

Health Professions Education for the Future

GCEMEM

Barossa Valley, South Australia

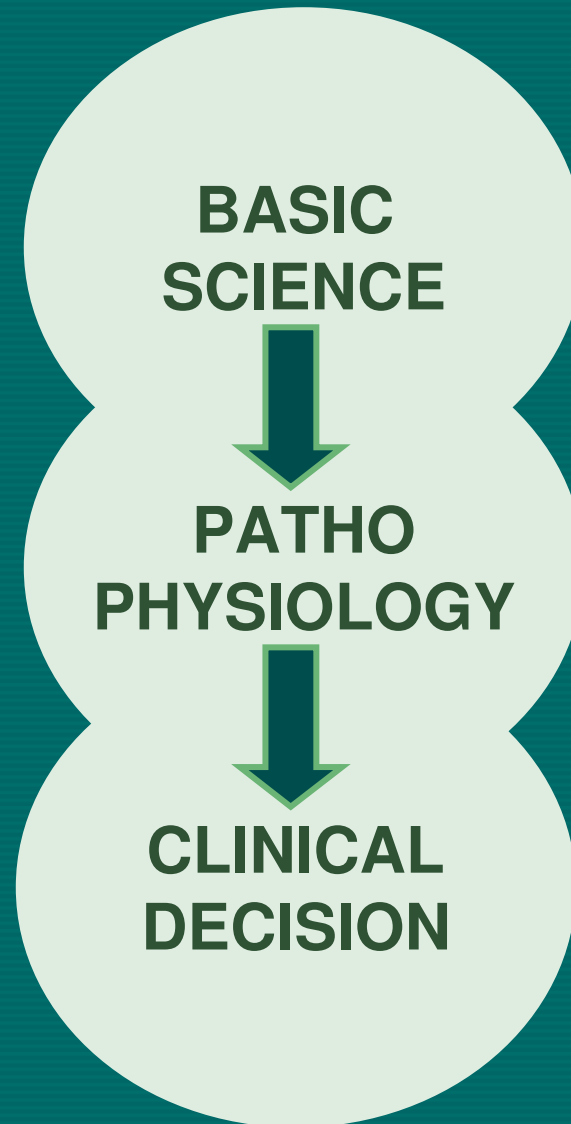
October 21, 2010

Malcolm Cox, MD

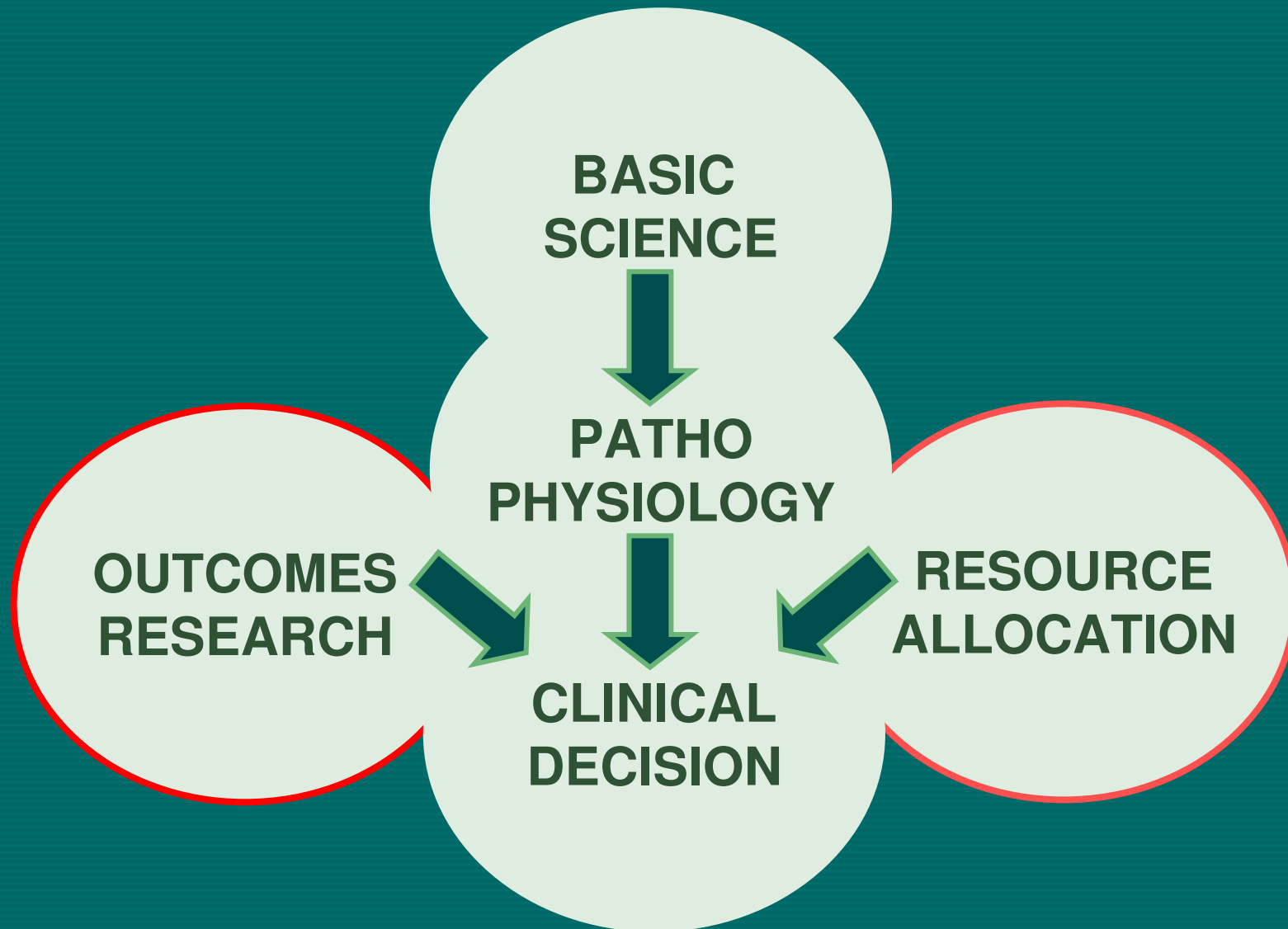
Chief Academic Affiliations Officer, U.S. Department of Veterans Affairs

Adjunct Professor of Medicine, University of Pennsylvania

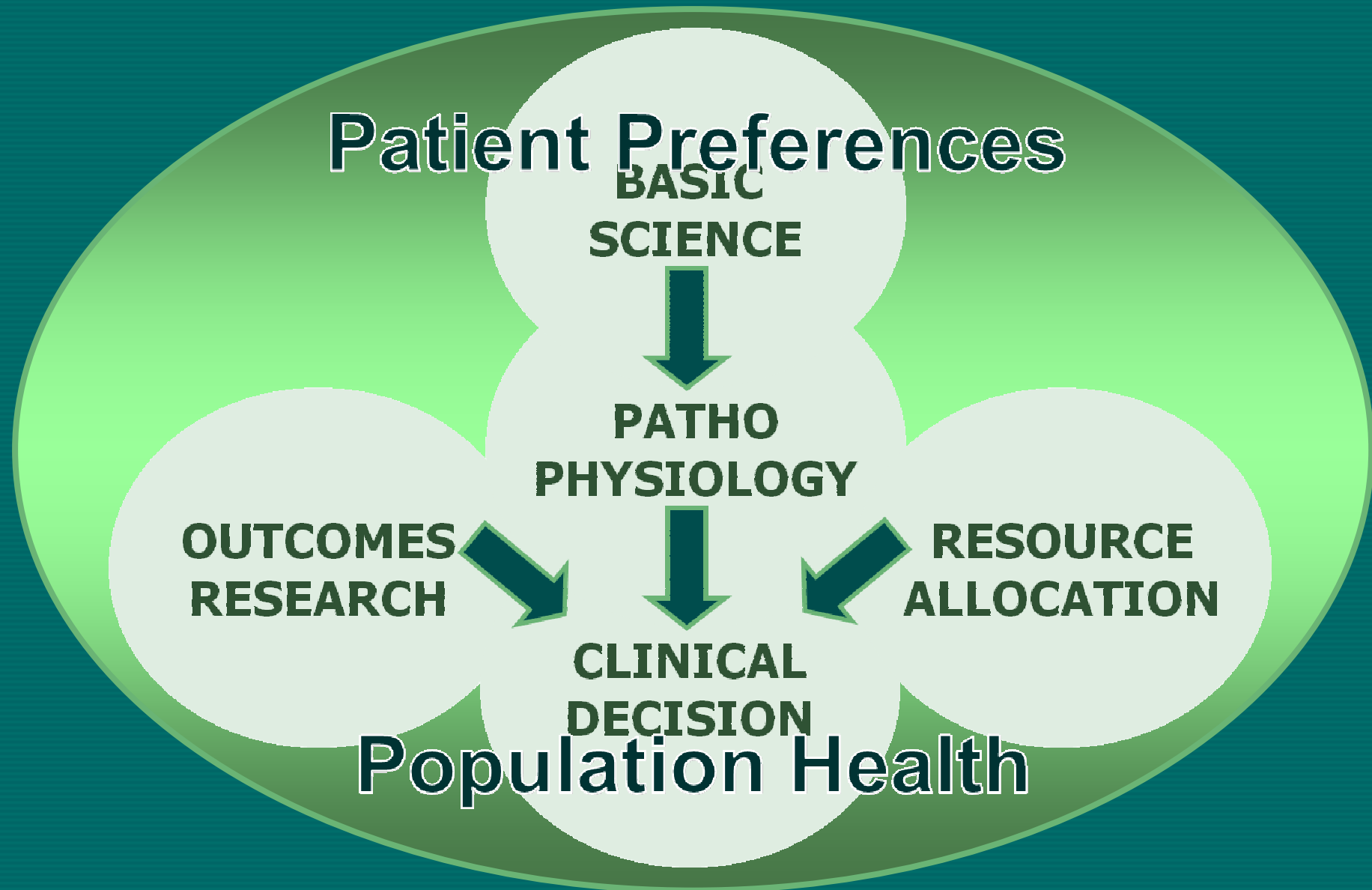
What We Do Well



What We're Doing Better



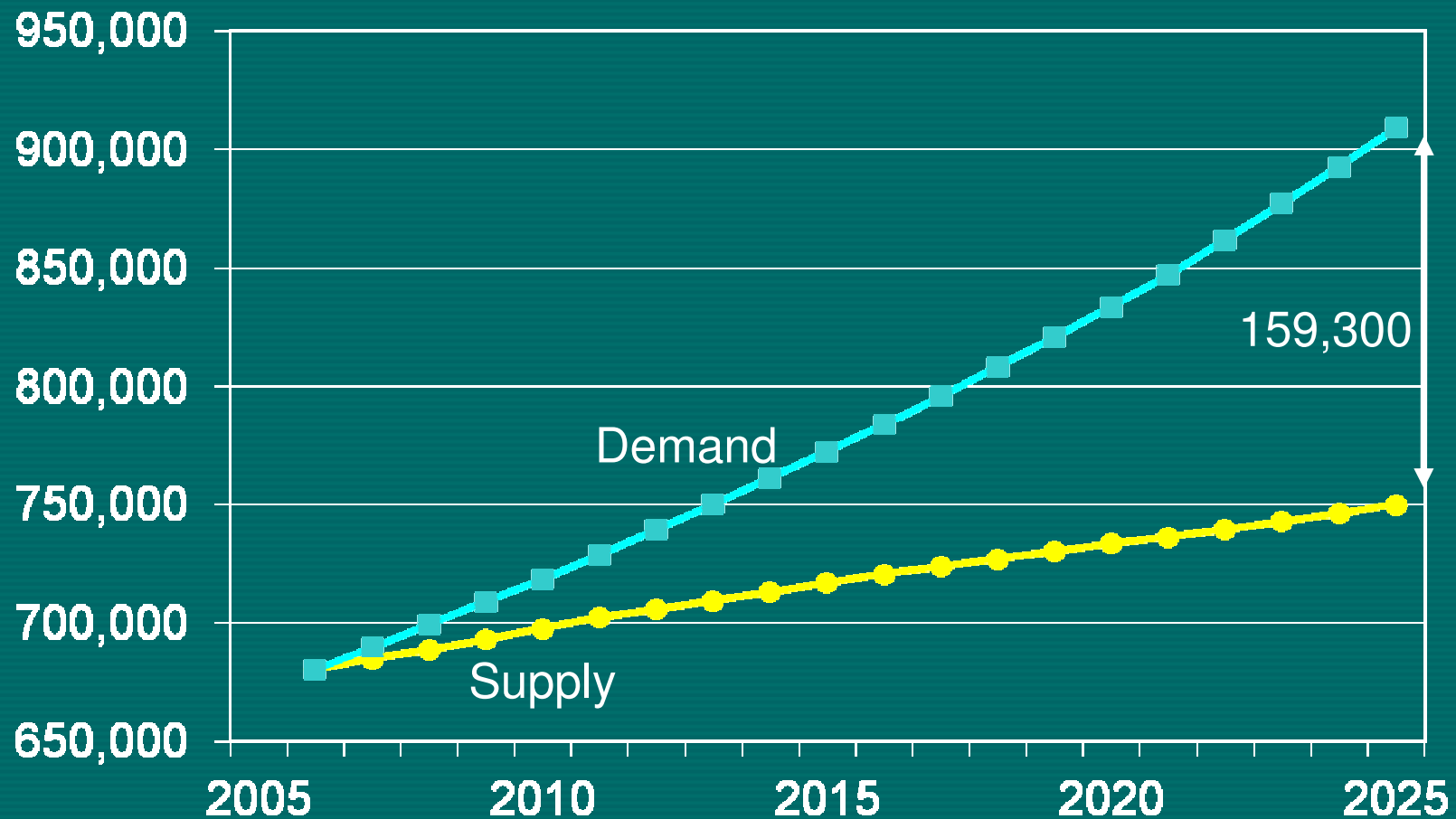
Where We're Having Real Trouble



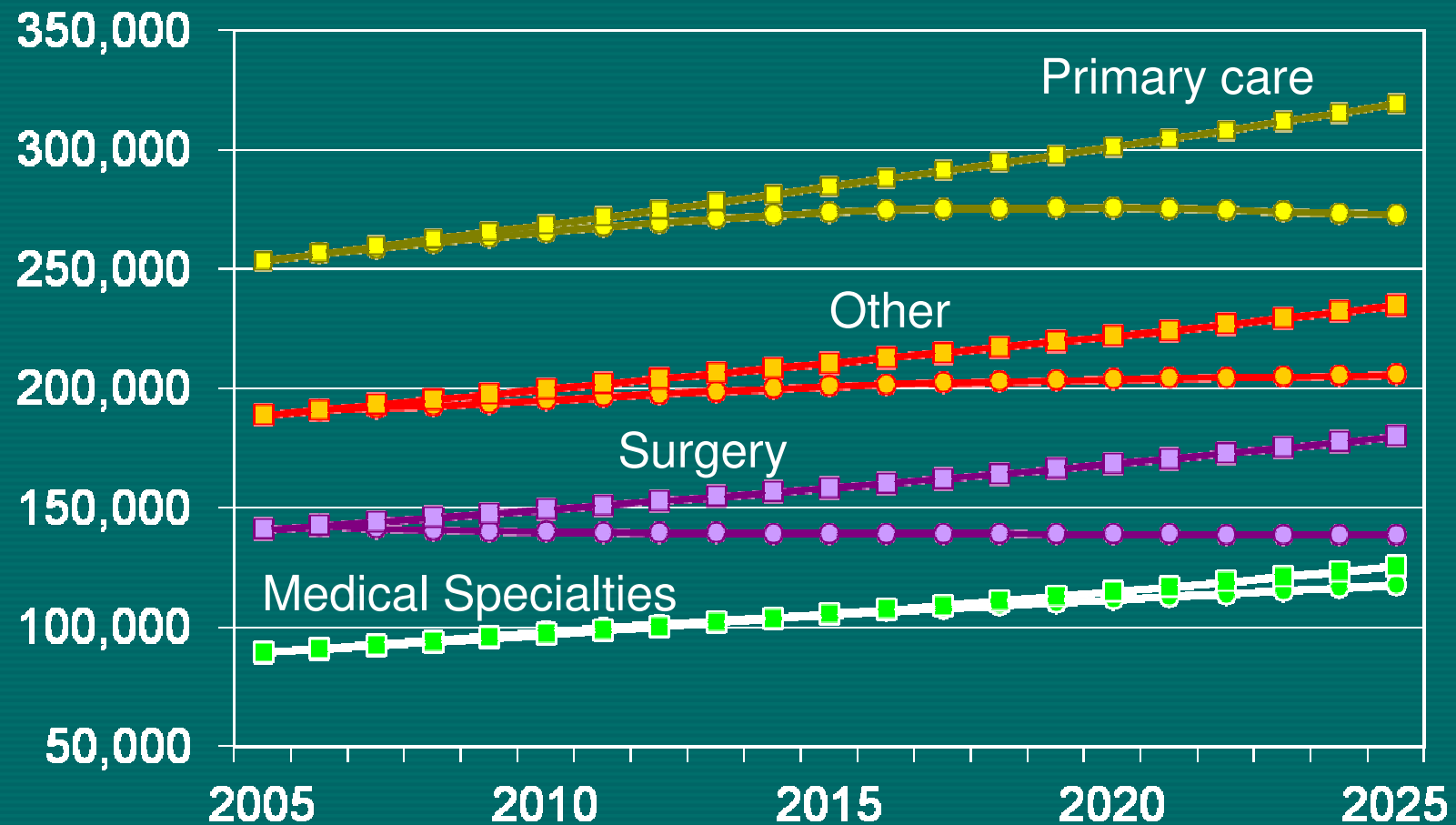
Today's Agenda

- U.S. physician workforce trends
 - The crisis in primary care
- Workforce expansion is insufficient
 - Case Study #1: Priming the pump
- Clinical education reform is essential
 - Case Study #2: Promoting professional values
- Practice redesign is foundational
 - Case Study #3: Transforming VA health care

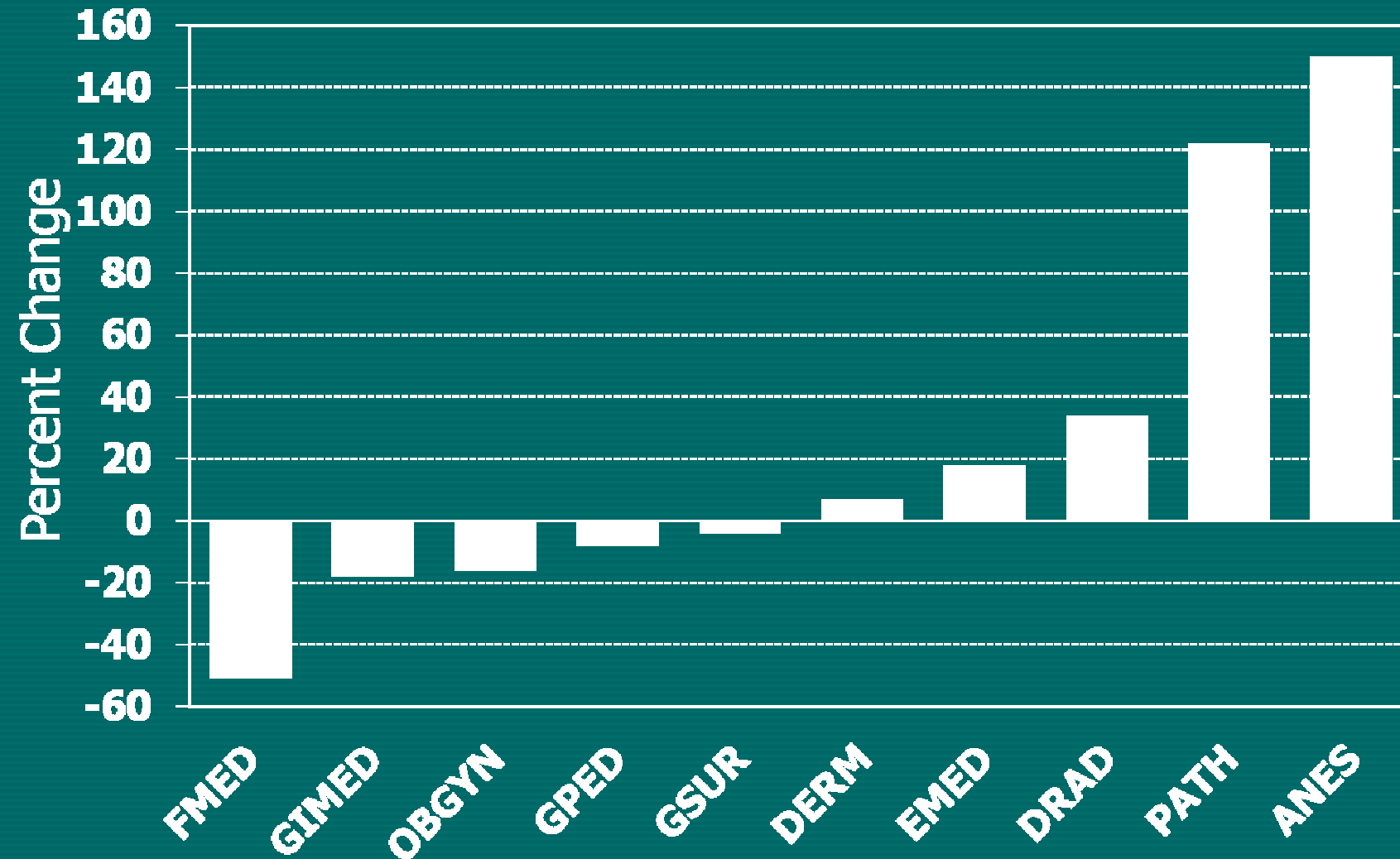
U.S. Physician Workforce Projections “Most Plausible” Scenario



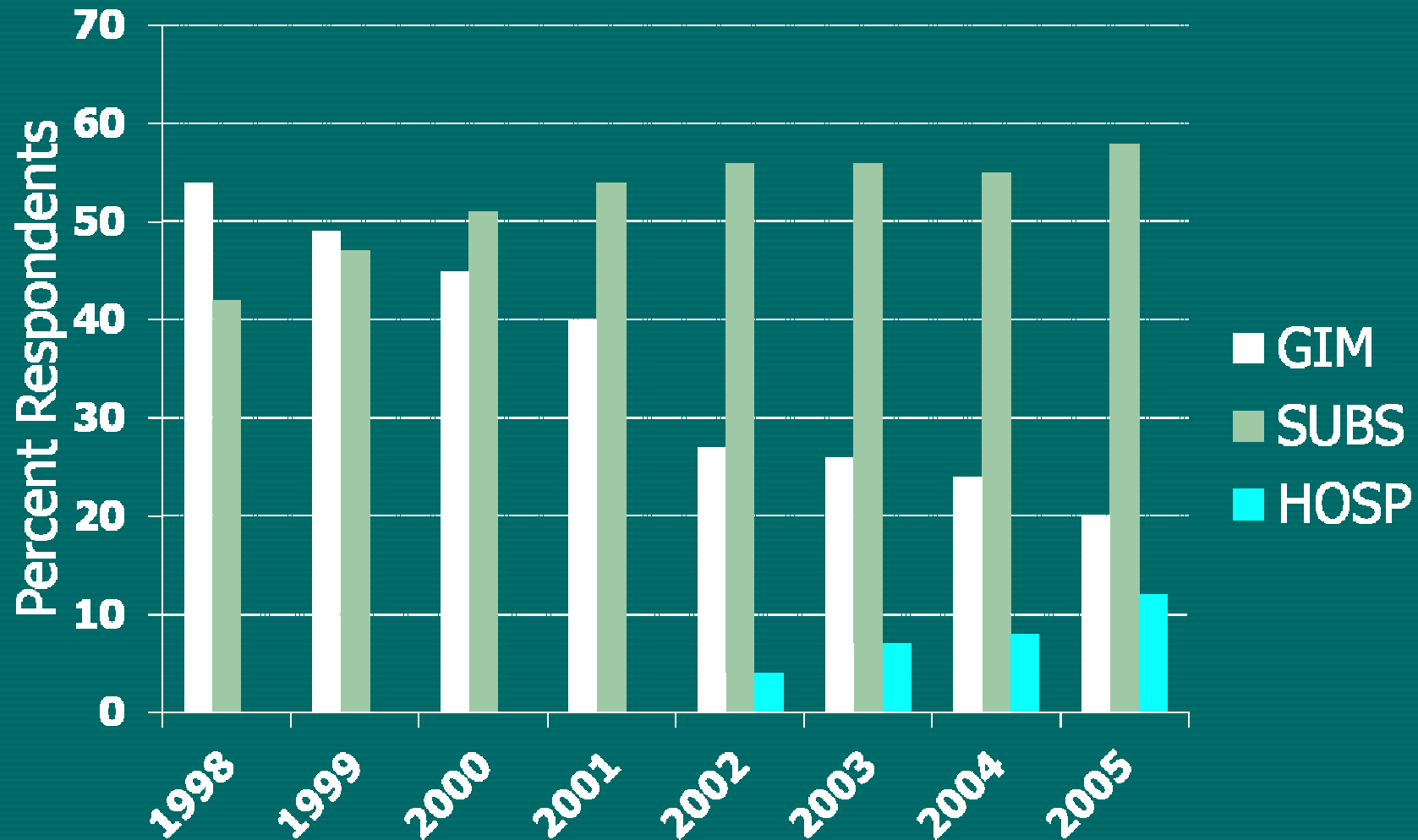
U.S. Physician Specialty Projections



U.S. Medical School Graduates Career Choice



U.S. Internal Medicine Residents Career Choice

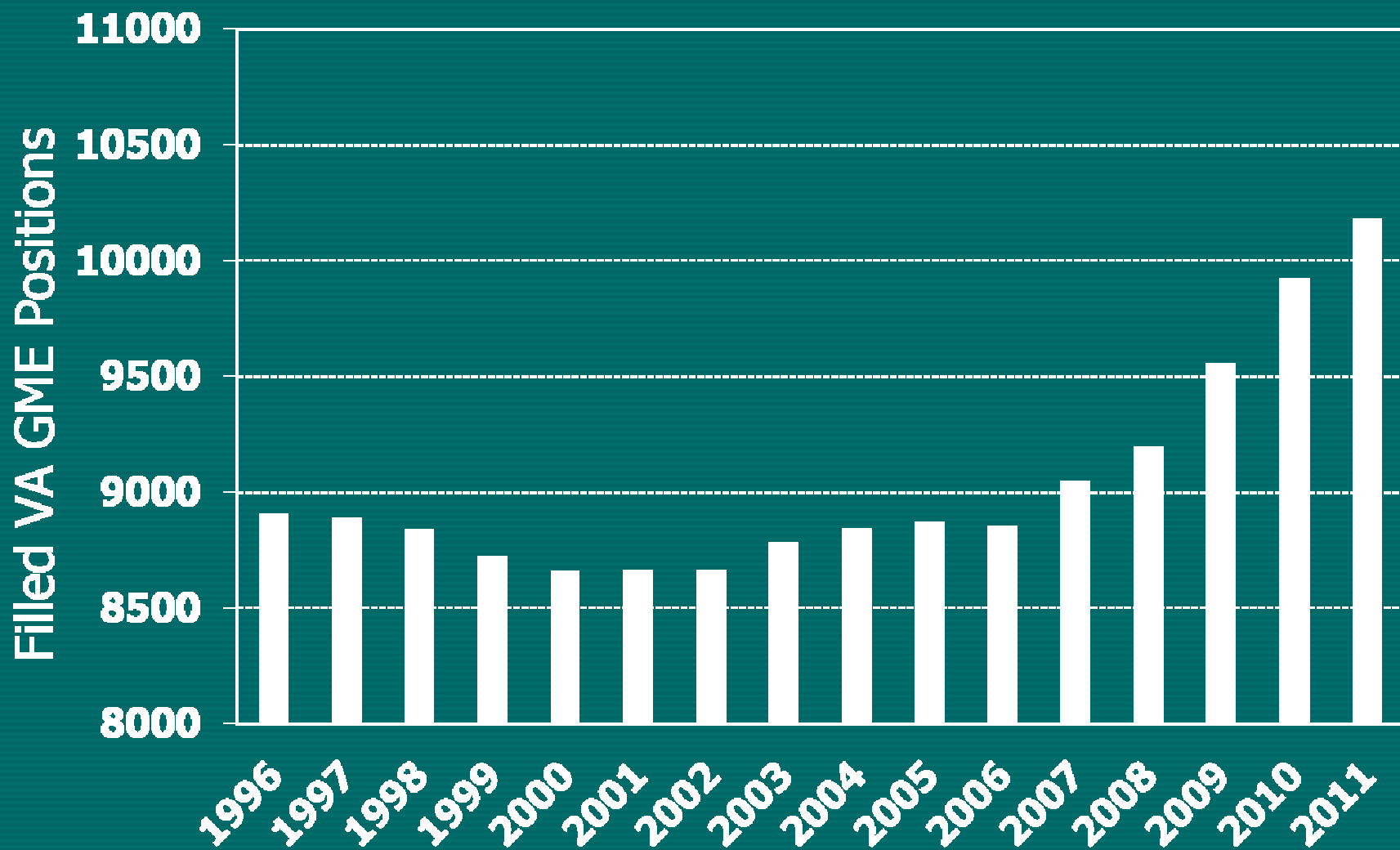


Case Study #1

Priming the Pump

- Nationally, about three-quarters of practicing physicians in the U.S. have had some training in VA
- VA is the sole payer presently expanding support for graduate medical education
- VA's GME Enhancement Initiative: 5-year plan to increase support for GME by 2000 FTE positions at a cost of \$250 million

VA's GME Enhancement Initiative



Distribution by Specialty

Specialty Group	Approved Positions	
	N	%
Generalist	160	17
Medicine Subspecialties	279	29
Surgery and Related	163	17
Specialty – Other	159	16
Mental Health	126	13
Rehabilitation	24	2
Diagnostic	55	6
Total	967	100

Distribution by Specialty

Specialty Group	Approved Positions		% in Base Yr (2005-06)
	N	%	
Generalist	160	17	39
Medicine Subspecialties	279	29	16
Surgery and Related	163	17	22
Specialty – Other	159	16	6
Mental Health	126	13	10
Rehabilitation	24	2	2
Diagnostic	55	6	6
Total	967	100	100

Primary Care Training Key Determinants

- Primary care training environment and experiences during medical school
 - Quality of the teaching faculty
 - Primary care provider satisfaction
- Student debt and expected income from career choice
- Perception of “control” over lifestyle

Satisfaction with Primary Care in VA

	Primary Care Physicians (n=1791)	Other Physicians (n=6424)
Type of work	3.90	4.20
Amount of work	3.46	3.98
Pay	3.43	3.41
Co-workers	4.21	4.29
Direct supervisors	3.70	3.99
Senior management	3.28	3.58
Promotion opportunities	3.22	3.52
Working conditions	3.39	3.65
Customer satisfaction	3.93	4.04
Overall quality of work	4.38	4.50
Overall job satisfaction	3.60	3.92

Conclusions

- “Priming the pump” by increasing the number of GME positions may be necessary but by itself will not be sufficient to avert the crisis in primary care
- New approaches to valuing primary care practice are needed; financial incentives may be necessary but the “work” of primary care must also be addressed
- New models of “learning in practice” to make careers in primary care specialties more attractive to physicians in training are needed

Case Study #2

Promoting Professional Values

- Introducing “learning in practice” in undergraduate medical education
 - Redesigning the core clinical clerkship
- Promoting “learning in practice” in graduate medical education
 - Redesigning internal medicine residency

Maximize Learning Experiences

- **Meaningful Relationships**
 - Patients, families and community
 - Supervisors, coaches and mentors
- **New Skills**
 - Interprofessional teamwork
 - Distributive leadership
 - Population management
 - Performance improvement
 - Systems-based practice

Continuity of Care

- **Goal**
 - Enhanced patient connection, caring and advocacy
- **Educational Prerequisites**
 - Contact with patients at the site and time of initial medical decision making
 - Ability to follow patients over time and across care venues
- **Operational Requirements**
 - Sustained learner-patient relationships

Continuity of Supervision

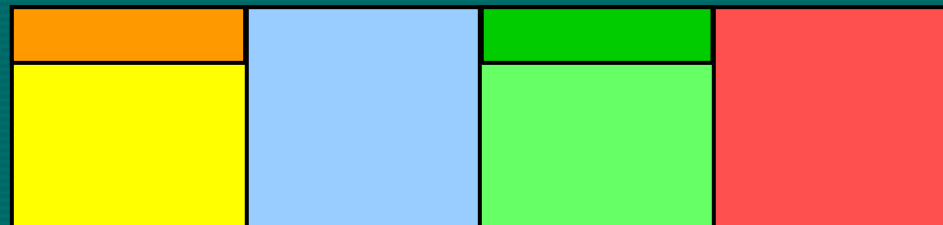
- **Goal**
 - Enhanced role modeling, coaching and mentoring
- **Educational Prerequisites**
 - Community of learners, educators and caregivers
- **Operational Requirements**
 - Sustained learner-teacher relationships

Clinical Clerkship Redesign

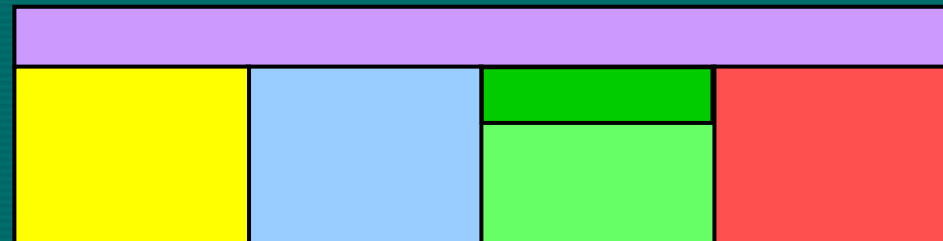
**SEQUENTIAL
DISCIPLINE SPECIFIC**



**SEQUENTIAL
BLOCK AMBULATORY**



**SEQUENTIAL
LONGITUDINAL
CONTINUITY CLINIC**



**LONGITUDINAL
INTEGRATED**



Cambridge Integrated Clerkship

A fundamental restructuring of clinical education, integrating all the traditional clerkships into one year-long clerkship, focused on longitudinal patient care, close mentoring, and collaborative learning.

Student Outcomes

NBME Shelf Exams and OSCE

	CIC (n=27)	CON (n=40)	P
NBME Shelf Exams (%)			
Ob/Gyn	73.70	71.75	0.375
Pediatrics	80.60	74.79	0.008
Surgery	76.85	73.32	0.098
Psychiatry	80.22	71.05	0.001
HMS 4 th Year OSCE (%)	67.15	63.57	0.048

Student Outcomes

Professionalism

Extent to Which Experiences Have Prepared You To...?

	CIC (n=27)	CON (n=40)	P
Be truly caring with patients	5.93	5.07	<0.05
Deal with ethical dilemmas	5.33	4.17	<0.05
See how the social context affects patients	5.89	4.67	<0.05
Involve patients in decision making	5.59	4.55	<0.05
Relate well to a diverse patient population	5.96	4.72	<0.05

Mean scores: 1=Very Poorly, 6=Very Well

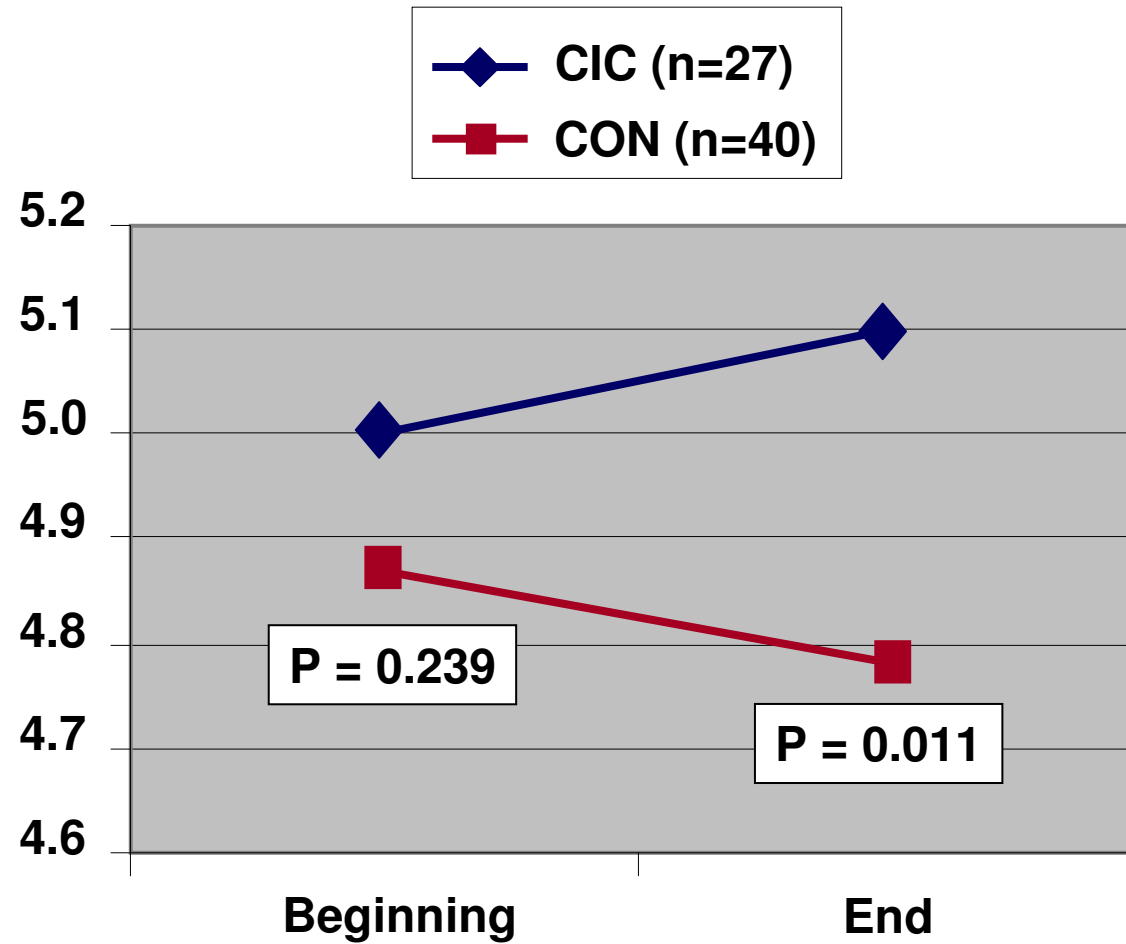
Student Outcomes Behavior

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Student Outcomes

Patient Centeredness



Continuity-Based Clerkships

Early Adopters

- **Urban Models**
 - Harvard Medical School
 - University of California, San Francisco
- **Rural Models**
 - University of South Dakota
 - University of Minnesota
 - Flinders University

Conclusions

- Lack of early “immersion” in the core medical specialties does not impair knowledge accrual or clinical skill development
- Emphasizing “continuity” brings new meaning to the principal clinical experience, promoting foundational professional values and enhancing learner satisfaction

Internal Medicine Residency Continuity-Based Models

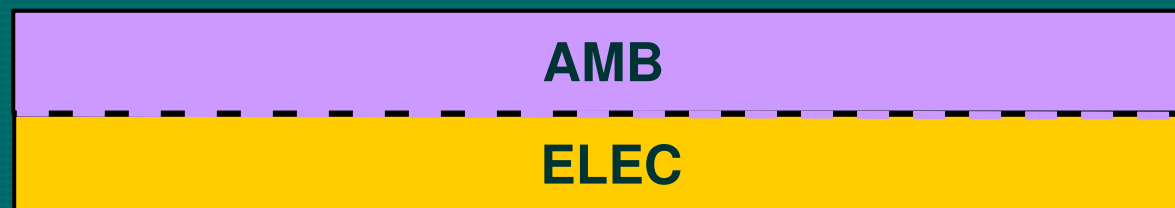
- **Ambulatory Long Block**
 - University of Cincinnati
- **Recurring Ambulatory Block**
 - San Francisco VAMC & UCSF

Ambulatory Long Block

PGY 1



PGY 2



PGY 3



University of Cincinnati Learner Outcomes

	Before	After	P
Time for learning	2.94	4.44	0.0004
Learning environment	3.65	4.24	0.0075
Clinical environment	3.44	4.33	0.0156
Personal reward from work	3.33	4.44	0.0042
Relationships with patients	4.06	4.72	0.0001
Sense of ownership	3.72	4.78	0.0002
Value of clinic experience	3.29	4.44	0.0006

University Cincinnati

Patient Outcomes

- Enhanced patient satisfaction
- Increased “continuity” (# patient visits) and decreased “no-show” rates
- Improved quality measures
 - Blood pressure control
 - Measurement of Hgb A1c (but not control)
 - Use of statins (but not LDL levels)
 - Mammography
 - Colonoscopy

Recurring Ambulatory Block

RESIDENT 1

WARD	AMB1	WARD	AMB1
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RESIDENT 2

AMB2	ELEC	AMB2	ICU
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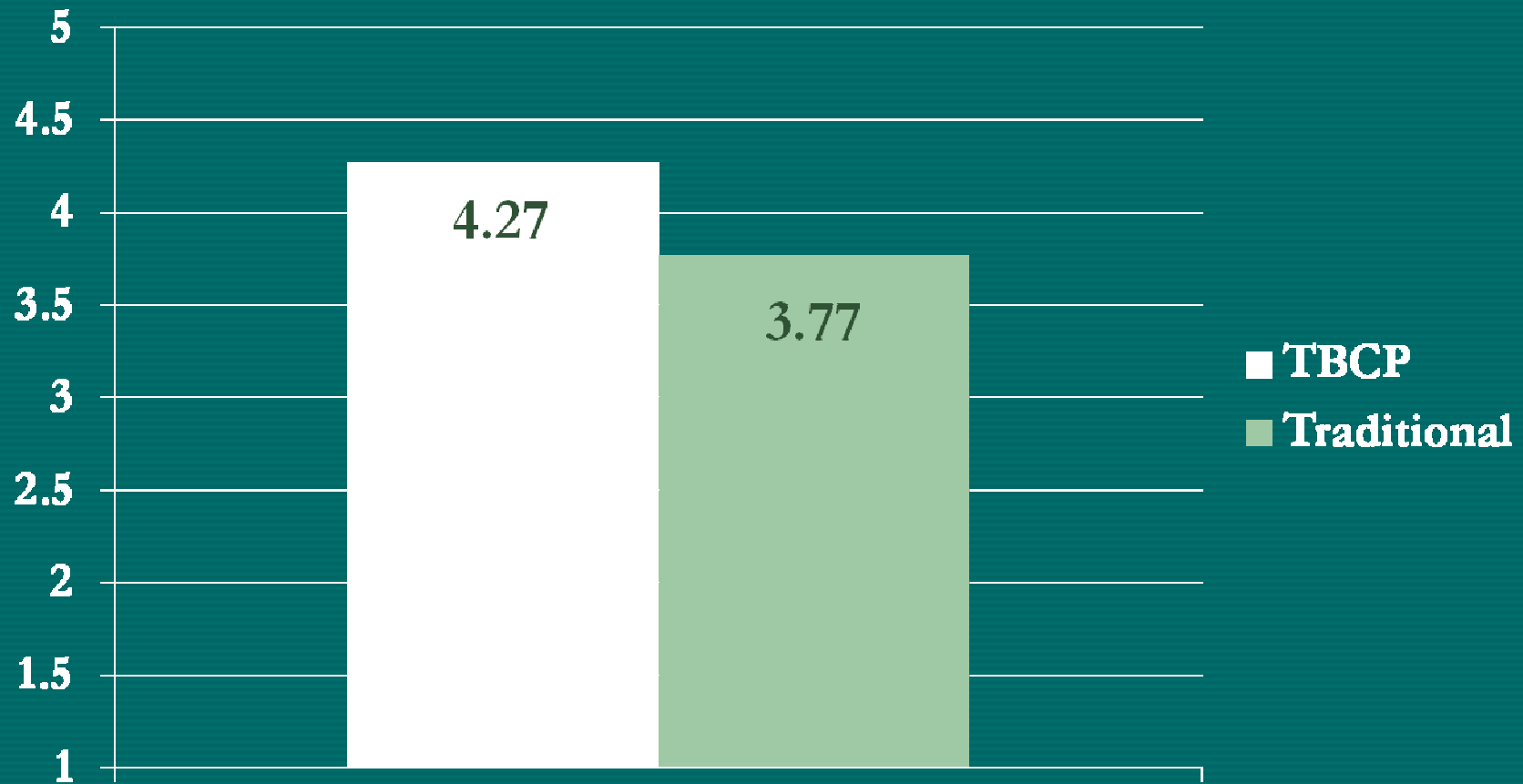
**OUTPATIENT
TEAM**

AMB2	AMB1	AMB2	AMB1
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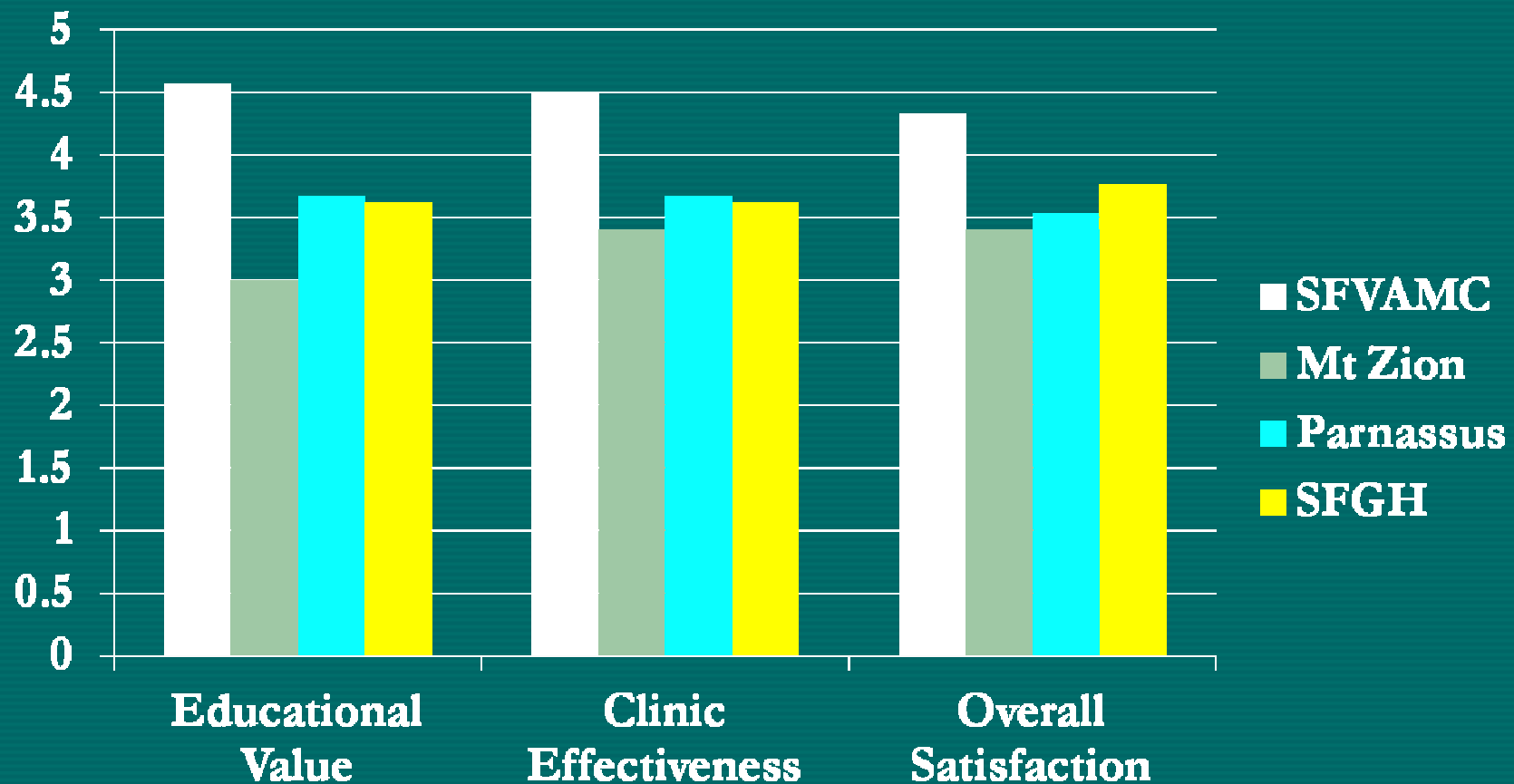
**INPATIENT
COVERAGE**

WARD	ELEC	WARD	ICU
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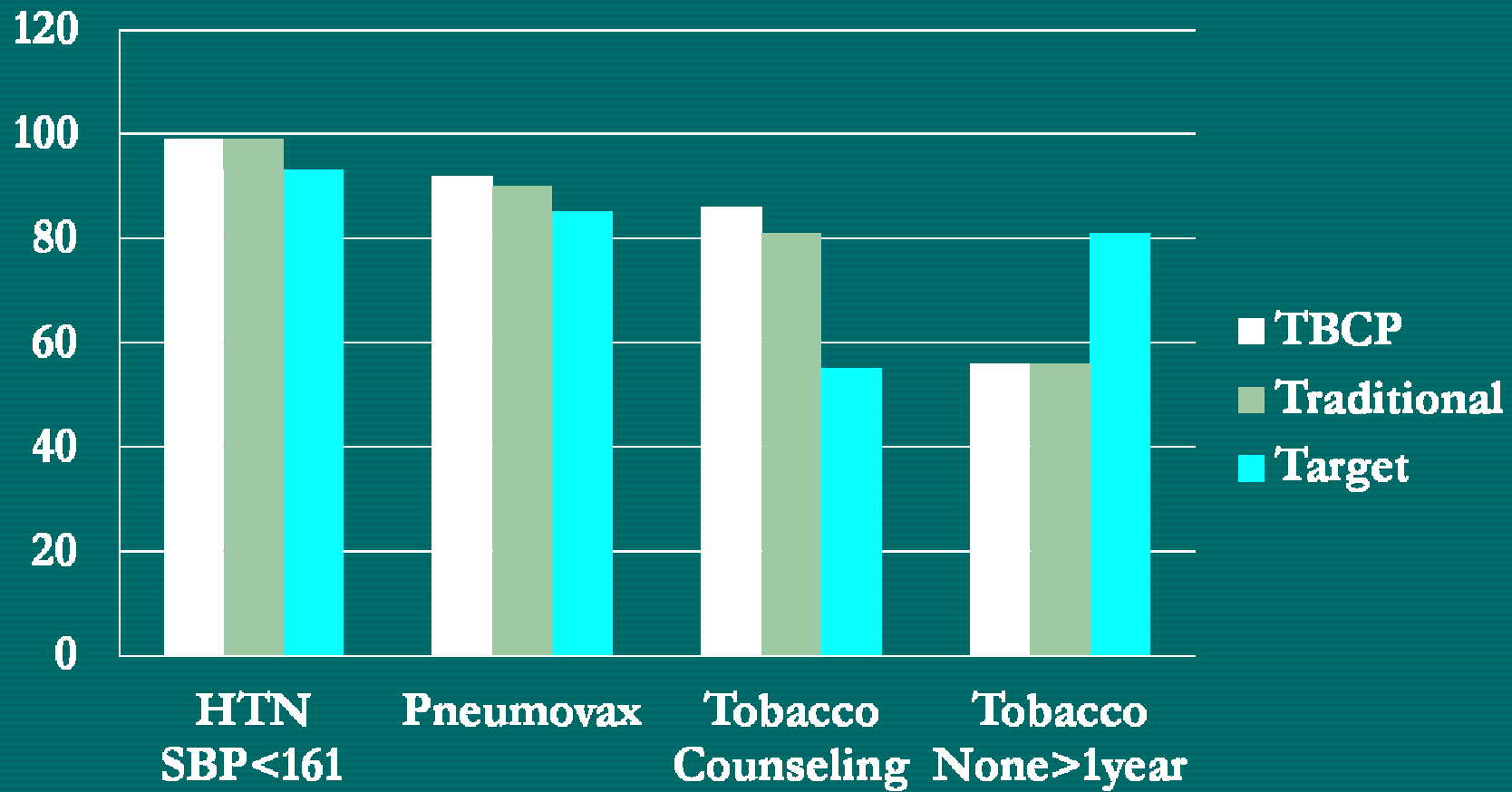
San Francisco VAMC Resident Satisfaction



San Francisco VAMC Resident Satisfaction



San Francisco VAMC Patient Outcomes

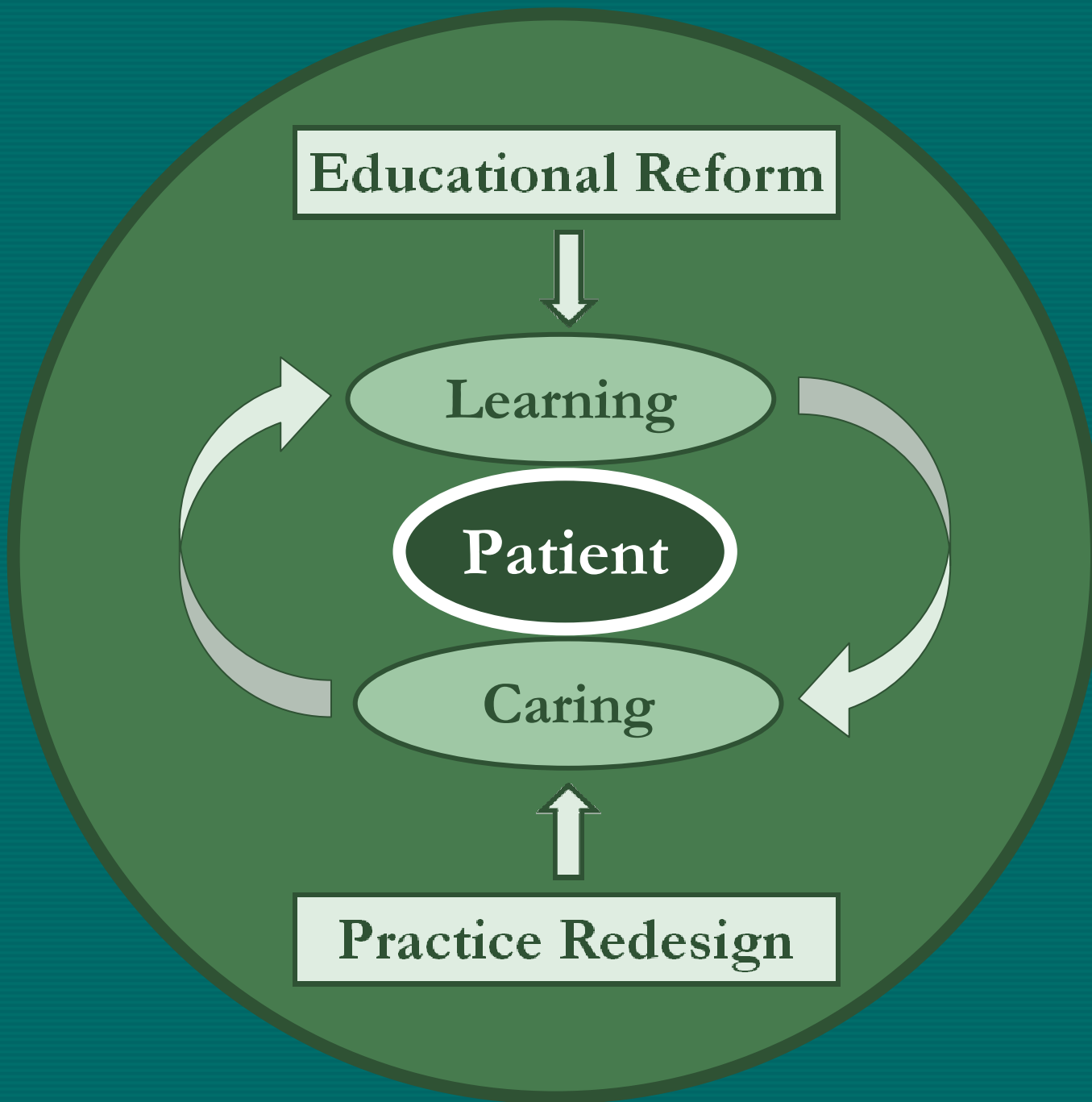


Conclusions

- Continuity-based primary care experiences are feasible and well-accepted by internal medicine residents
- Emphasizing “continuity” increases learner satisfaction and may enhance patient outcomes
- Rigorous testing of new models of clinical education is limited by lack of large scale demonstration projects

Case Study #3

Transforming VA Health Care



TODAY'S CARE

My patients are those who make appointments to see me

Patients' chief complaints or reasons for visit determines care

Care is determined by today's problem and time available today

Care varies by scheduled time and memory or skill of the doctor

Patients are responsible for coordinating their own care

I know I deliver high quality care because I'm well trained

Acute care is delivered in the next available appointment and by walk-ins

It's up to the patient to tell us what happened to them

Clinic operations center on meeting the doctor's needs

TOMORROW'S CARE

Our patients are those who are registered in our medical home

We systematically assess all our patients' health needs to plan care

Care is determined by a proactive plan to meet patient needs without visits

Care is standardized according to evidence-based guidelines

A prepared team of professionals coordinates all care

We measure patient outcomes and continuously improve quality

Acute care is delivered by open access and non-visit contacts

We track tests and consultations, and follow-up after ED visits/hospitalizations

A multidisciplinary team works at the "top of their expertise" to serve patients



VA Primary Care

Largest integrated health care system in the U.S.

Comprehensive electronic medical record

>850 sites of Primary Care

- 152 Hospital Clinics (HBOC)
- >700 Community Based Outpatient Clinics (CBOC)

4.8 million primary care patients – each assigned to a primary care provider

- 50% HBOCs/50% CBOCs

12 million encounters/year

Practice Redesign

- Patient Aligned Care Teams (PACTs)
- Learning collaboratives
- Consultation teams
- National learning center
- Demonstration laboratories

**Other Team
Members**

Teamlet

1200 Patients

1 PCP

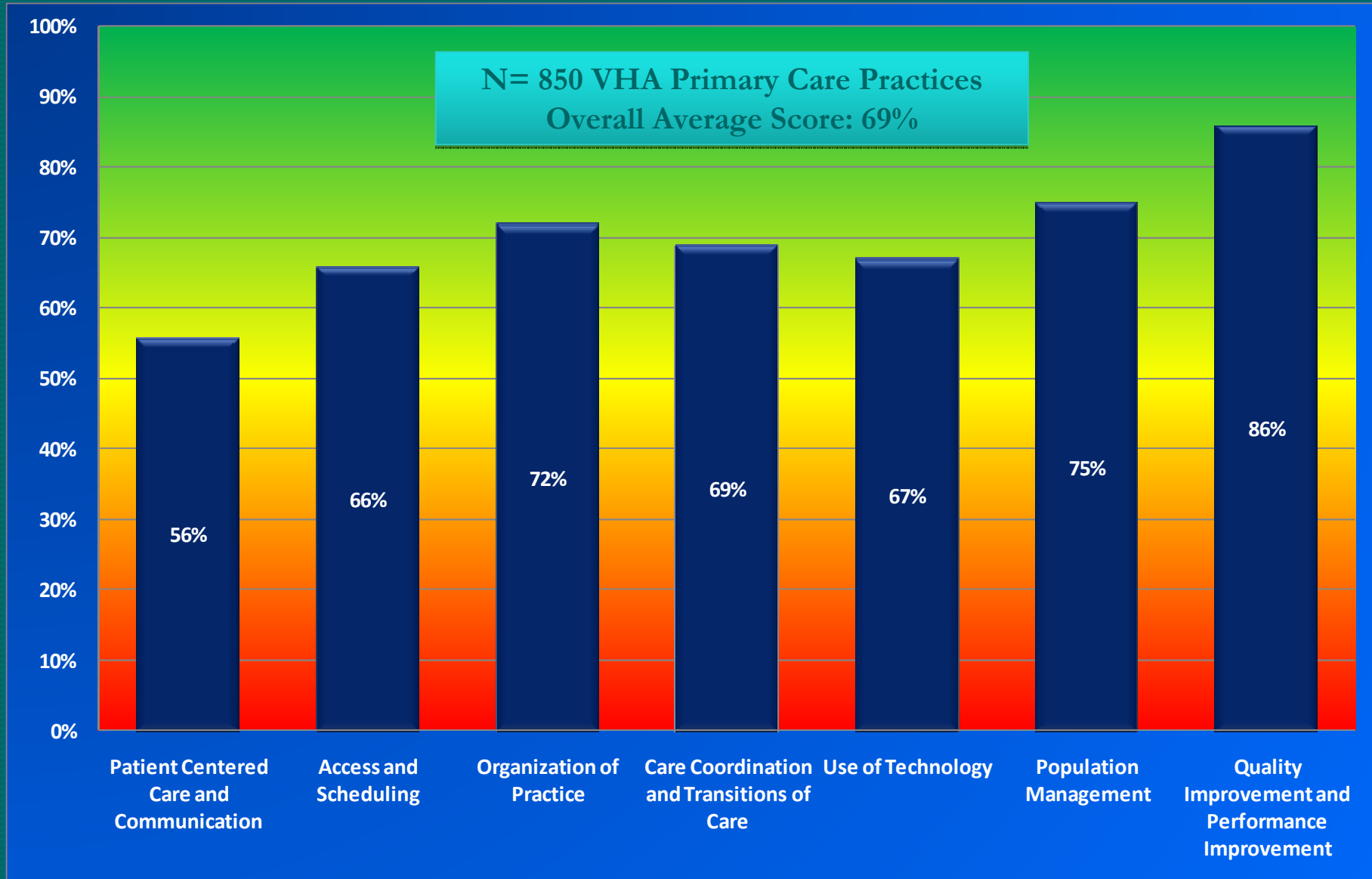
1 Care Manager

1 Clinical Associate

1 Clerk

Patient

Practice Evaluation



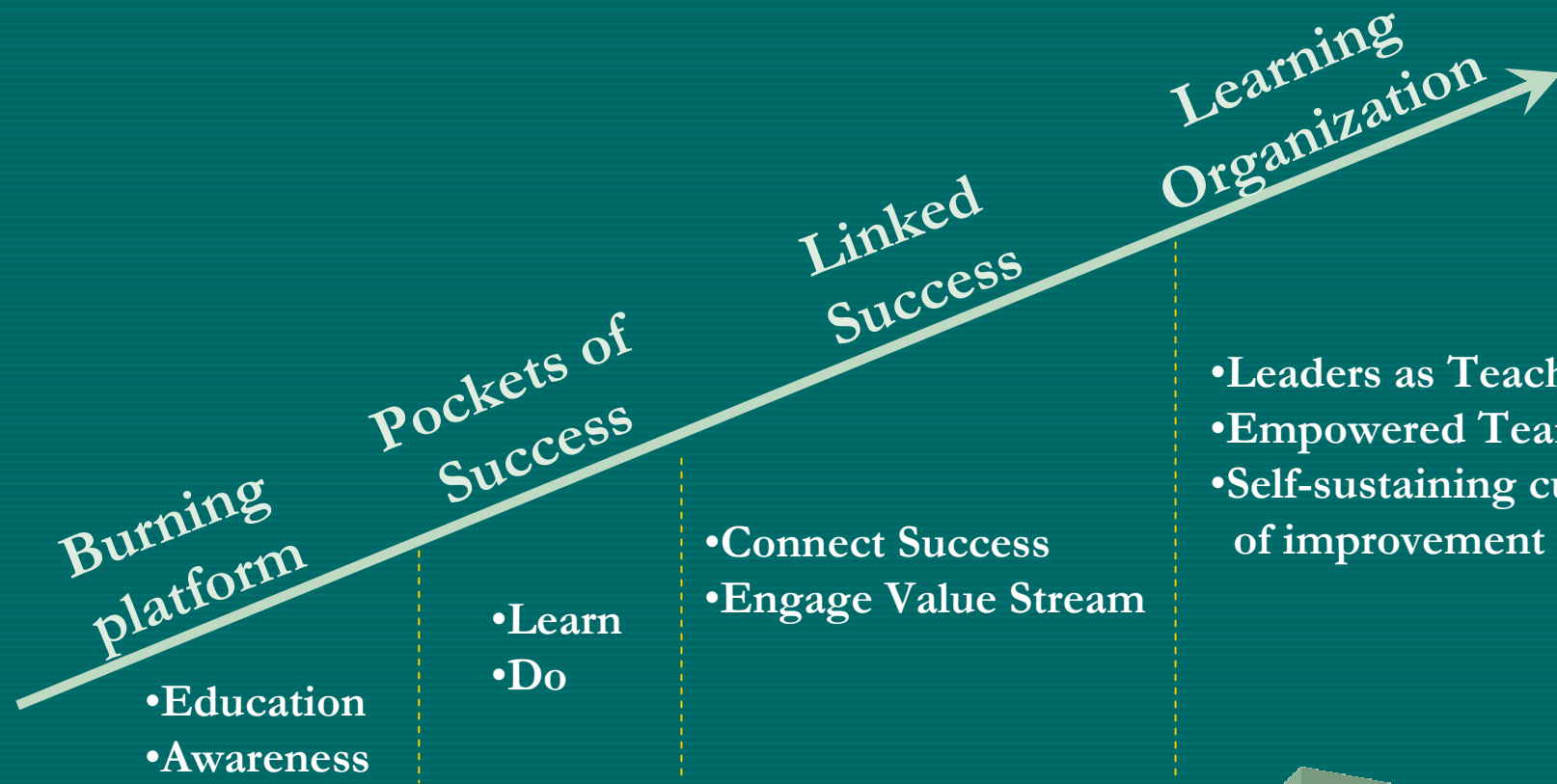
Educational Reform Principal Initiatives

- **Centers of Excellence in Primary Care Education**
 - RFP released August 2010
 - Centers activated January 2011
 - \$1M/year/center for 5 years
- **Advanced Fellowship in Education & Health Policy**
 - Scheduled for development in 2011

Centers of Excellence

Key Design Elements

- **Educational Goals**
 - Shared decision-making (patient-centeredness)
 - Sustained relationships (continuity)
 - Interprofessional collaboration (teamwork)
 - Performance improvement (quality)
- **Requirements**
 - Joint sponsorship (medicine and nursing)
 - Integrated interprofessional teams
 - 30% time commitment



Improvements measured in:

Years Months Days Hours Minutes

Workplace Learning

Key Characteristics

- *Unscripted*: Requires workers to go beyond approaches learned previously in order to resolve novel and poorly defined work challenges
- *Collaborative*: Requires workers to add to, replace or enhance their collective expertise as changes in technology and work processes necessitate the development of new skills
- *Distributive*: Requires team leadership to be determined by expertise germane to the question at hand rather than artificial hierarchies

From... the Institute of Medicine,
U.S. National Academy of Sciences

Among all of the Academic Health Center roles, education will require the greatest changes in the coming decade... We regard education as one of the primary mechanisms for initiating a cultural shift toward an emphasis on the needs of patients and populations and a focus on improving health, using the best of science and the best of caring.