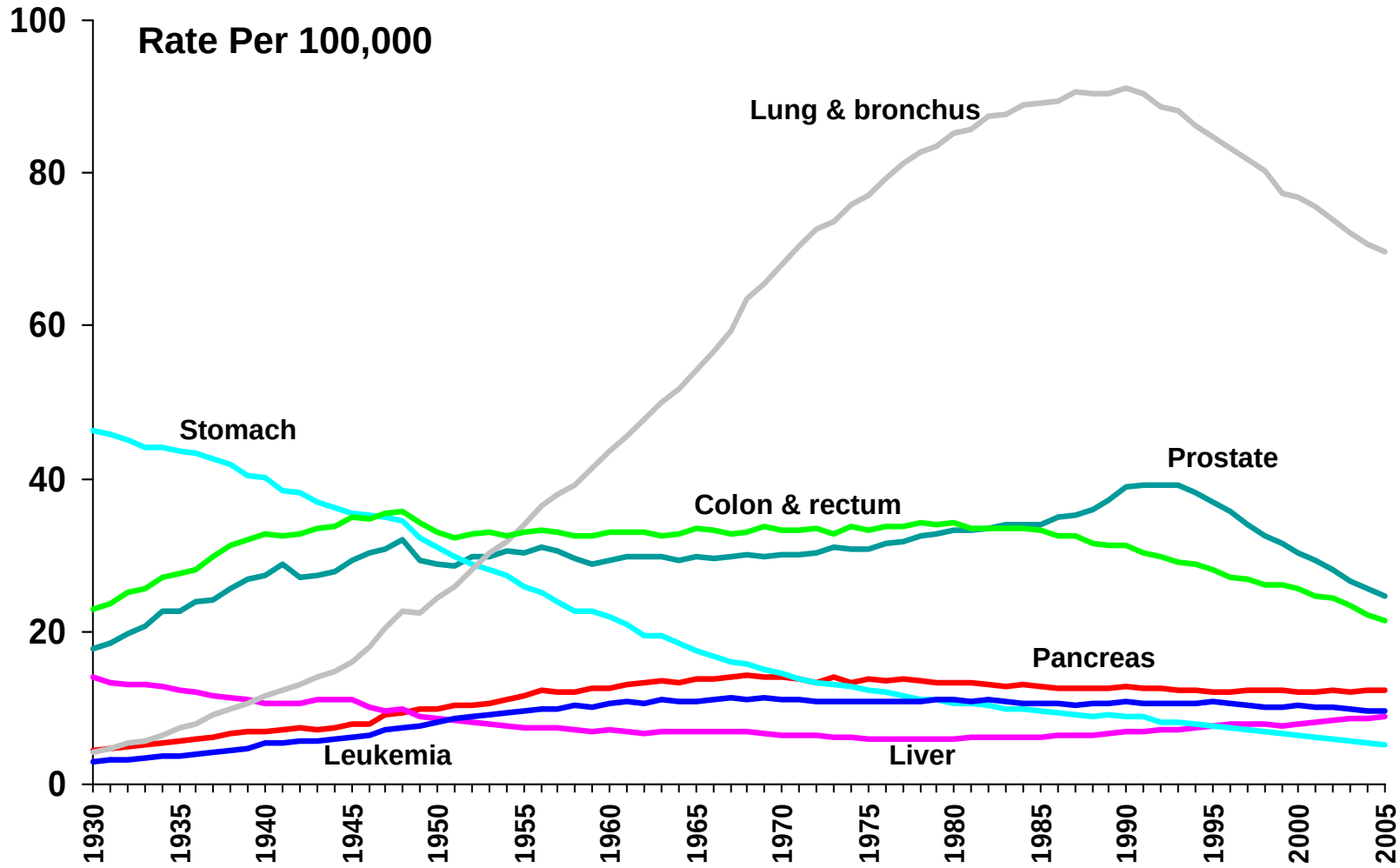
Change in US Death Rates* from 1991 to 2006



*** Age-adjusted to 2000 US standard population.**
Sources: 1950 Mortality Data - CDC/NCHS, NVSS, Mortality Revised.
2006 Mortality Data: US Mortality Data 2006, NCHS, Centers for Disease Control and Prevention, 2009.

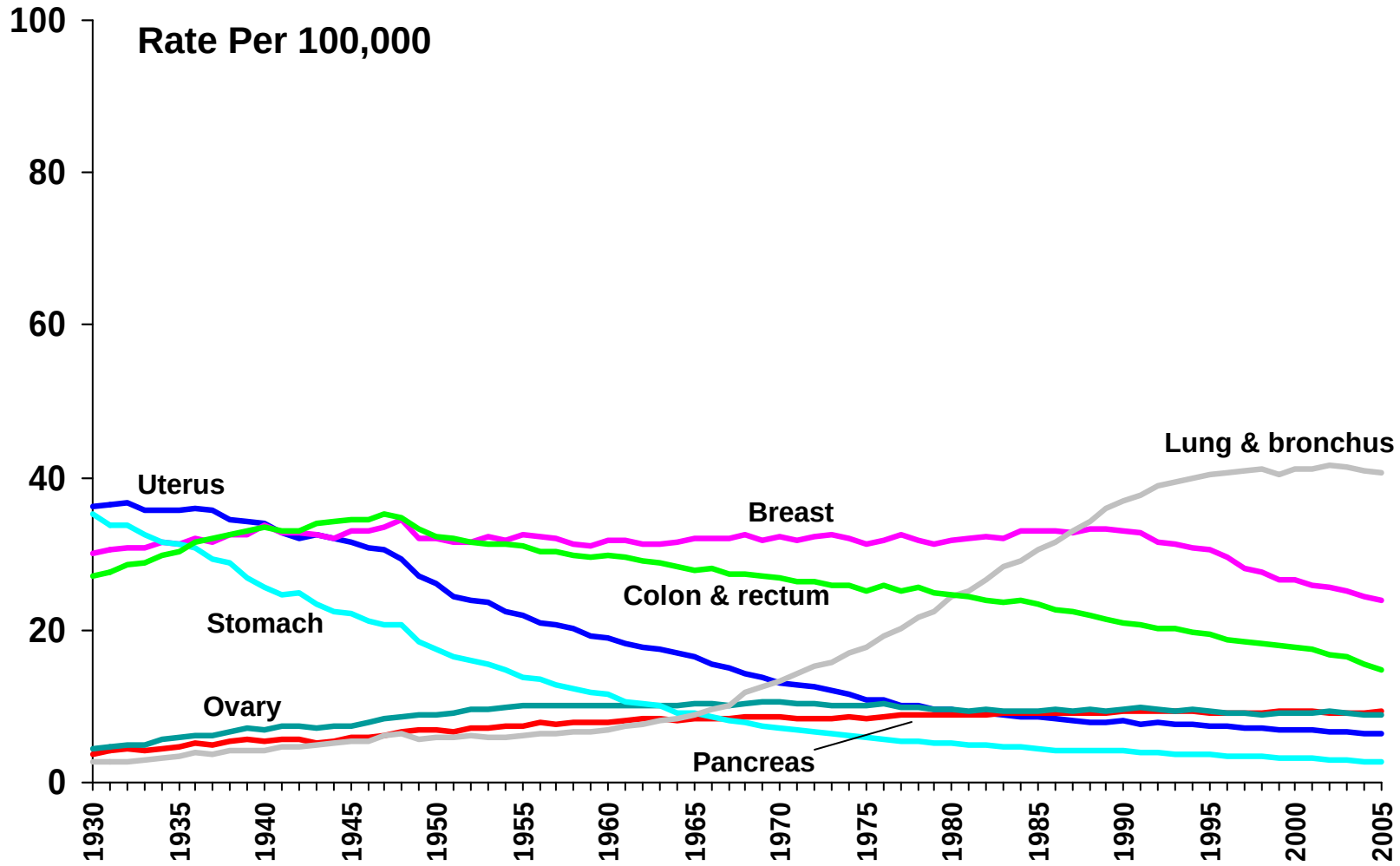
Since 1971, Americans have spent close to $300 billion in fighting cancer

Cancer Death Rates* Among Men, US,1930-2005



*Age-adjusted to the 2000 US standard population.
Source: US Mortality Data 1960-2005, US Mortality Volumes 1930-1959,
National Center for Health Statistics, Centers for Disease Control and Prevention, 2008.

Cancer Death Rates* Among Women, US,1930-2005



*Age-adjusted to the 2000 US standard population.
Source: US Mortality Data 1960-2005, US Mortality Volumes 1930-1959,
National Center for Health Statistics, Centers for Disease Control and Prevention, 2008.

“ When you break down the Big Four cancers by stages, long-term survival for advanced cancer has barely budged since the 1970’s”

Clifton Lee Fortune Magazine March 22, 2004

“Throug munity
publishe
studies .

...on mice

“ . . . Many more cancer deaths can be averted by concerted action to control tobacco and obesity, by redoubling efforts in mammography and colorectal cancer screening, and by enacting policies to close gaps in access to cancer detection and treatment services”

Byers E et al Cancer 2006

Flat NIH budget from 2004-2008 created acute research distress

Funding for clinical research is 1/3 of NIH budget

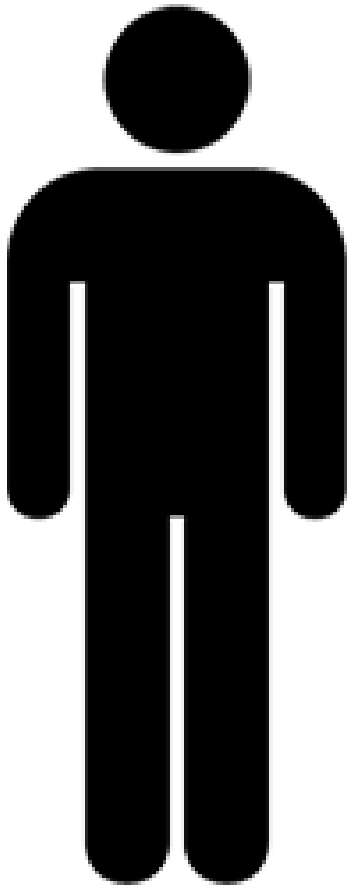
Funding for true translational research, far lower

Making a living seeking NIH and CIHR funding through the current peer review process can be a scary and frustrating experience

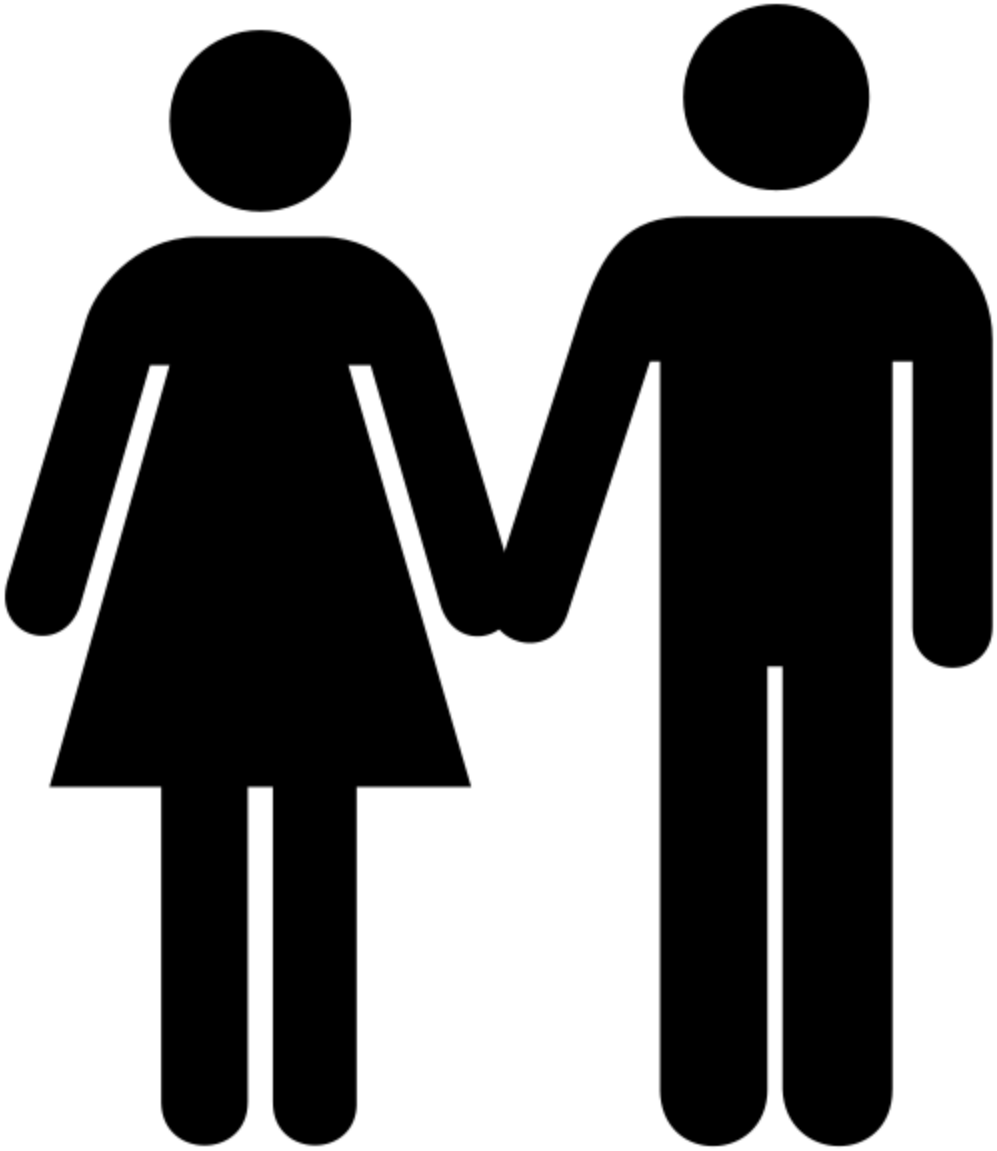
I wonder what is was like...

In The Beginning...

The first research project

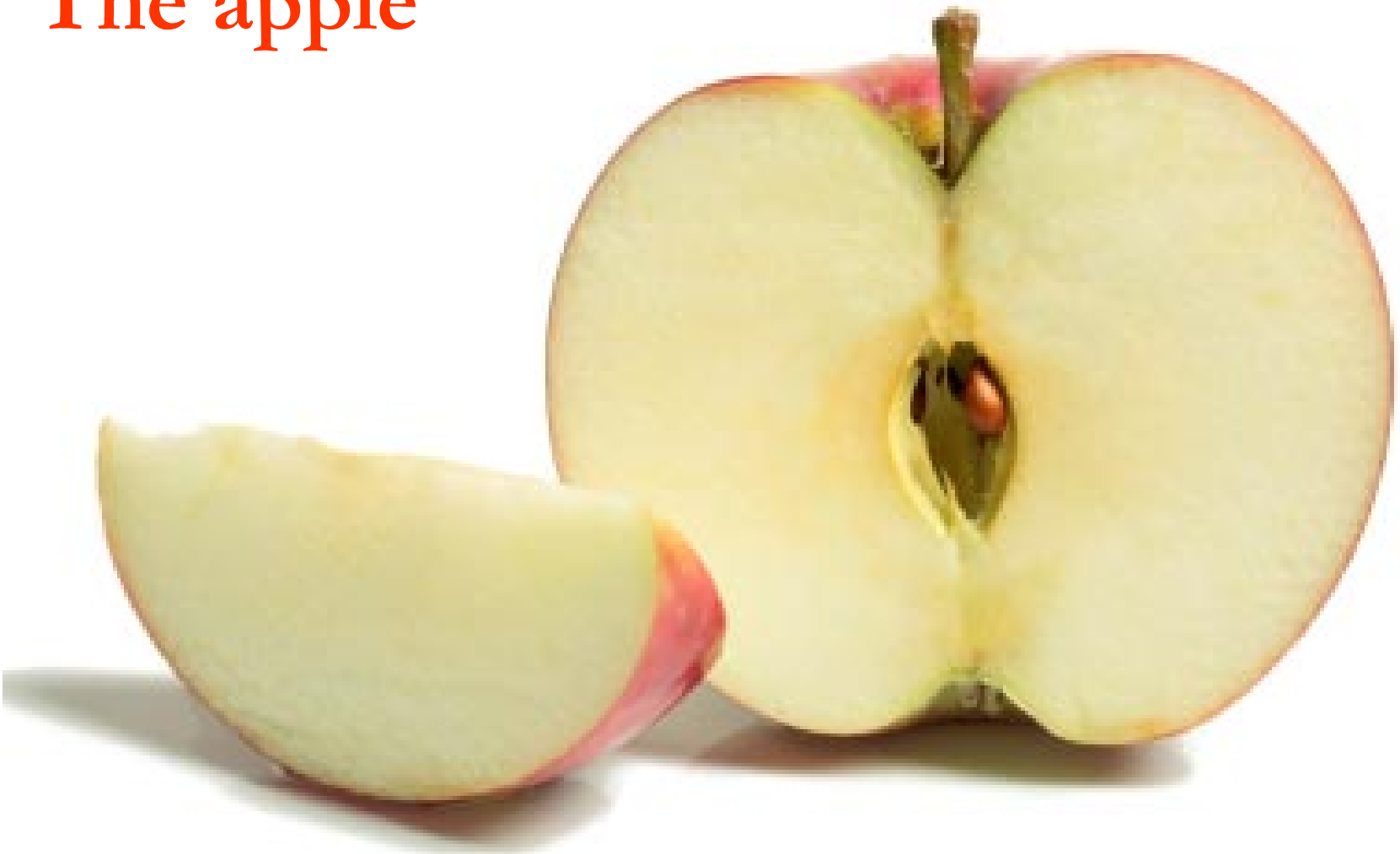


Adam



The effect of deception in a group of educationally naïve humans

The apple




ANGELS
TM
angelsbaseball.com


Dear God:
Fascinating and innovative! But the title is not working for us. Too long and “researchy”. And we definitely don’t get the apple. Why not something exotic, like….

The Pomegranate

God prepared a resubmission

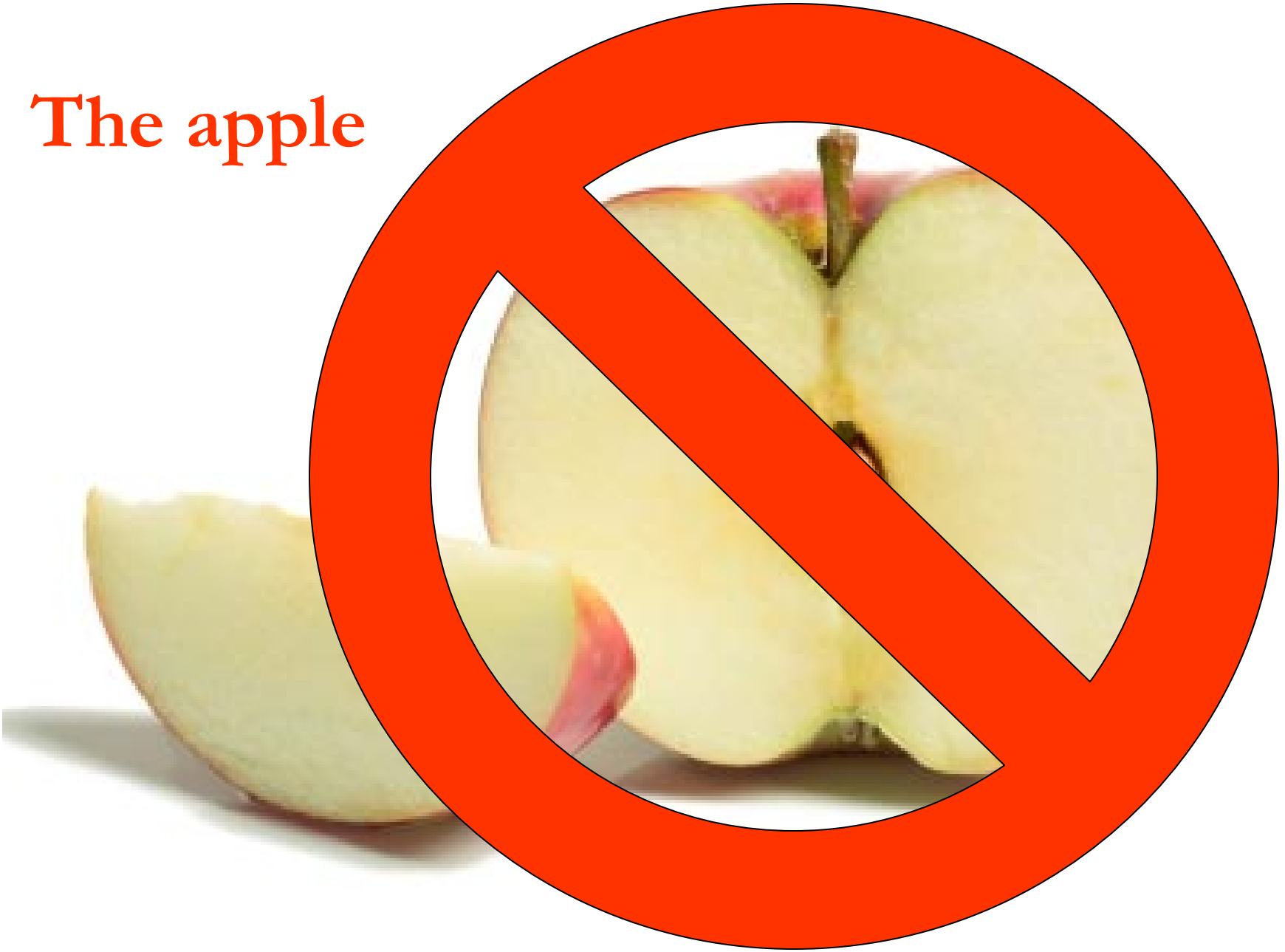
The effect of deception in a group of educationally naïve humans

The Effect of Deception in a group of Educationally Naïve humans

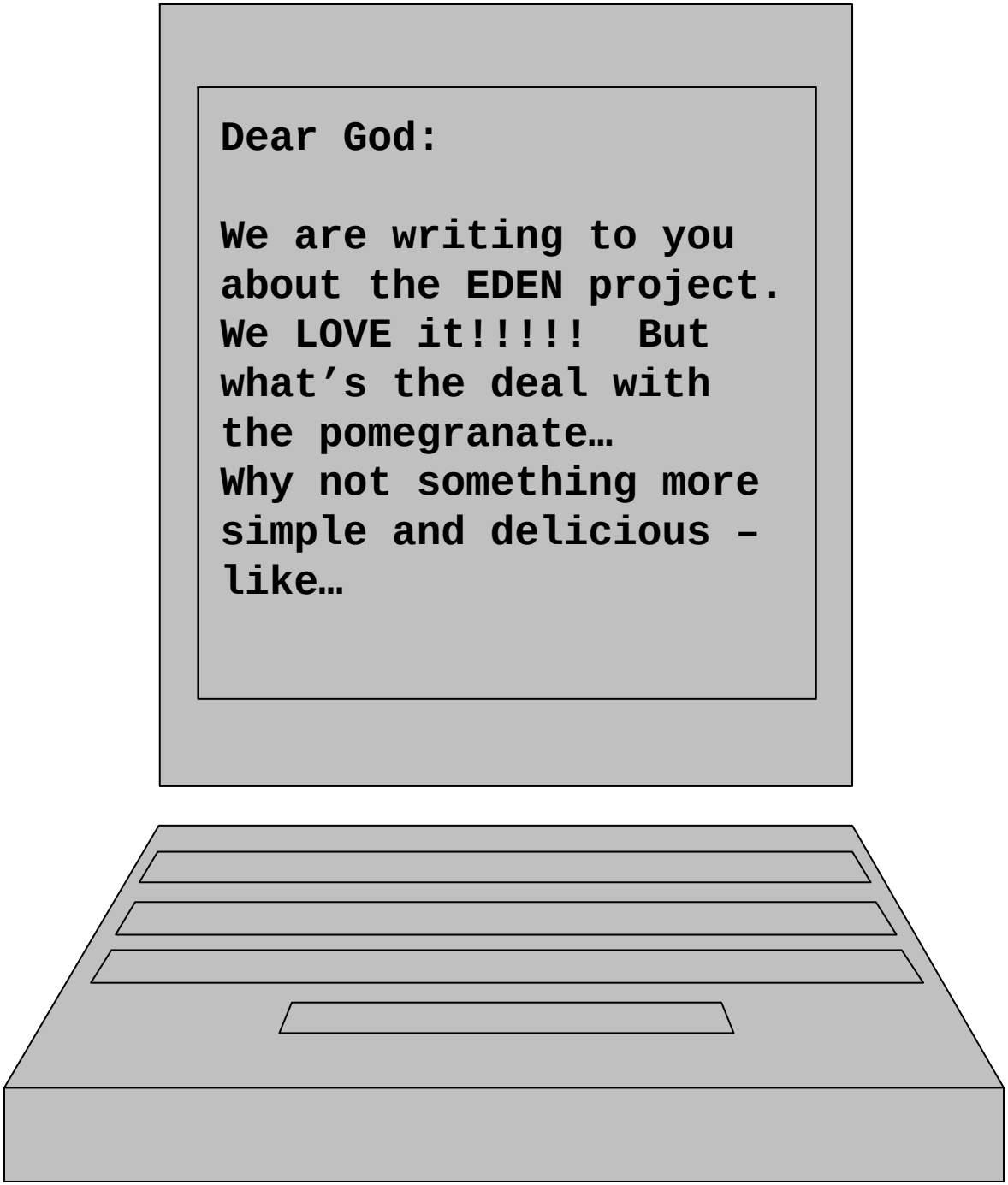
....or.....

The EDEN Project

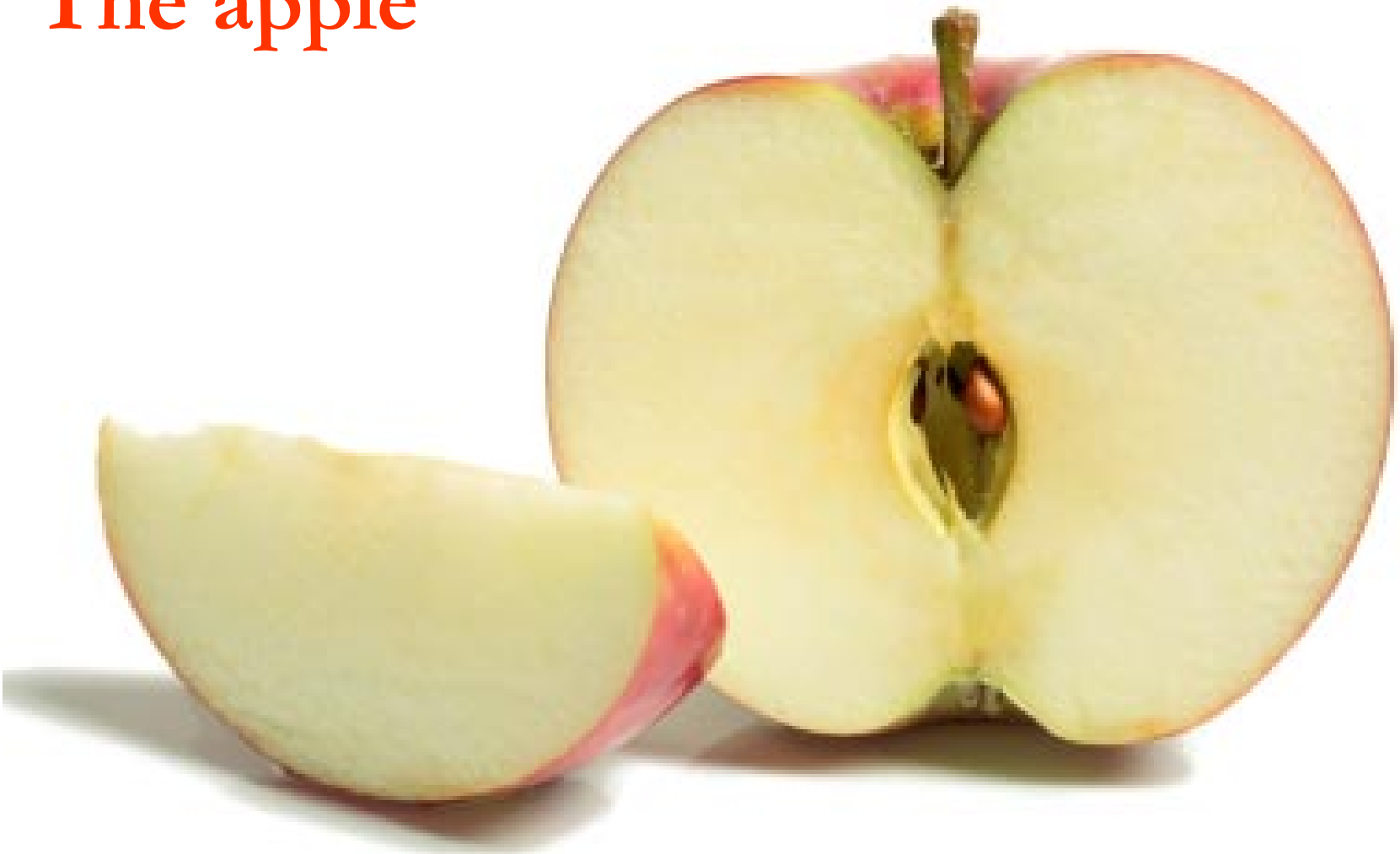
The apple



The Pomegranate

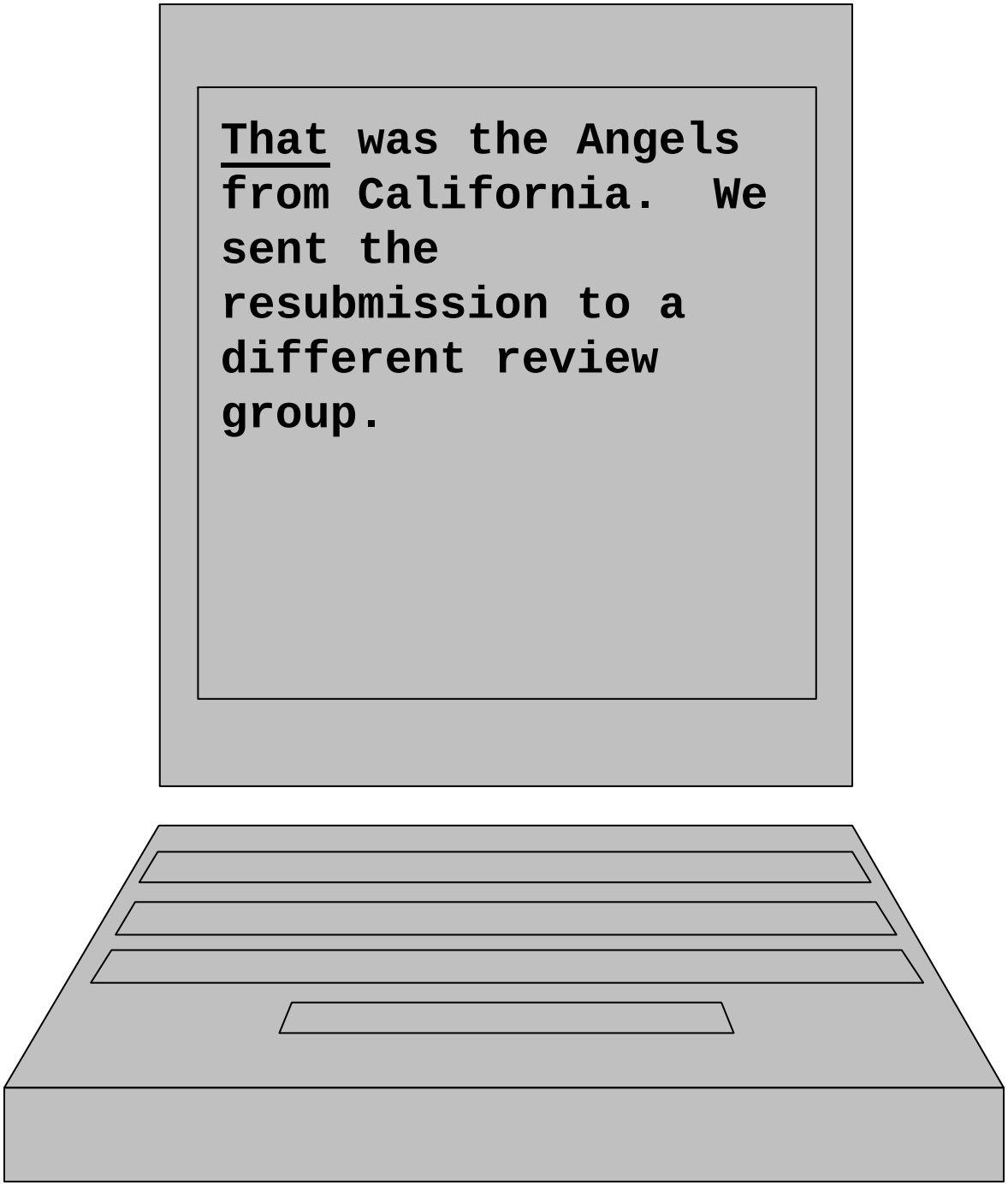

Dear God:
We are writing to you about the EDEN project. We LOVE it!!!!! But what's the deal with the pomegranate…
Why not something more simple and delicious – like…

The apple

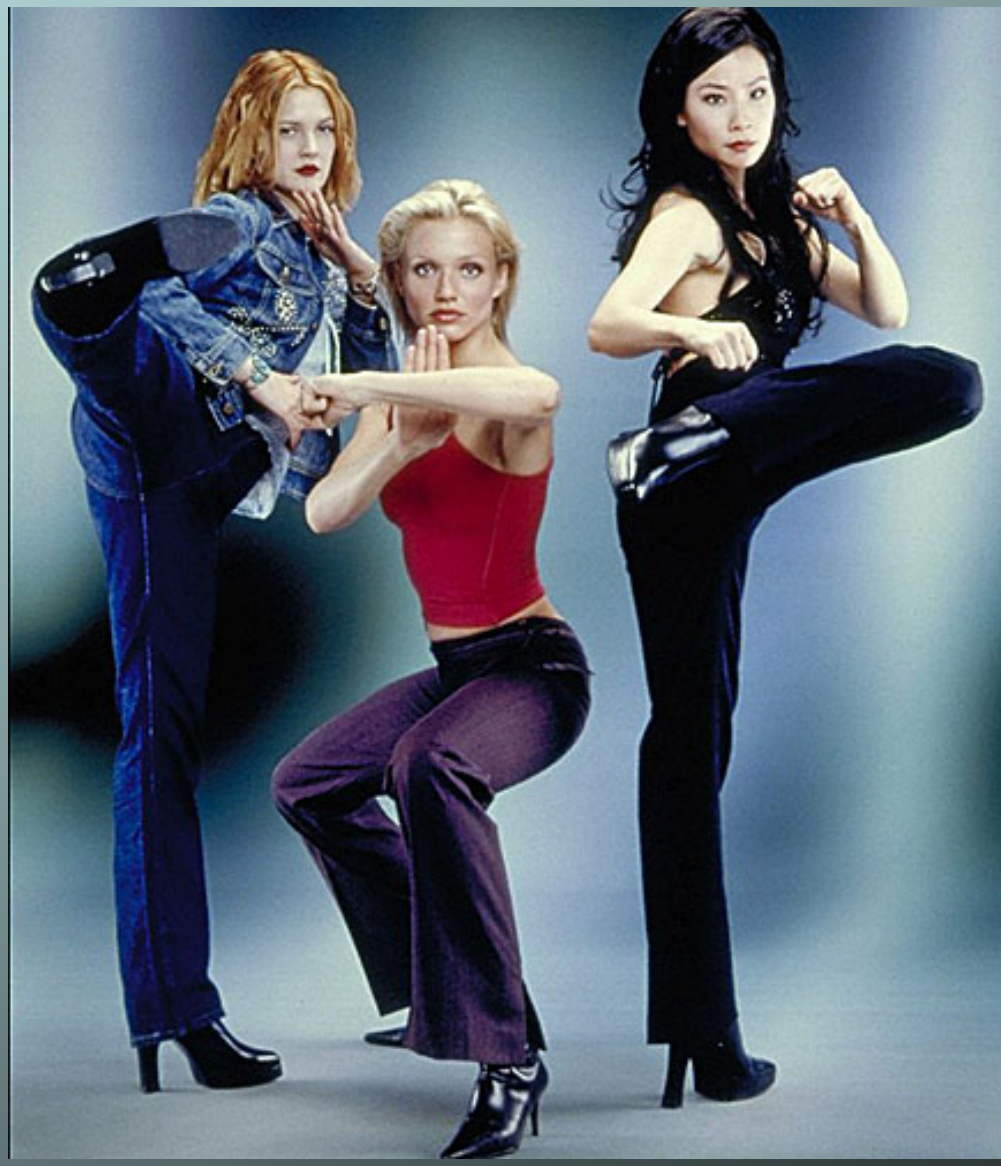


God responded

"But the Angels are the ones who wanted the pomegranate"


That was the Angels from California. We sent the resubmission to a different review group.


CHARLIE'S
ANGELS



The apple is BACK!

Human beings' insatiatible drive to acquire new knowledge was confirmed

God thought

"We need a neater way to investigate questions about human behavior"

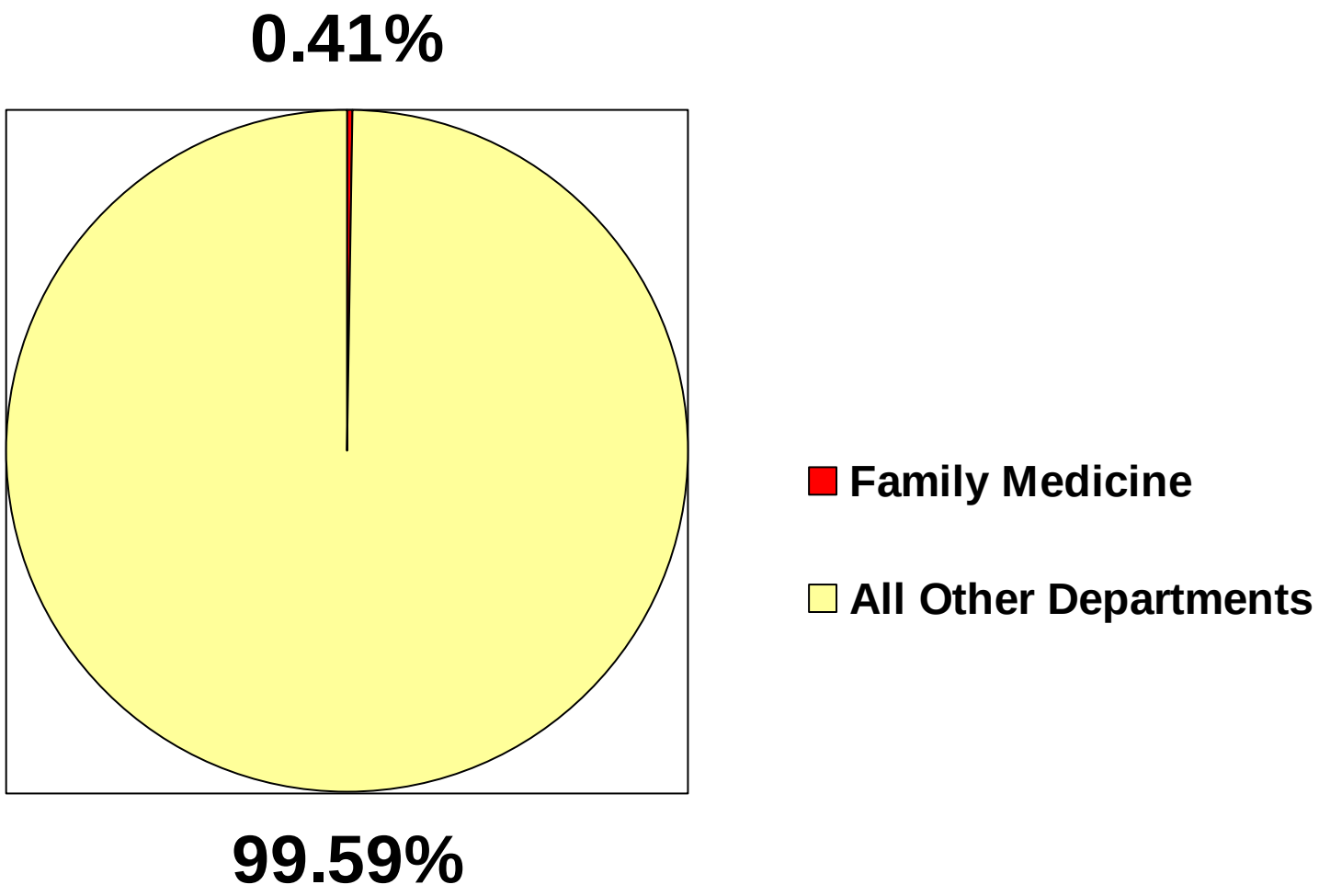
A neater way to investigate questions about human behavior

*A **N**eater way to*
*I**nvestigate questions***
*about **H**uman behavior*

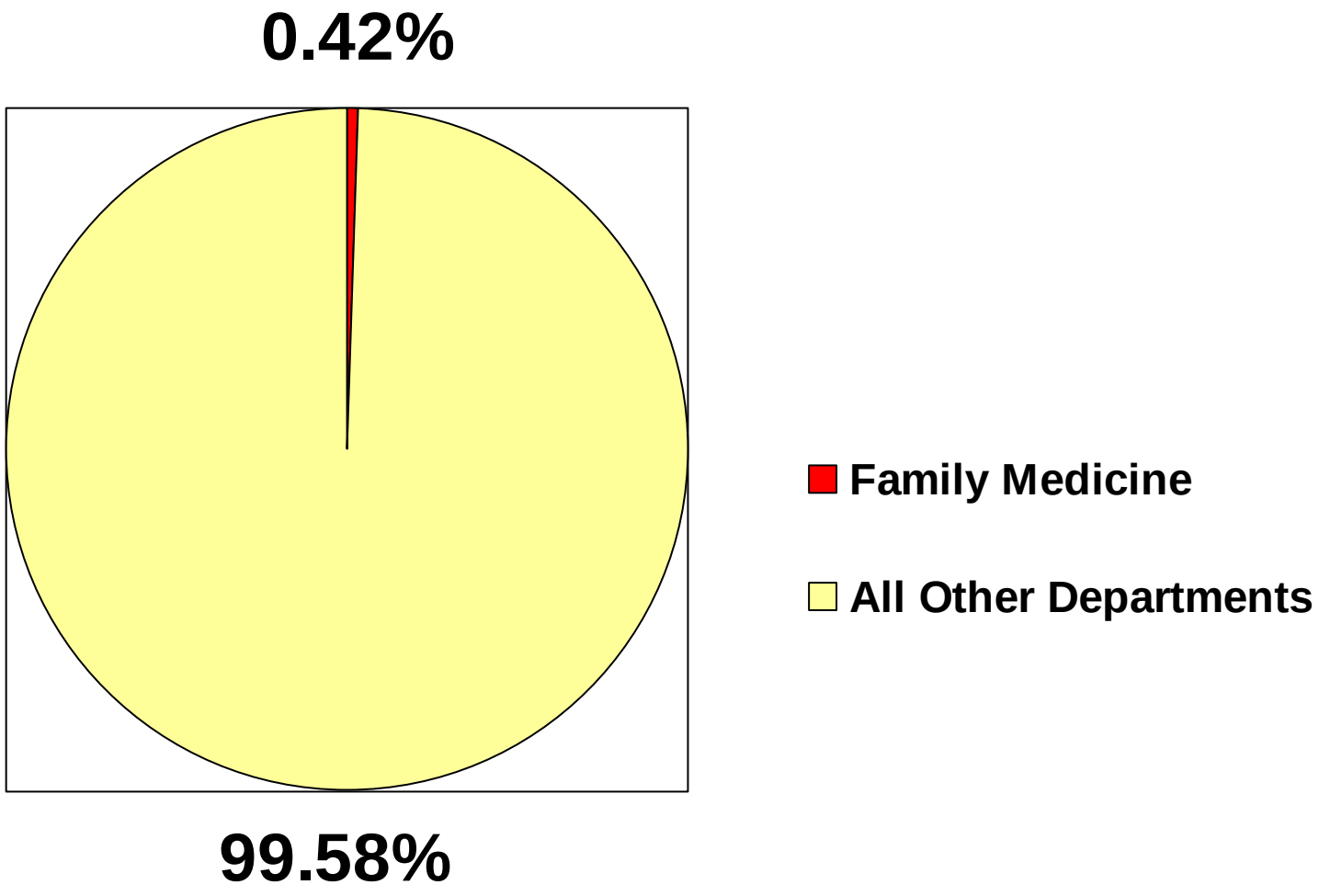
....or.....

NIH

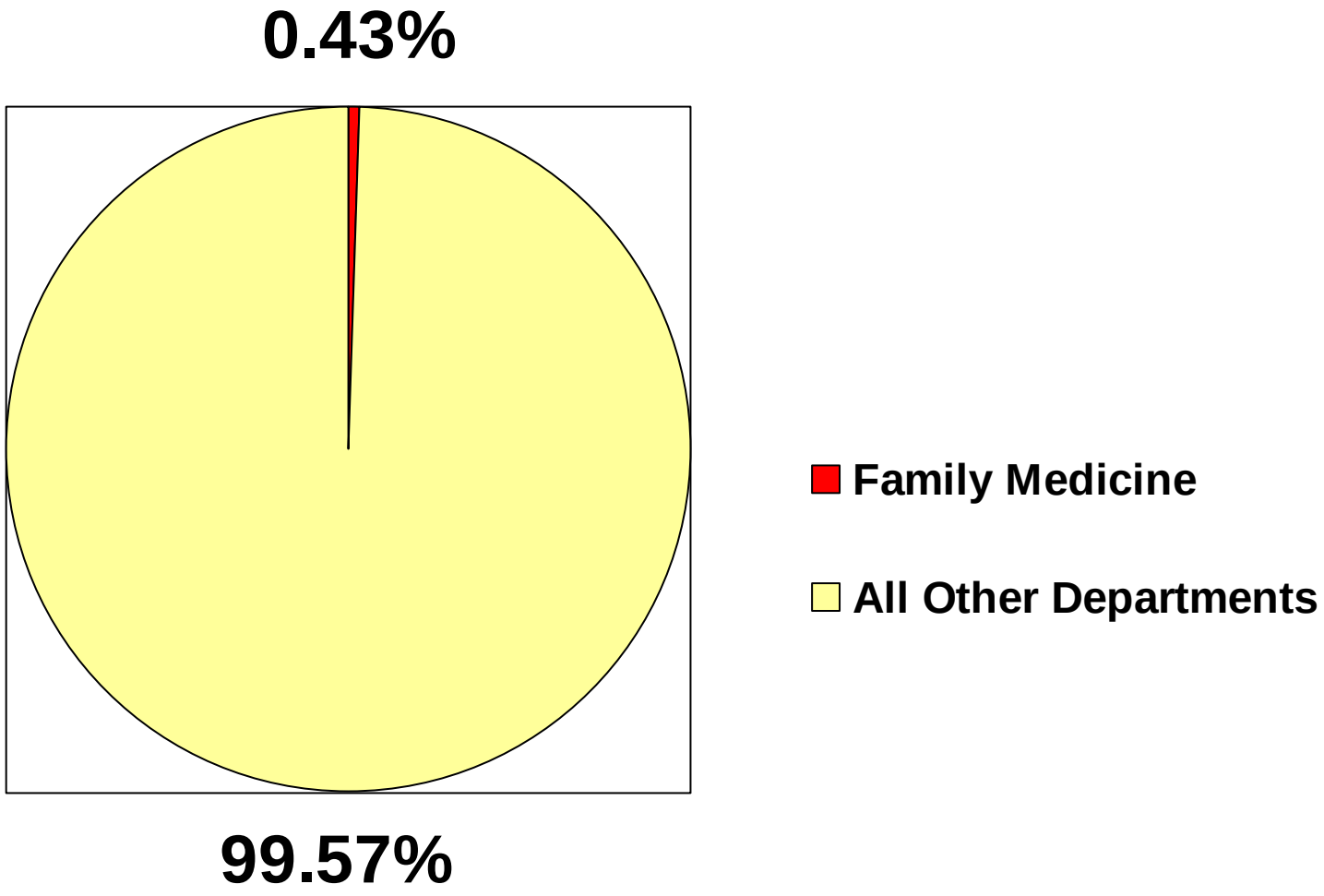
NIH Funding 2006

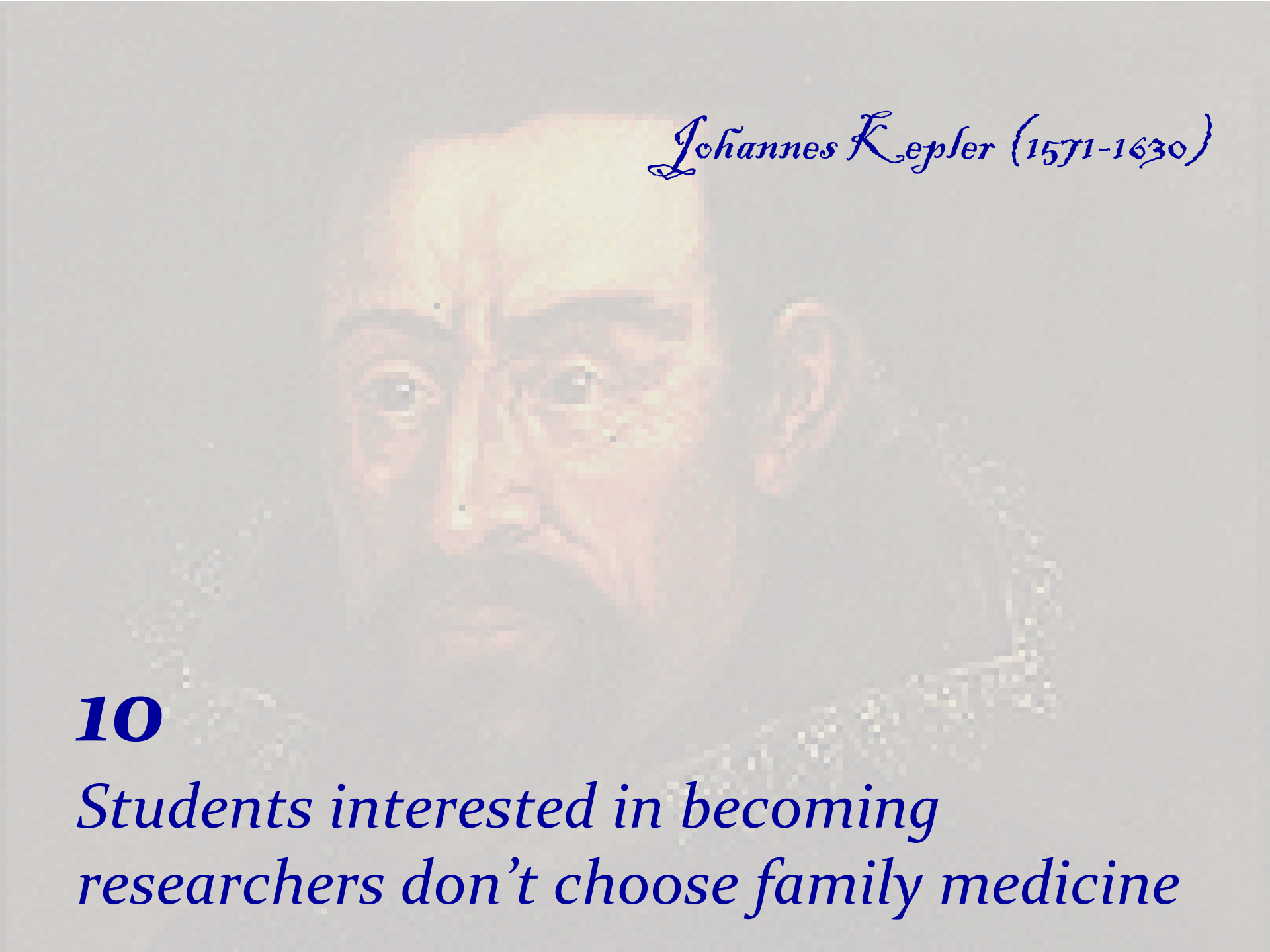


NIH Funding 2007



NIH Funding 2008





10

Students interested in becoming researchers don't choose family medicine

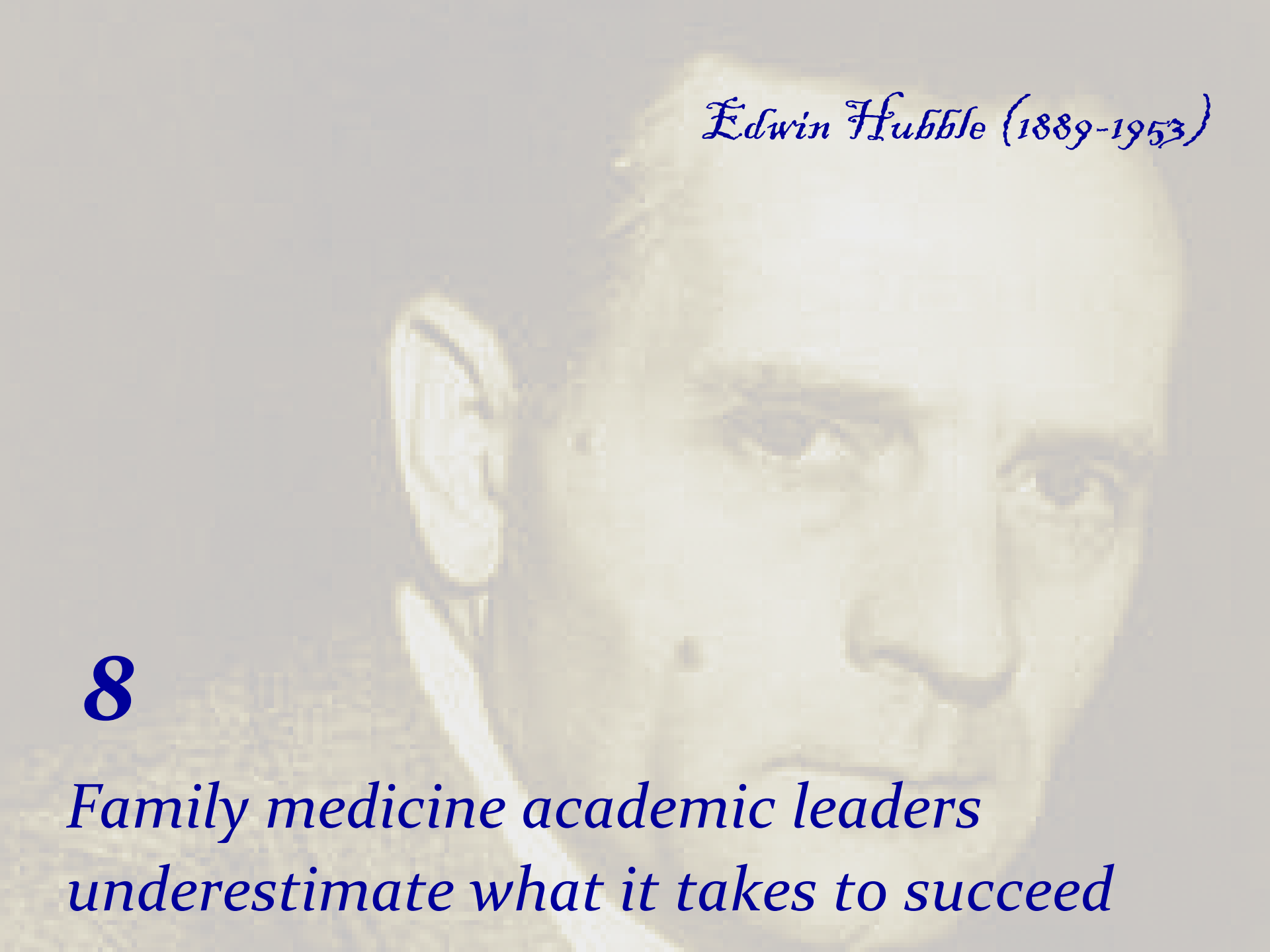
"Only 1.4% of medical students graduating from MD/PhD programs from 2000 – 2006 chose family medicine as their career paths – by far the lowest of any specialty"

Seeharsen DA, Weaver SP. Fam Med 2009
Andriole DA et al. JAMA 2008

9

Many family medicine academic programs do not conduct research

In 2007, only 44 or 120 departments of family medicine sponsored an NIH Principle Investigator



8

Family medicine academic leaders underestimate what it takes to succeed

NIH Funding in Family Medicine: An Analysis of 2003 Awards

Howard K. Rabinowitz, MD
Julie A. Becker, PhD, MPH
Naomi D. Gregory, BA
Richard C. Wender, MD

Department of Family and Community Medicine, Jefferson Medical College, Thomas Jefferson University, Philadelphia, Pa

ABSTRACT

PURPOSE We wanted to analyze National Institutes of Health (NIH) awards to departments of family medicine.

METHODS We obtained the list of NIH awards to departments of family medicine in 2003, and collected additional information from the Internet regarding each principal investigator (PI), including whether he or she worked primarily in a core (central) organizational component within a family medicine department.

RESULTS One hundred forty-nine NIH awards were granted to 45 departments of family medicine, for a total of $60,085,000. Of 146 awards with a designated PI, approximately two thirds of awards (89, 61%) and awarded dollars ($39,850,000, 70%) went to PIs who were either not full-time family medicine faculty primarily working in family medicine departments, or they were not working in core family medicine organizational components. Few awards to physician PIs in these non-core areas were to family physicians (4 of 37, 11%), whereas most awards to physician PIs in core family medicine areas went to family physicians (40 of 45, 89%). In contrast, most K awards (research career programs) went to PIs in core areas (19 of 23, 83%), and most to family physicians (17 of 23, 74%). Nationally, only 17 R01 awards (research project, traditional) went to family physicians.

The majority of Family Medicine NIH funded investigators have a Masters or PhD

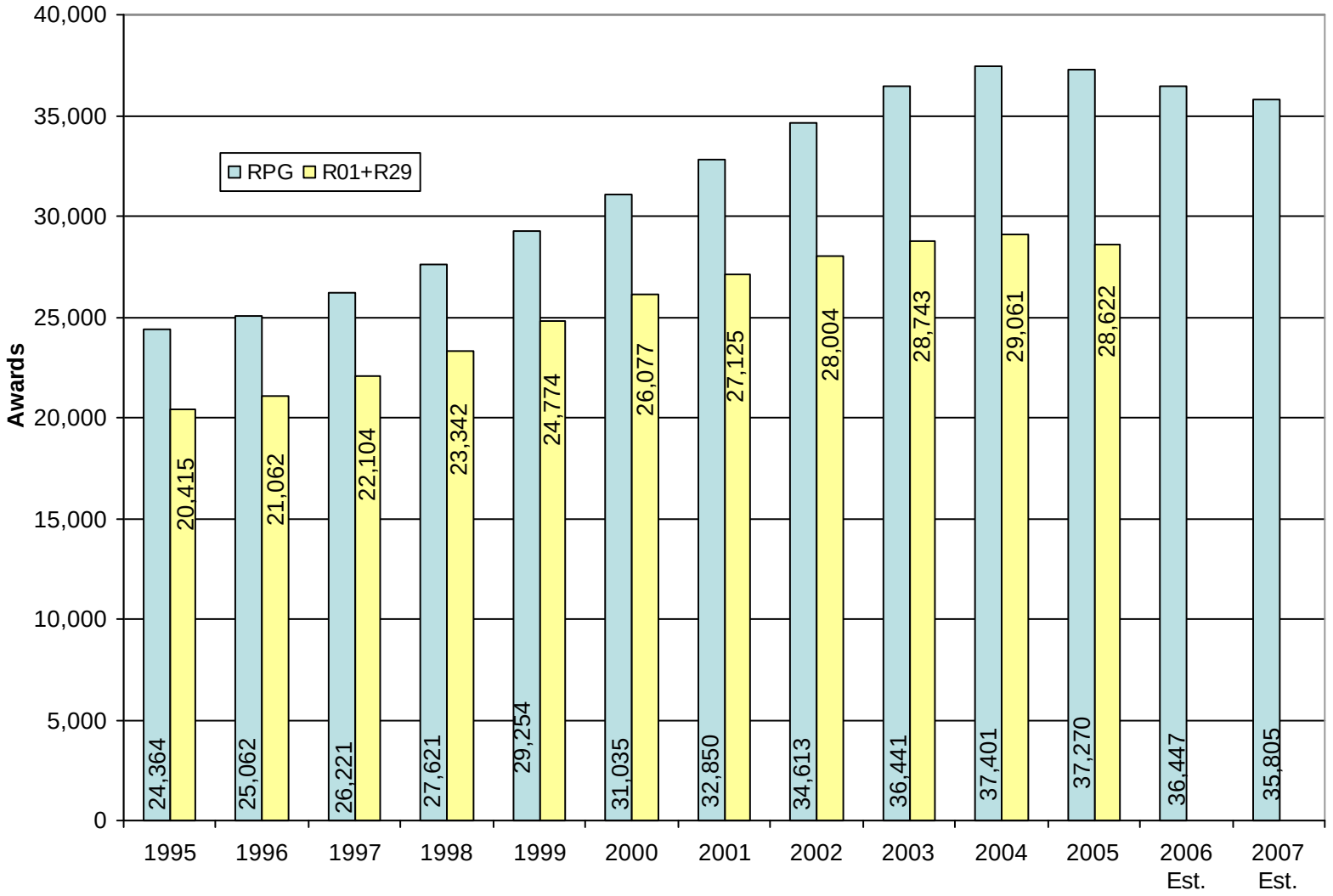
One-year “faculty development” fellowships will not do the trick

Rabinowitz et al. Ann of Fam Med 2006

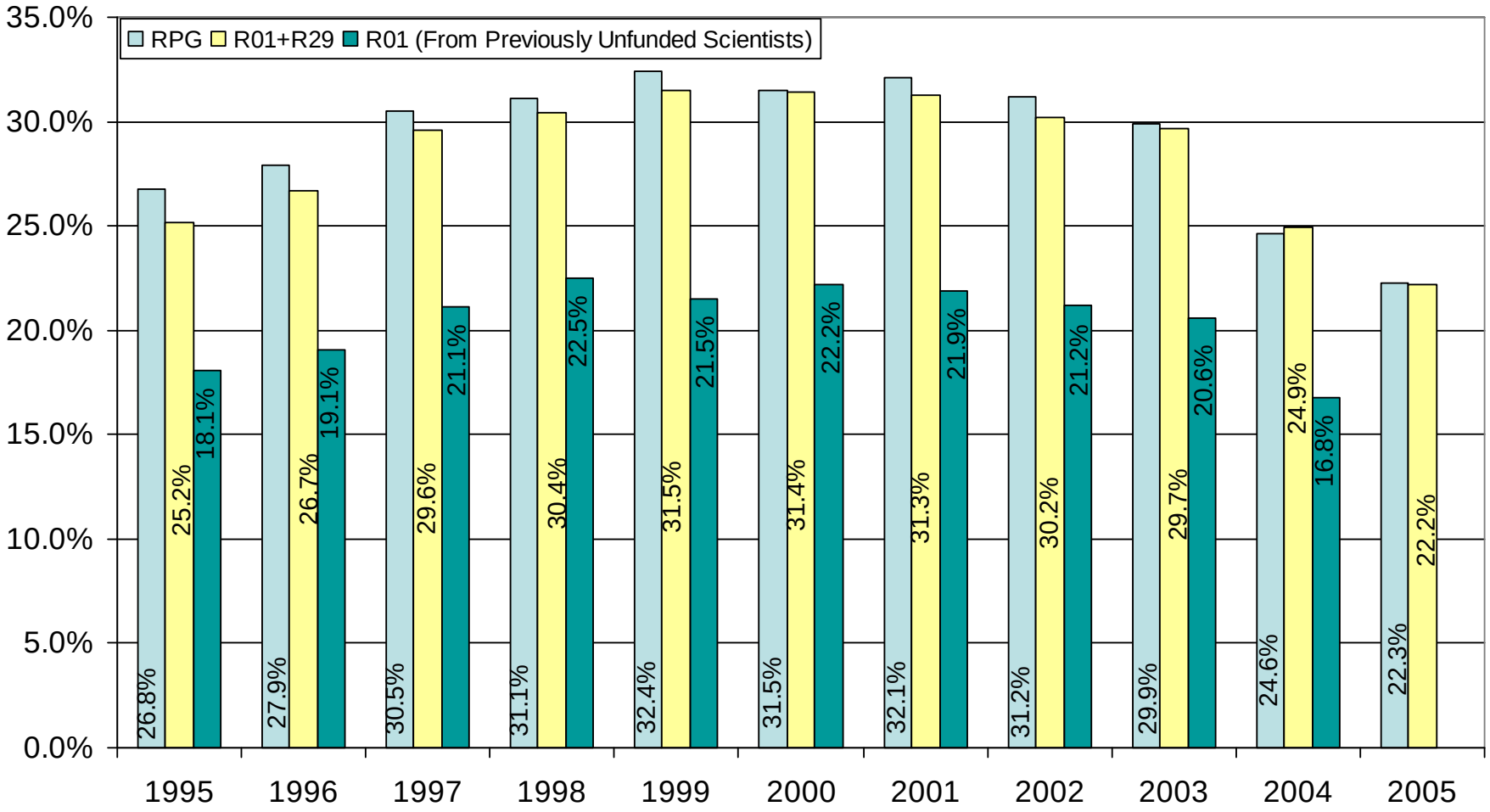
7

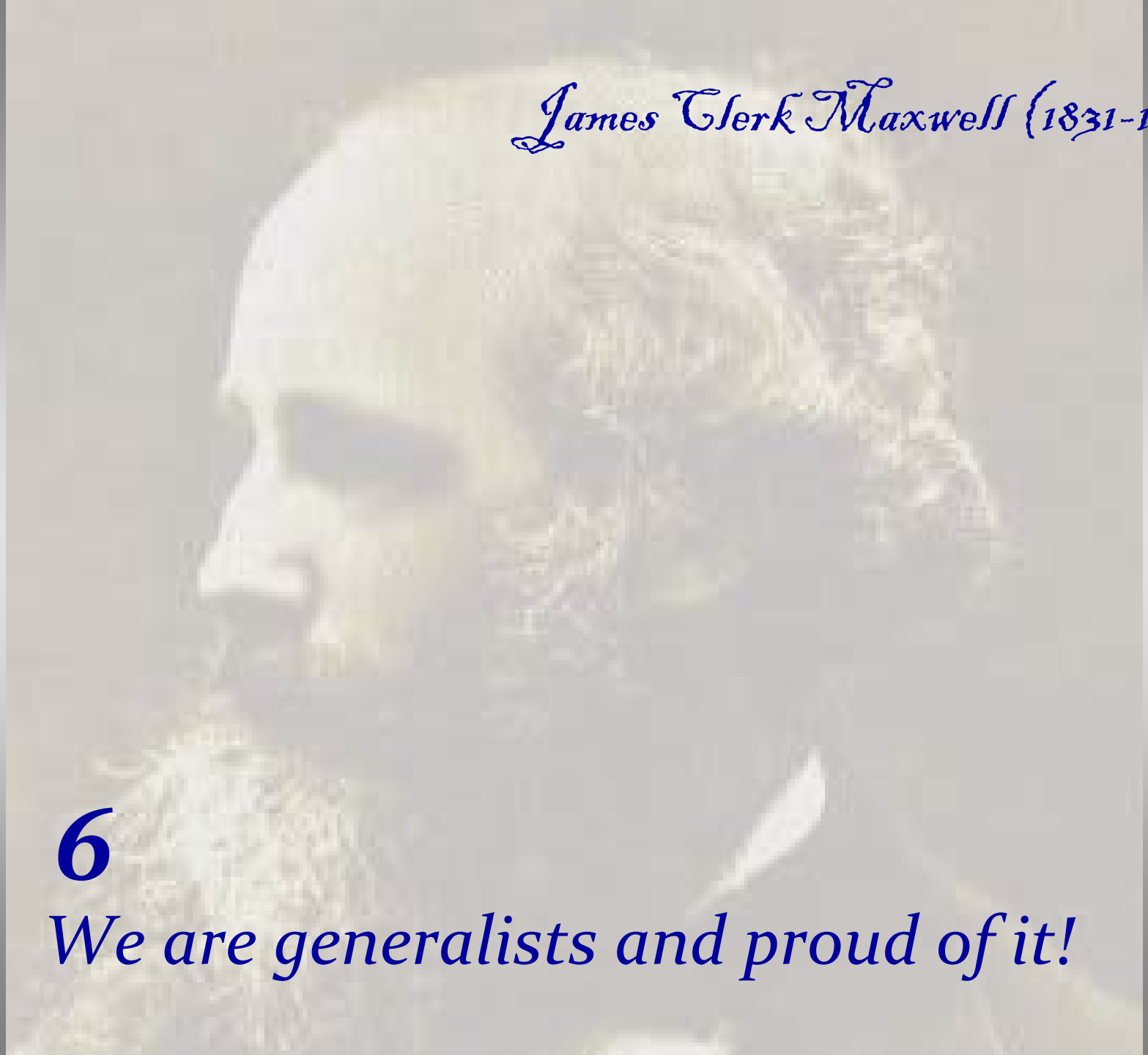
More and more are competing for less and less

Number of NIH Awards: FY1995-2007



Success Rates For All Competing NIH Grants: FY1995-2005





6

We are generalists and proud of it!

But NIH Does Not Support Generalism

Faculty Development

Family Medicine, the NIH, and the Medical-Research Roadmap: Perspectives From Inside the NIH

Sean C. Lucan, MD, MPH; Frances K. Barg, PhD, MEd; Andrew W. Bazemore, MD, MPH; Robert L. Phillips, Jr, MD, MSPH

Background and Objectives: *Family medicine has had little engagement with the National Institutes of Health (NIH), and it is unclear what NIH officials think about this.* Methods: *Purposive sampling identified 13 key informants at NIH for open-ended, semi-structured interviews. Evaluation was by content analysis.* Results: *NIH officials expressed the perception that family physicians have strong relationships with patients and communities and focus on interdisciplinary collaboration but that they do limited research and have weak research infrastructure. They also indicated that NIH has repackaged its stated focus, to include areas of research that might be applicable to family medi-*

“NIH is ‘two-thirds basic science’ and ‘disease-based’ . . . family physicians have ‘no natural home for seeking funding’”

5

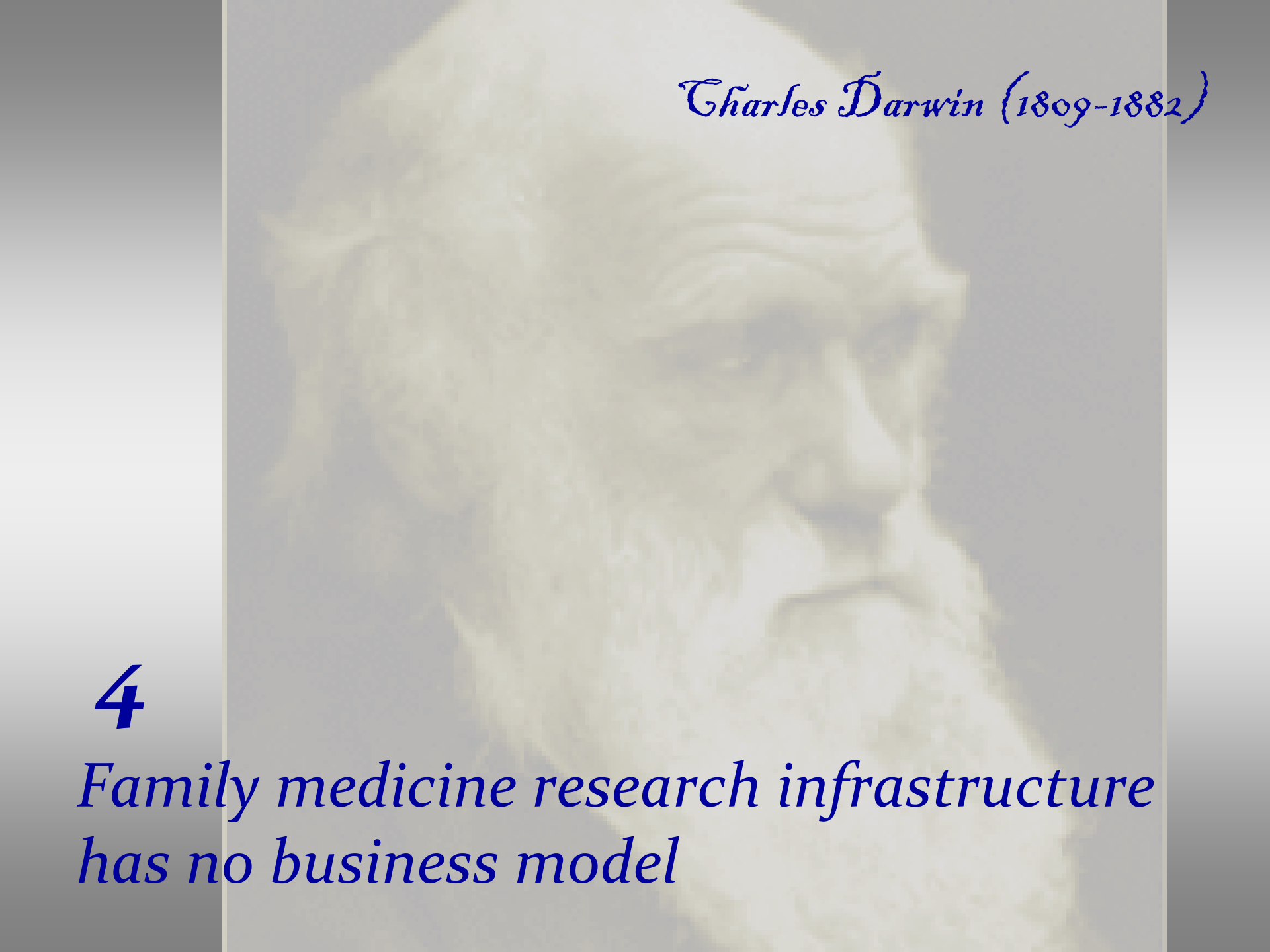
Family medicine research mentors are few and far between

Mentored career development awards are an important bridge to becoming an independent investigator

But: obtaining funding requires a skilled mentor with a proven track record

NIH Funding in Family Medicine – the 2003 Awards

- 146 total awards to 109 PI's
- 57 to PI's in "core" family medicine department
- 44 awards to family physicians
  - 17 family physicians were PI's on RO1 grants

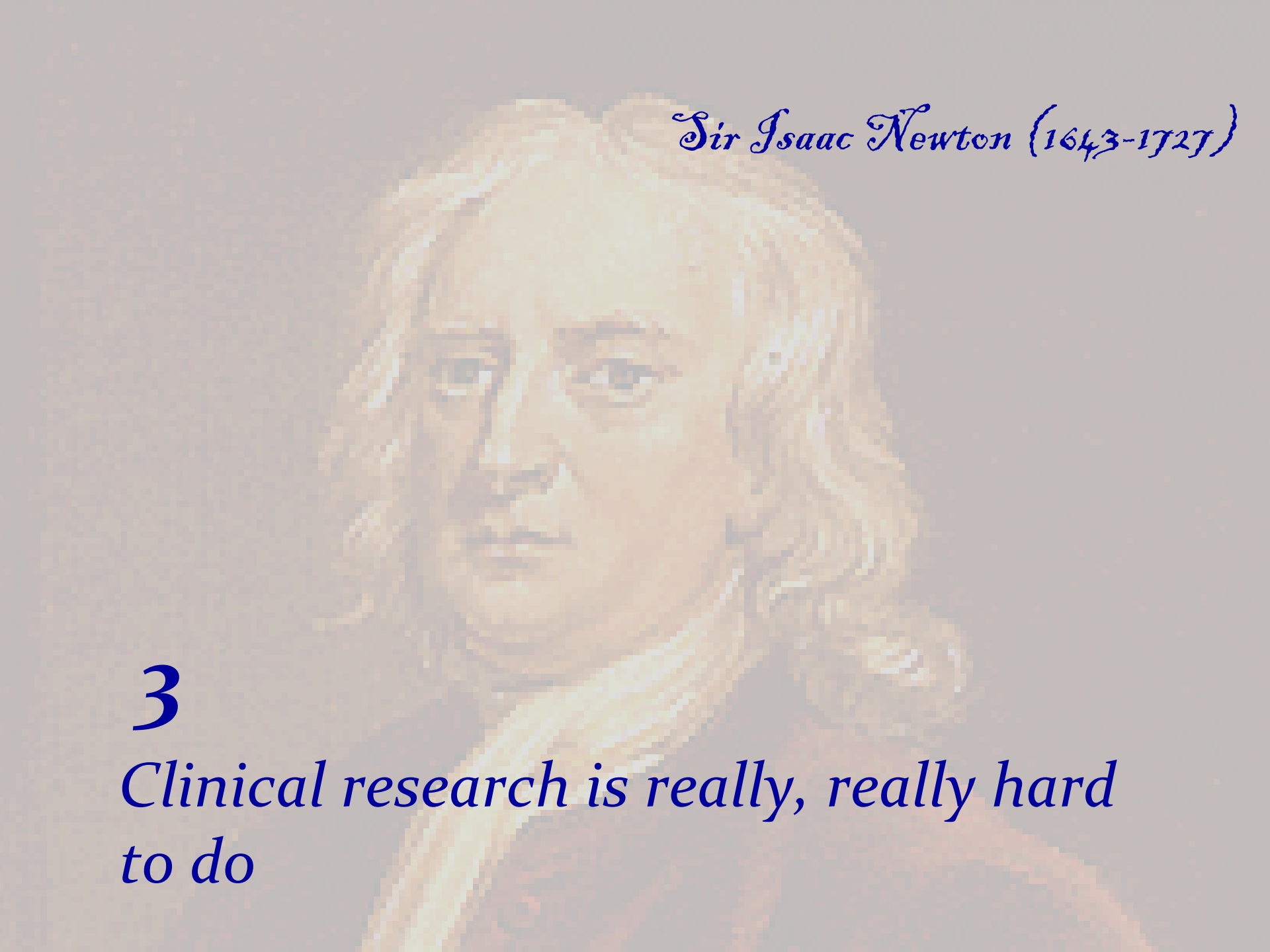


4

Family medicine research infrastructure has no business model

Department claims should divert surplus or profit from clinical work to support research infrastructure a

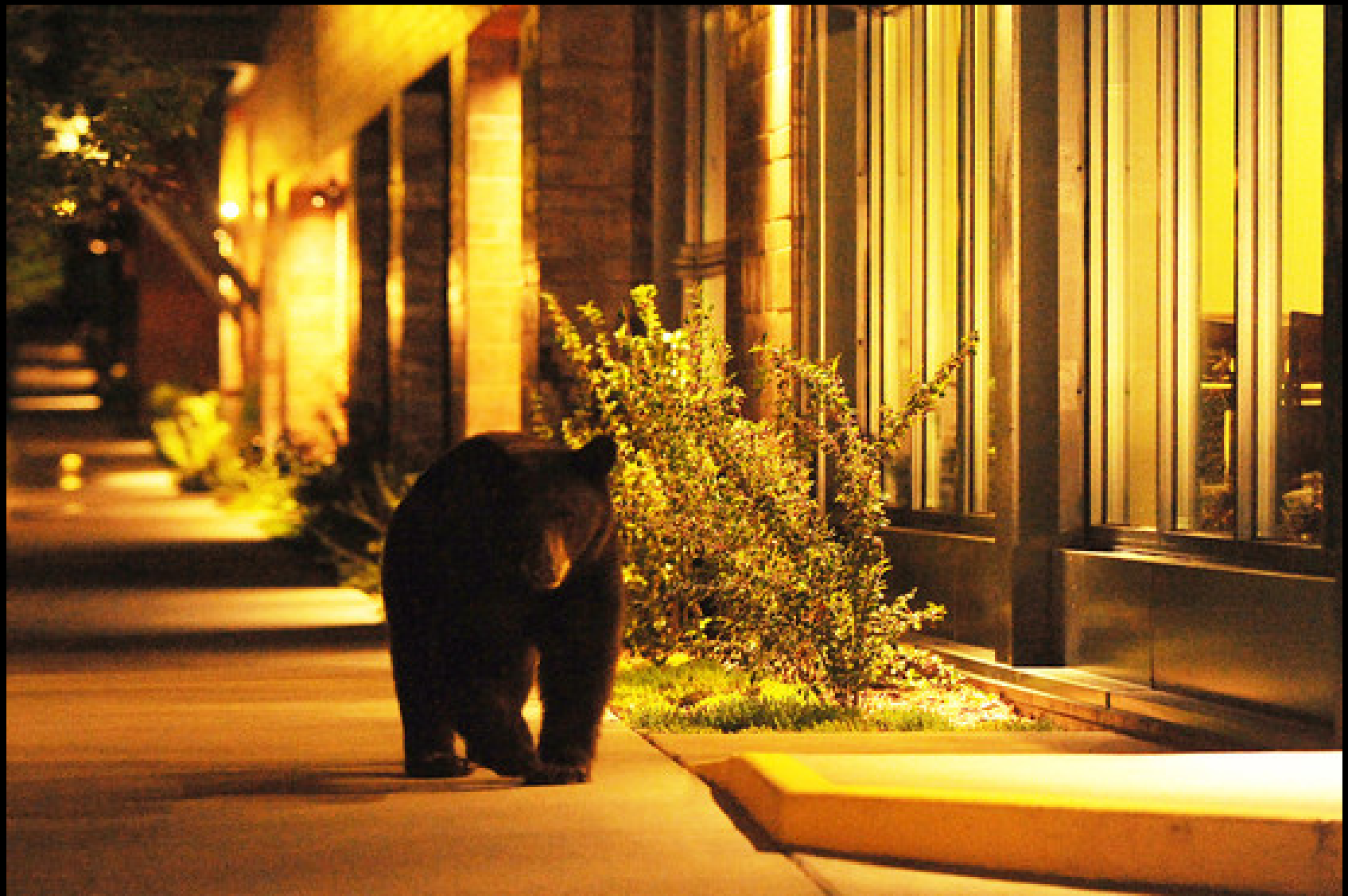
…but we have no clinical surplus or profit



3

Clinical research is really, really hard to do

And population based research in the community is a bear!



"…clinical research has become increasingly difficult to do and…the scientific community …must recast its entire system of clinical research"

http://nihroadmap.nih.gov

Experiments take longer.

Publications are delayed.

Costs are high.

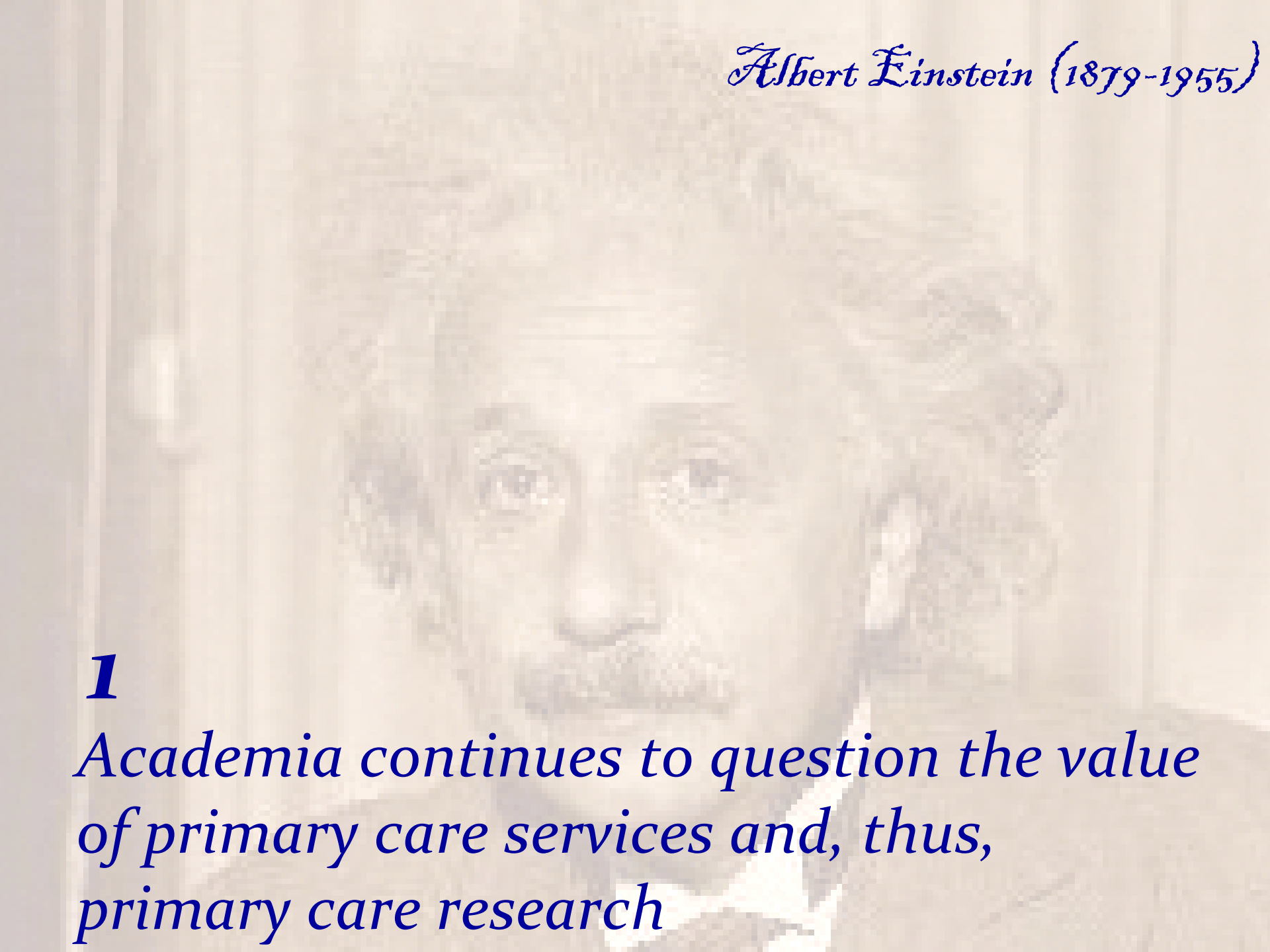
2

Academic Health Centers invest in surer research bets

Compare the recruitment “packages” for Chairs of Pathology to Chairs of Family Medicine

I boldly negotiated a reduction in the planned budget cut

And the number one obstacle to growing Family Medicine research is . . .



1

Academia continues to question the value of primary care services and, thus, primary care research

Where *does* primary care matter?

The Impact of Prevention on Reducing the Burden of Cardiovascular Disease

- 78% of adults ages 20-80 are eligible for a prevention activity
- If 100% received these activities, 63% fewer MI's and 31% fewer CVA's would occur
- Bridging just half of the quality gap can prevent 36% of MI's and 20% of CVA's

Kahn R, Robertson RM, Smith R, Eddy D. Circulation 2008; 118:576-585

A physician recommendation is the strongest predictor of whether or not a patient is screened for colon or breast cancer

Smith RA Wender RC. CA Cancer J Clin 2007 Jan-Feb;57(1):4-5

Why Is Primary Care Important?

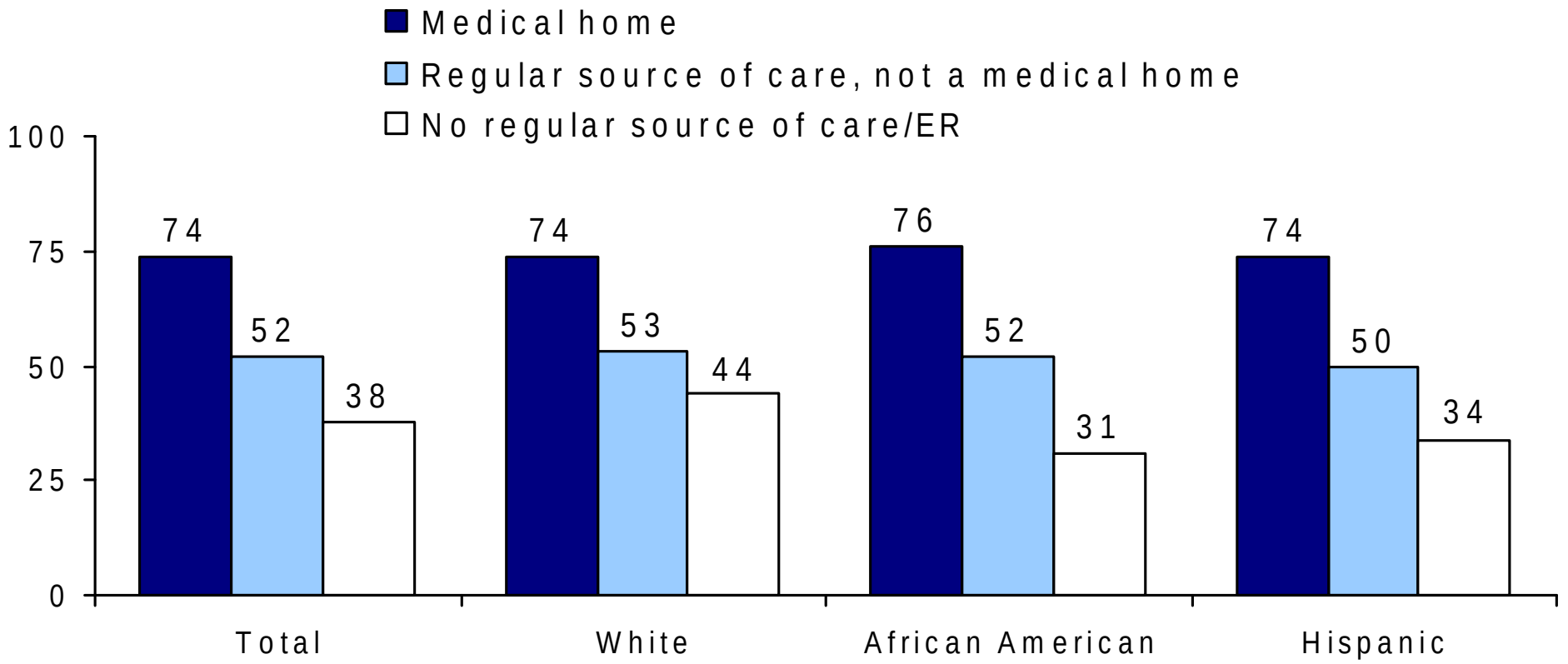
Better health outcomes

Lower costs

Greater equity in health

Racial and Ethnic Differences in Getting Needed Medical Care Are Eliminated When Adults Have Medical Homes

Percent of adults 18–64 reporting always getting care they need when they need it



Note: Medical home includes having a regular provider or place of care, reporting no difficulty contacting provider by phone or getting advice and medical care on weekends or evenings, and always or often finding office visits well organized and running on time.
Source: Commonwealth Fund 2006 Health Care Quality Survey.

Skepticism about primary care performance and value persists

“Errors in diagnosis of depression over and under diagnosis in primary care”

Mitchell AJ, Vaze A, Rao S. The Lancet Vol 374 Issue 9690 p.609-619, Aug 2009

“Primary care clinicians often fail to follow practice guidelines when treating patients with sore throats”

Linder JA, et al. Arch Int Med 166:1374-1379. July 2006

“Weight loss counseling occurred with 11% of overweight adults and 8% of overweight children”

Ma J, et al. Prev Med 2004, 34:815-822

“Often, clinicians fail to discuss health-related behaviors during ambulatory visits”

Scott JG, et al. Preventive Medicine Vol 38 Issue 6 June 2004, p 819-827

“Primary care providers often prescribe antiviral medications inappropriately for influenza patients”

Linder JA, et al. J. of Gen Int Med 24(4) pp504-510 Feb 2009

But one central harsh reality is stoking the fires of a change in our research enterprise

Our nation's health is unconscionably poor

. . . and Canada has a long way to go

The Canadian and US Health Report Cards

			MORTALITY DUE TO:			
	Life Expectancy	**Premature Mortality**	**Cancer**	**Circulatory Disease**	**Diabetes**	**Infant Mortality**
Canada	**B**	**B**	**B**	**B**	**C**	**B**
United States	**D**	**D**	**B**	**D**	**C**	**C**
Japan	**A**	**A**	**A**	**A**	**A**	**A**

http://www.conferenceboard.ca/hcp/details/health.aspx

Despite spending more on health care research than any nation on earth, the US remains the least healthy high resource country

And the epidemic of over-eating and sedentary living threatens progress for all the major killers

The US is the 9th heaviest nation on earth…

…resulting in 30% of our rising health care costs
(Canadians rank 35th)

Tobacco use has declined…

…but percent of new adolescent smokers has stabilized

- 17.9% of all Canadians smoke

The seeds of a research revolution have been sown

There Are Four Components to the Research Revolution

- Promotion of clinical research – the NIH Roadmap
- Investment in high-risk research
- The dream of personalized medicine
- Creation of a new infrastructure for translational research
  - Clinical and Translational Science Awards

The NIH Roadmap for Medical Research

- Launched in September 2004
- To address roadblocks to research
- To transform the way research is conducted
- Programs are expected to have "exceptionally high potential to transform the manner in which biomedical research is conducted"

The NIH Roadmap

- Faster high-risk/high reward research
- Enable the development of transformative tools and methodologies
- Fill fundamental knowledge gaps
- Change academic culture to foster collaboration

Personalized medicine – the use of genetic information to predict risk and therapeutic response

The Inherent Tension of the Research Revolution

Clinical and Translational Science Awards

- By 2012, NIH expects to fund 60 centers with a budget of over $500 million a year

Clinical and Translational Science Awards

The goal is to

"...help deliver improved medical care to the entire population, helping to disseminate new technologies and new advances into clinical practice"

Clinical and Translational Screening Awards

No funding “event” has created more opportunities for Departments of Family Medicine to become engaged in the central research enterprises of their academic centers

COMMENTARY

The Meaning of Translational Research and Why It Matters

Steven H. Woolf, MD, MPH

TRANSLATIONAL RESEARCH MEANS DIFFERENT THINGS to different people, but it seems important to almost everyone. The National Institutes of Health (NIH) has made translational research a priority, forming centers of translational research at its institutes and launching the Clinical and Translational Science Award (CTSA) program in 2006. With 24 CTSA-funded academic centers already established, other universities are transforming themselves to compete for upcoming CTSA grants. By 2012, the NIH expects to fund 60 such centers with a budget of $500 million per year.[1] Besides academic centers, foundations, industry, disease-related organizations, and

only the starting point for this second area of research. According to McGlynn et al,[4] US patients receive only half of recommended services. The second area of translational research seeks to close that gap and improve quality by improving access, reorganizing and coordinating systems of care, helping clinicians and patients to change behaviors and make more informed choices, providing reminders and point-of-care decision support tools, and strengthening the patient-clinician relationship.

The distinction between these 2 definitions of translational research was articulated by the Institute of Medicine's Clinical Research Roundtable,[5] which described 2 "translational blocks" in the clinical research enterprise and which some now label as T1 and T2. The first roadblock (T1) was described by the roundtable as "the transfer of new

Woolf SH JAMA 2008

"U.S. patients receive only half of recommended services"

"The second area of translational research seeks to close that gap…by improving access, reorganizing and coordinating systems of care"

New Treatments Are Important, But…..

"…patients might benefit even more- and more patients might benefit – if the health care system performed better in delivering existing treatments than in producing new ones"

The Agency for Healthcare Research and Quality

"...the ultimate goal of AHRQ is research translation – that is, making sure that findings from AHRQ research are widely disseminated and ready to be used in everyday health care decision-making"

http://www.ahrq.gov/research

And, for the first time in years, a new model recognizing the value of high performing primary care has been proposed


39
Your Medical Home

Plan Do **Study** Act

- Practice transformation demands measurement
- Proven practices must be disseminated
- New collaborations are needed

- Initiate the research process at the start of practice transformation
  - An over-arching IRB covering Medical Home development
  - Separate IRB's for each sub-project

The Scientist and the Clinician

We need practice transformers to attend NAPCRG

...and researchers to attend the Conference on Practice Improvement

Practice Based Research Networks (PBRN's) are one of the vital tools to answering the full spectrum of translational research questions

- They require more federal support

Every practice should consider joining a PBRN

Service Research

- An emerging opportunity

What Is Service Research?

Service-Research is a method of research based on collaborative efforts with communities, community service agencies, and government to design, implement, and evaluate programs addressing an important need

Service-Research Leads With Service

Much service research focuses on how to deliver proven interventions to hard to reach populations

Public health intervention and clinical practice improvement constitute new realms of research

New Design and Analysis Methods are Needed

- Evaluations usually require, at a minimum, multi-method approaches, both qualitative and quantitative
- Design methods, such as sequential cluster analysis, (comparing different clusters to each other as opposed to individuals), are often required.
- Professional researchers are a must

Service-Research relies on a diverse set of federal and non-federal funders

- Not-for-profit community service agencies
- Foundations
- AHRQ
- CDC

These grants and contracts almost universally rely on collaborations

- The Academic Health Center may or may not be permitted to be the applicant

The CDC Mission Statement

"CDC's mission is to collaborate to create the expertise, information, and tools that people and communities need to protect their health – through health promotion, prevention of disease, injury and disability, and preparedness for new health threats"

www.cdc.gov

"State Supplemental Funding for Healthy Communities, Tobacco Control, Diabetes Prevention and Control, and Behavioral Risk Factor Surveillance System"

Eligible Applicants: States

"HIV Prevention Projects for Community Agencies"

Eligible Applicants: Non-profit organizations (other than institutions of higher education)

Barriers

- Funding looks different than the NIH RO1 mechanism
  - Dollars may be less
  - Spread over more collaborators
  - Indirects are often less attractive

Barriers

- Thus, AHC's need different structures to compete for, attract and afford Service-Research grants and contracts
  - Interdisciplinary centers that are prepared to implement programs, provide service and evaluate projects in multiple areas

Myths

"Service-Research isn't research"

"It's not intellectually challenging"

"It doesn't generate new knowledge"

Challenges

Sustainability —— A challenge for most public health programs

Dissemination —— Hard to find the business model

Service-Research – Business Model

Often requires flexibility to conduct projects in a variety of areas

Funding per project is often low

Indirects are often low

Thus, funding from multiple projects is often necessary

Service-Research without careful evaluation leading to publication

.....is just service

Service-Research REQUIRES teams

- Make sure that professional researchers are a part of the team

The New Research Team

physical therapists

public health scientists

legal experts

the public

behavioral scientists

basic researchers

anthropologists

nurses

epidemiologists

occupational therapists

community leaders

biostatisticians

patients

clinicians

social marketers

...and many more

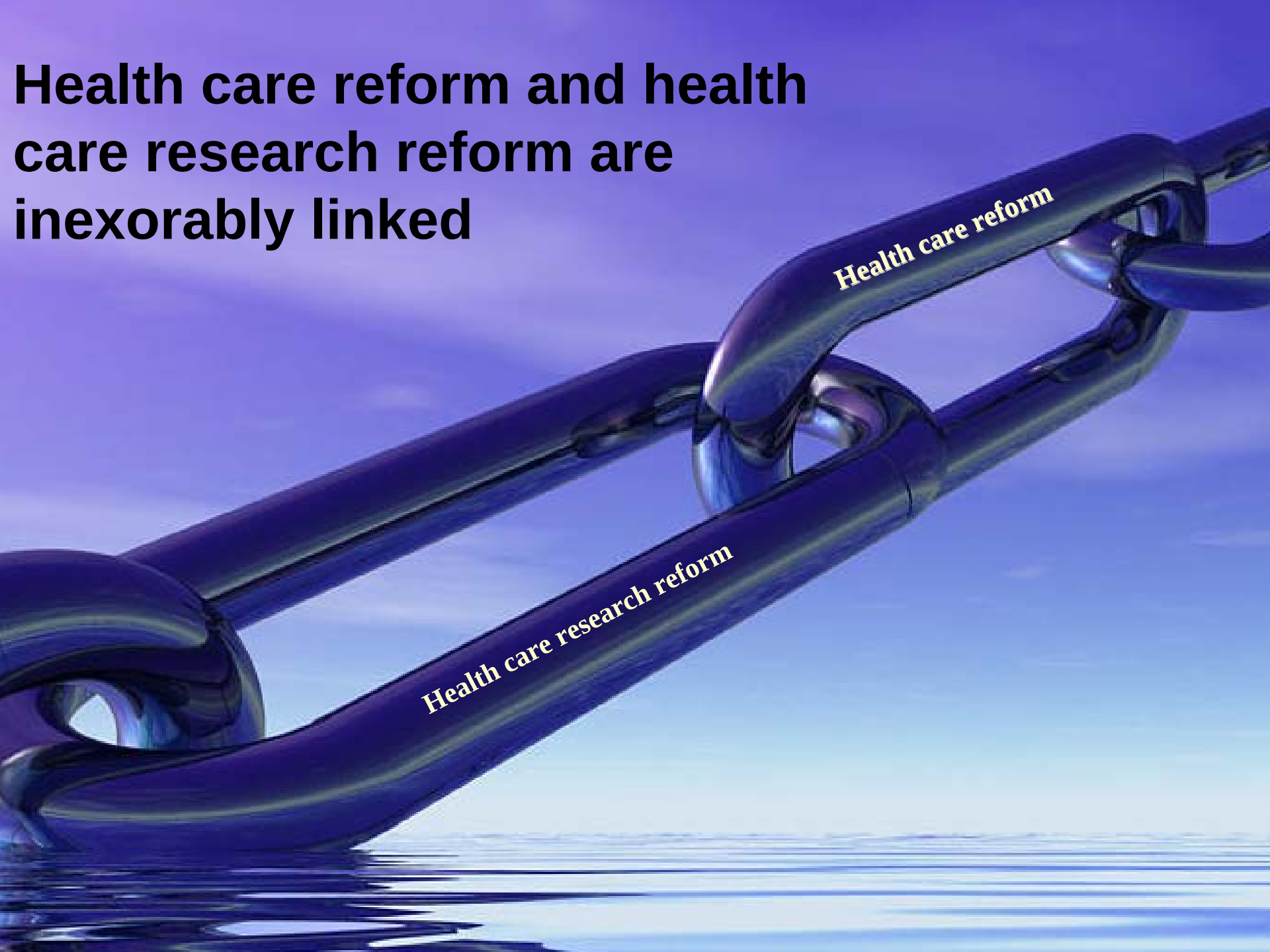
There is not enough NIH & CIHR money to fund all important research

Service-Research offers an important opportunity to enhance our research capacity

Receiving your marching orders:

What role will each of us need to play in the research revolution?

Health care reform and health care research reform are inexorably linked



Finding someone to pay for diffusion into multiple practices outside of a research context has proven very difficult

The lack of trust that primary care and community-based interventions can be sustained has sapped enthusiasm for primary care and public health research


First.....
advocate for
health reform


Second...
accept the challenge

Senior, experienced researchers are our greatest asset in the research revolution

To Senior Researchers

- The mantle of responsibility is heavy:
  - Stay funded
  - Publish
  - Mentor junior investigators
  - Advocate for primary care and public health research support
  - Find sustaining financial models

Junior investigators are our greatest hope

To Junior Investigators

- Improving health is what matters
  - Research without publications and presentation isn't research
    .....and will not attract funding

Be Prepared!

- A Family Medicine residency does not provide the skills you need to be a career researcher
- A research fellowship must be focused and long enough
- Masters or PhD is helpful, if not vital
- Mentored research awards are an important option

Be Relentless!

Successful researchers have a need to know, a need to bring about change… hang in there – stay the course add a long stratight road??)

Department Chairs must be the Chiefs of Staff in the research revolution

To Department Chairs and Academic Leaders

Now is the moment to move research towards the top of our Departments' agendas

The Courtship of Mentors

Find them, engage them……

heck, marry them if you have to…

Research mentors who care about populations are in every department, in almost every school

Three of our Key Senior Mentors Are:

- A behavioral psychologist in the department of Oncology
- An occupational therapist in the Jefferson School of Health Professions
- A pediatric-adult nephrologist in the Division of Nephrology

And Chairs.....

"No matter how little you think you know about medical home, practice transformation, disparity reduction, and community engagement, you probably know more than anyone else"

-Tamsen Basford, University of Arizona

Become the go-to person in your AHC

Have the courage to use department surplus to invest in research…and, that's right, we need to figure out how to generate that surplus

Levels of Engagement With AHC

Advocate for AHC's to:

1. Define their mission to care for a population
2. Embrace a population health research agenda
   - We need to make the business case for research transformation
3. Realign incentives to support collaboration and research teams

We must find a way to celebrate, reward, promote and even grant tenure to the career co-investigator

The Chair's Prime Directive

A culture of scholarship

A culture of investigation

A research revolution has begun

It will continue with or without us

Medical Home is the bridge between…

Public Health

Community Engagement

Clinical Care Delivery

North American

Primary Care Research Group

"We need a new model in healthcare – one that is much more efficient and effective and is constantly evolving based on evidence that is produced by the system itself. We need continuous introduction of incremental and innovative treatments, powered by data concerning the delivery systems, insurance coverage methods, effectiveness, and benefits of care."

R. A. Rudick, D. M. Cosgrove, A radical proposal: Integrate clinical investigation into the U.S. health care system. *Sci. Transl. Med.* **1**, 4cm4 (2009).

The health of the public cannot improve…will not improve without broad changes in public policy and a spirit of social altruism

But we will also fail to realize our potential to improve public health without a powerful link to clinical care delivery…to screening, chronic disease management, to effective therapy for tobacco use, over-eating, and sedentary living, and to the integration, at last, of behavioral, community, and physical well-being within a re-designed medical home built on a foundation of knowledge, evidence, and passion.

Train Narrative

"...that the medical research train is moving towards its destination at 20 miles per hour sounds great, unless you know that trains are capable of much greater speeds!"

Disparity Montage Narrative

We cannot solve North America's major health care challenges within the walls of an office. NIH and CIHR cannot fund all of the work that must be done