

**Developing Quantitative Methods to Identify
Actionable Causes of Excess Emergency
Department Utilization in a Managed Care
Medicaid Program.**

Academy Health

State Health Research and Policy Interest Group

**Innovative State Approaches to Improve Outcomes
and Manage Costs**

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Background

- Much of the research on excess ED utilization focuses on the uninsured and populations that lack access to a usual source of care (USC).
- However, ED utilization in Medicaid populations is substantially higher than the uninsured,
- A pattern that persists even among Medicaid populations enrolled in managed care arrangements..
- **Clearly there are factors other than access to health insurance and a USC driving excess ED utilization.**

Objectives

- To identify ‘actionable’ determinants of excess ED utilization in a timely fashion using existing claims-based data systems,
- Implement program and policy initiatives based on best practices, *evidence-based*, initiatives identified in the published literature,
- Monitor and evaluate compliance with established protocols.

About the Programs

- RIte Care is the state of Rhode Island's managed care Medicaid program serving:
 - ◆ Core Program (including SCHIP)
 - ◆ Pregnant women up to 250% FPL
 - ◆ Adults up to 175% FPL
 - ◆ Children (≤ 18) up to 250% FPL
- Other Populations served by managed care:
 - ◆ Special Needs Populations
 - ◆ Rhody Health Partners (Adults)
- Current Report only Involves 'Core' RIte Care population.

About the Delivery System

- Three Health Plans with Managed Care contracts with the State:
 - ◆ Blue Cross/Blue Shield
 - ◆ United Health Care of New England
 - ◆ Neighborhood Health Plan of RI
- Generous Benefits Package including both in-plan and out-of-plan services

About the Organization

Center for Child and Family Health

Quality Assurance and
Medical Management



Program
Management



Health Plan Oversight
And Monitoring Committee

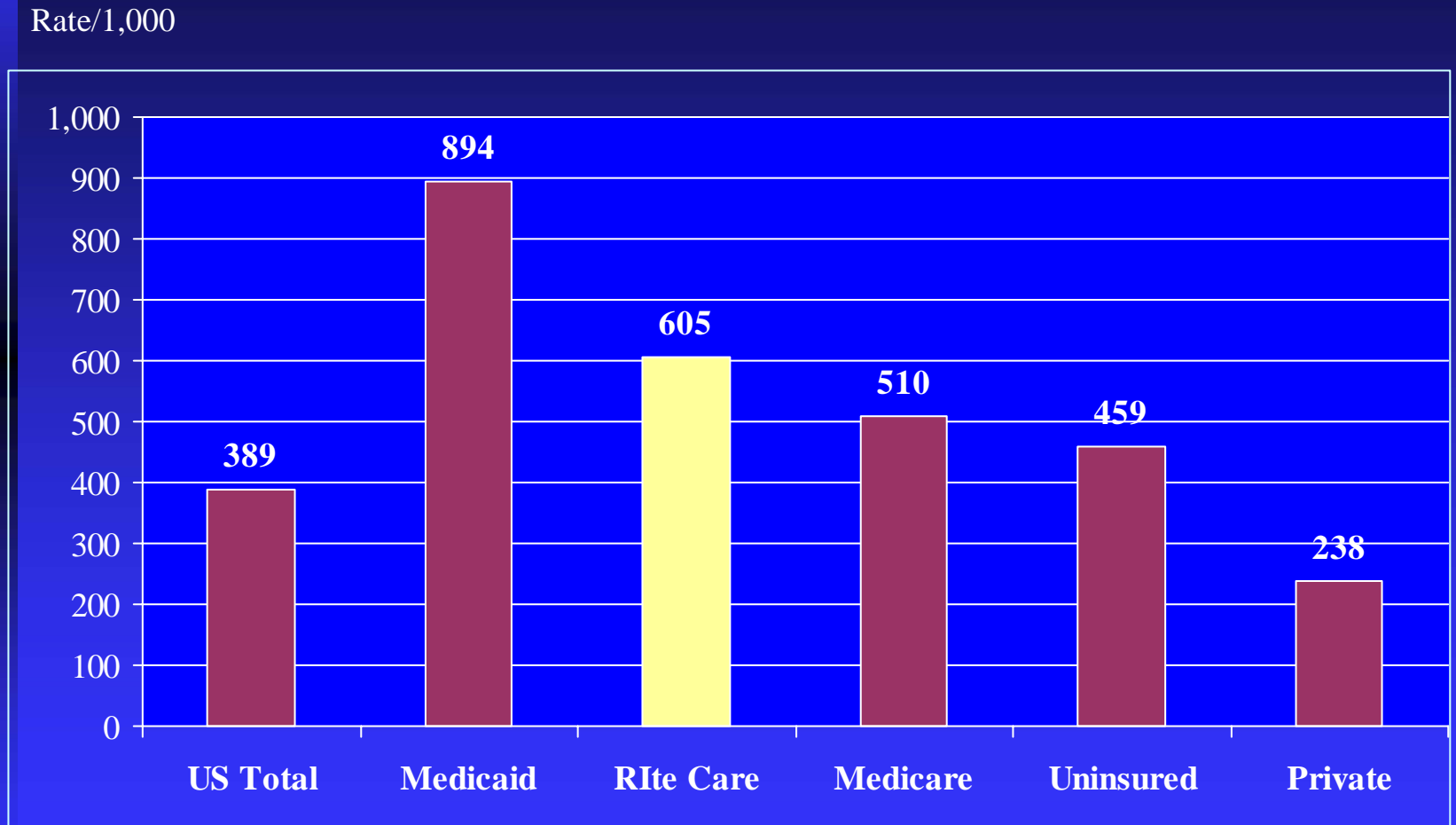


Health Plan
Liaisons



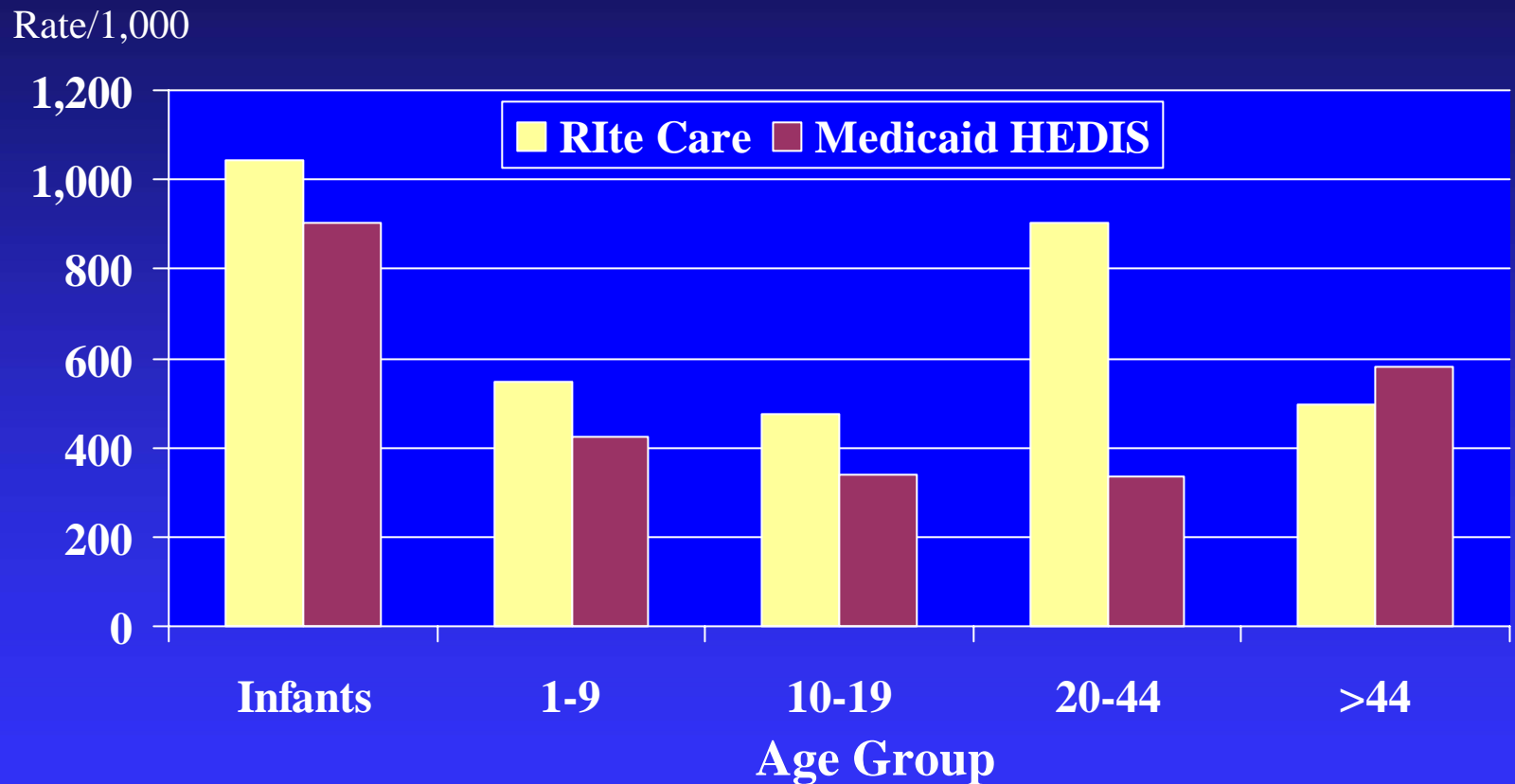
Analytical Unit

Figure 1. Comparison of Rite Care ED Utilization Rates with Various National Reference Populations. CY 2005



Source: National Hospital Ambulatory Care Survey: 2005 Emergency Department Summary. Advance data for vital and health statistics; no. 386. Hyattsville, MD. National Center for Health Statistics. 2007.

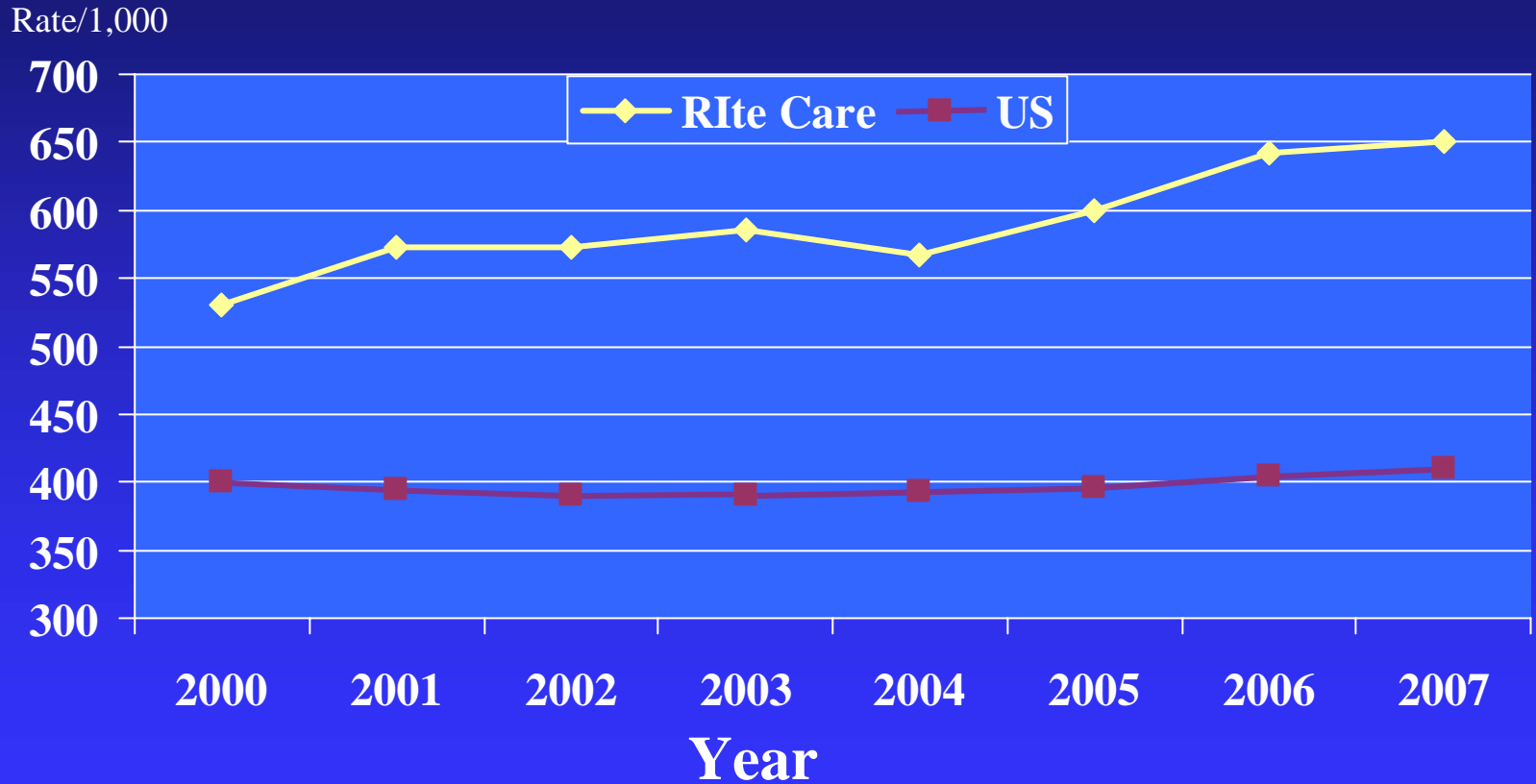
Figure 2. Comparison of Age Stratified ED Utilization Rates in RItE Care vs. Medicaid HEDIS 50th Percentile Rankings. CY 2005



Source: <http://www.ncqu.org/program/hedis/audit/2005mpr/medicaid.htm>.

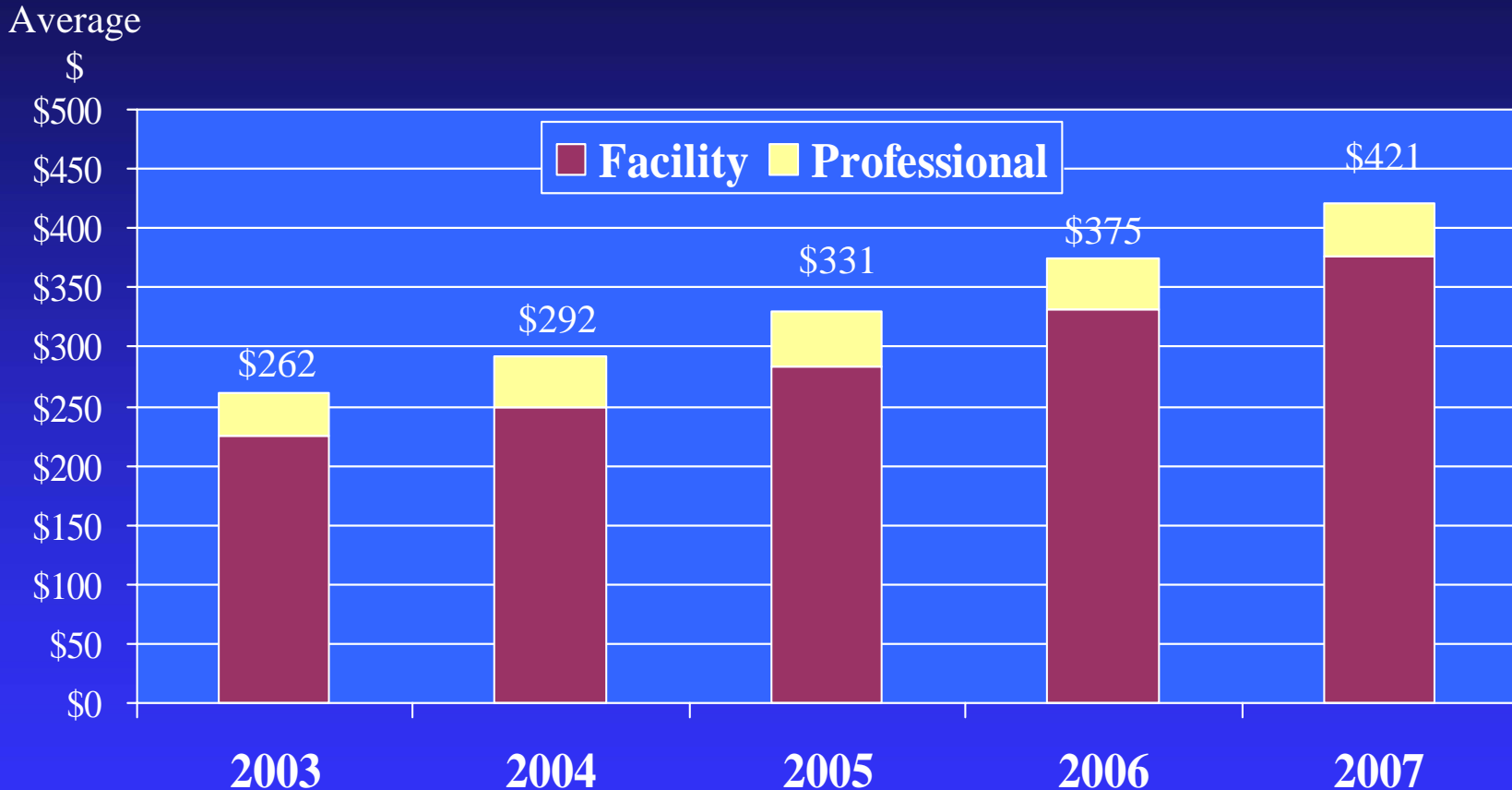
Note: Only 20 states submit HEDIS measures on their Medicaid programs and there is considerable case-mix variation among states' managed care Medicaid populations.

Figure 3. Annual ED Utilization Rates for Core Rite Care and US General Population. 2000-2007



Note: Rite Care rates have increased by 22% since 2000 while national rates have increased by less than 7%.

Figure 4. Average Payment for ED Visits: Facility Component and Professional Component: Rite Care CY 2007



Note: Average payments have increased by 61% since 2003, an average annual increase of 12.6%. At the current rate of growth the average cost of an ED visit will be \$540 by 2010. Total costs have increased from \$18 million in 2003 to \$30 million in 2007 and will reach \$40 million by 2010.

**Frequency Distribution of ED Visits within
Rite Care Population.
CY 2007**

	% of Members	% ED Visits	Rate
None	73%	0%	0
Once	17%	35%	1,193
Repeat	10%	65%	3,463

Measuring “Appropriateness” of ED Utilization: Scales

Clinical Standard

Severity/Urgency

Ambulatory Care Sensitivity

Resource Based

Criteria

Diagnosis

Procedures

Revenue Code

Data Source

Chart Review

Claims

**Figure 5. ED Utilization Rates by Selected Characteristics: Poverty, Residency, and Length of Enrollment.
CY 2007**

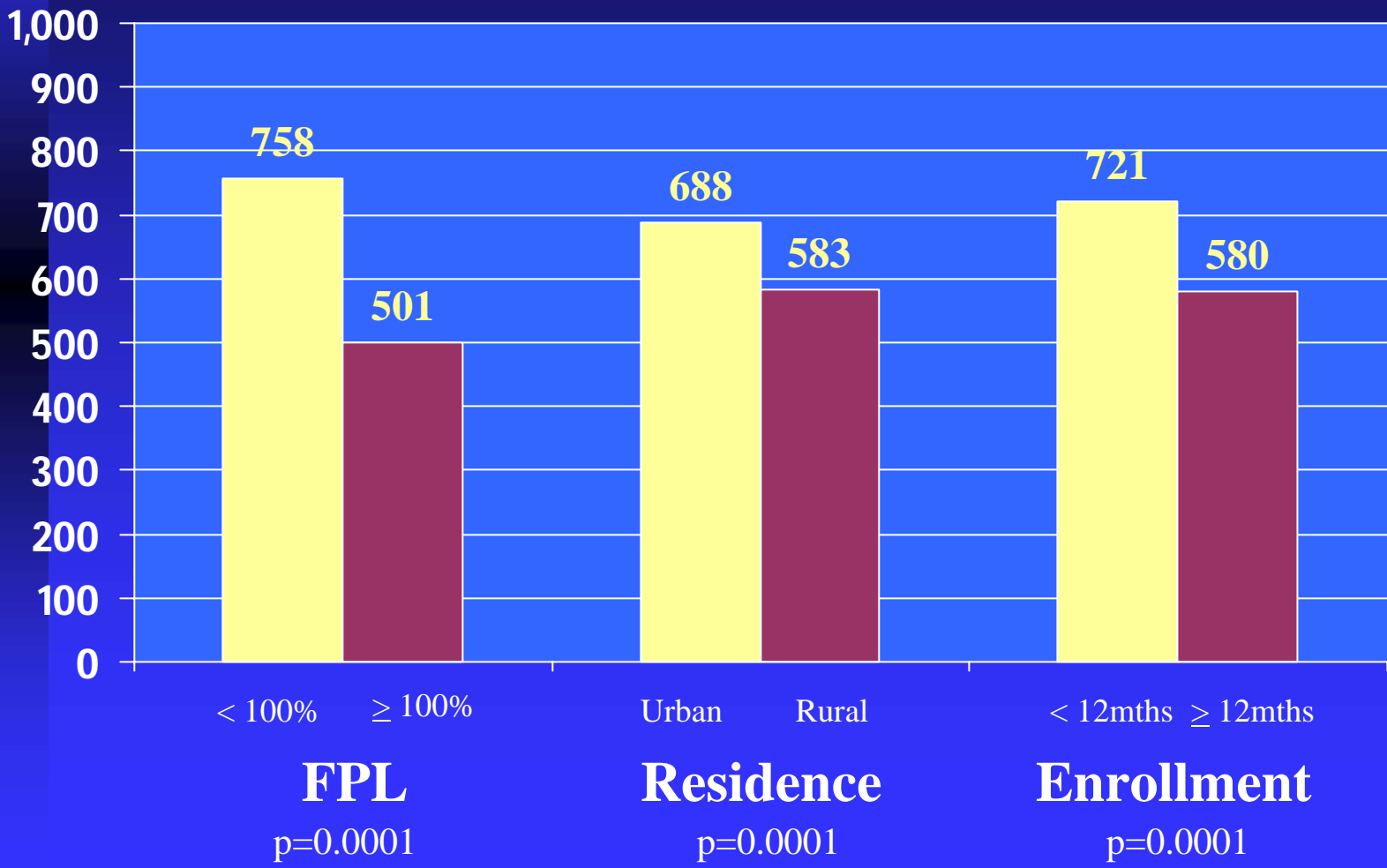
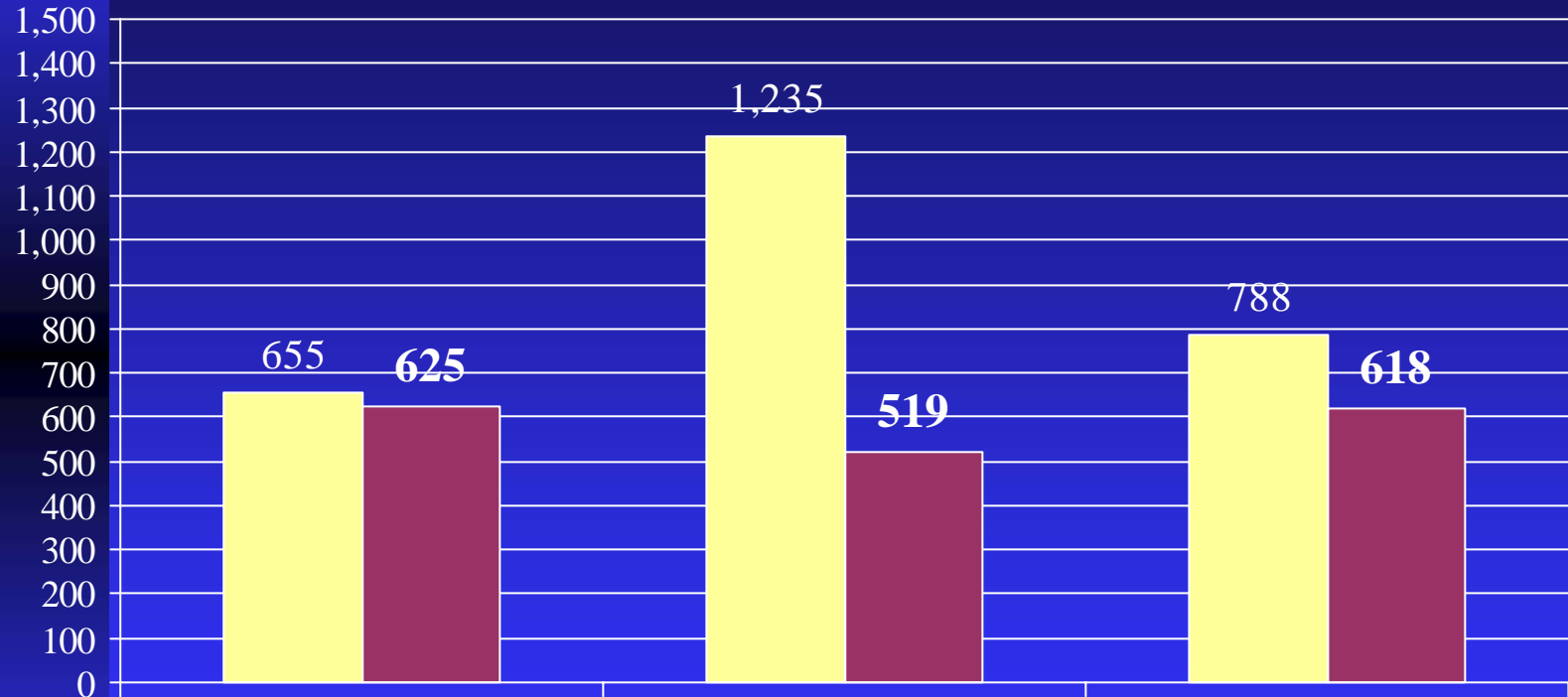


Figure 6. Access to Care and Health Status Indicators of ED Utilization Rates: CY 2007

Rate/1,000



No Yes

Any None

≥ 1 None

Access to USC
p>0.05

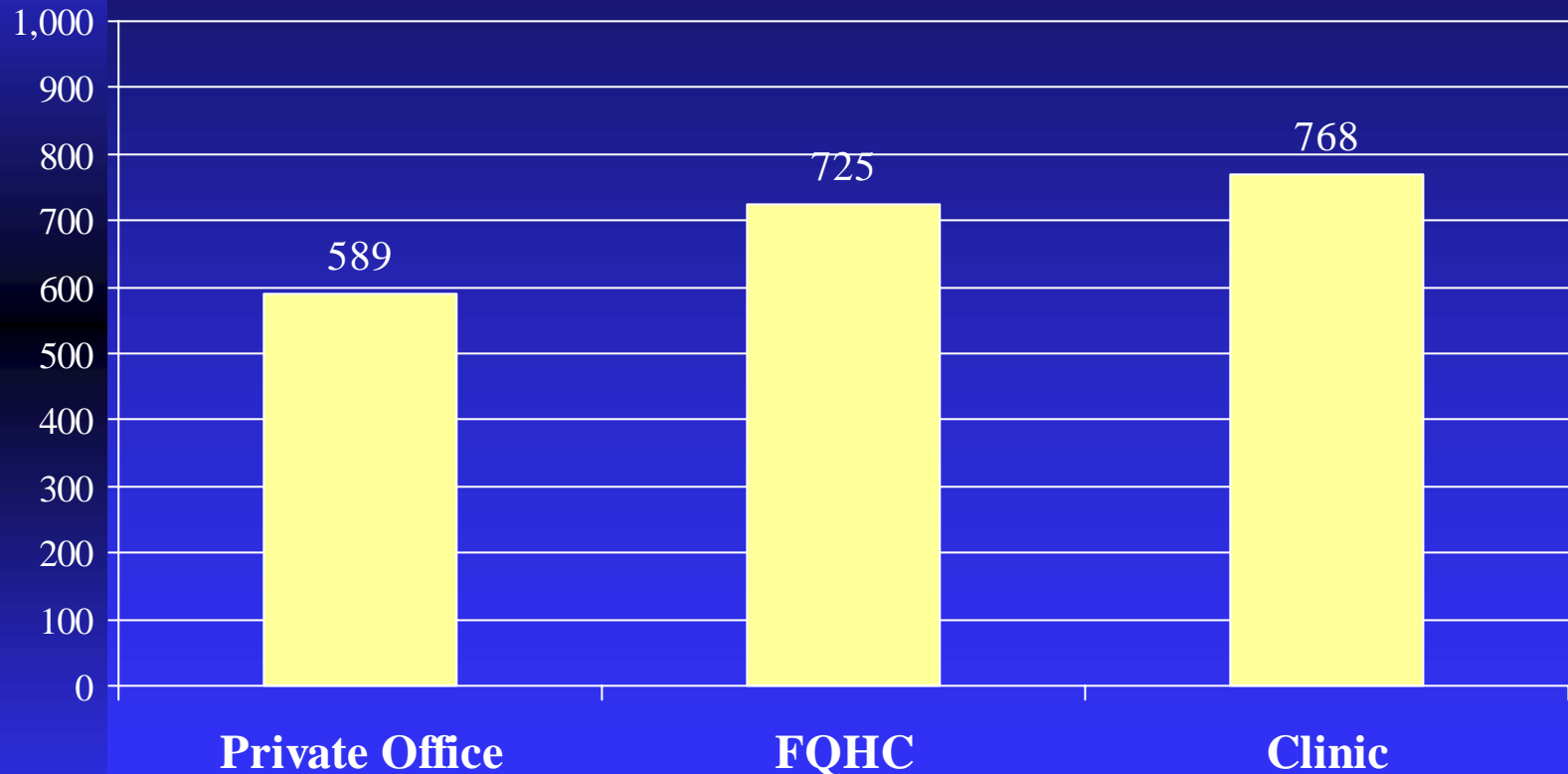
Chronic Disease
p=0.0001

Disruptions in Enrollment
p=0.0001

**Figure 7. ED Utilization Rates by Site of Primary Care:
Private Office, Federally Qualified Health Center (FQHC)
or Hospital-based Clinic.**

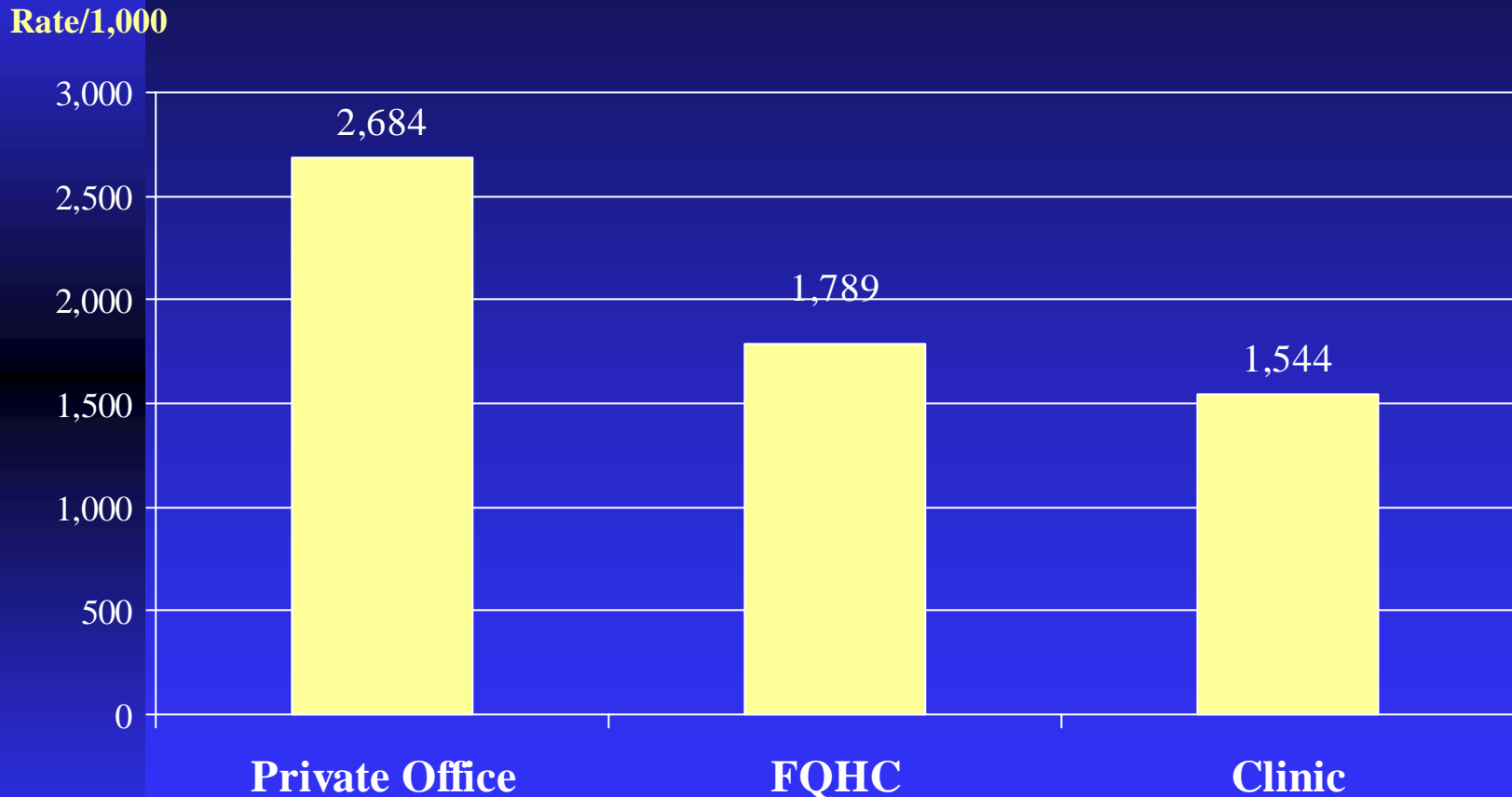
Rate/1,000

CY 2007



p=0.0001

**Figure 8. Outpatient Acute Visit Rate by Site
of Primary Care.
CY 2007**



p=0.001

Table 1. Crude and Adjusted ORs for ED Visits by Selected Risk Factors.

	Crude OR (95% CI)	Adjusted OR (95% CI)
Site of Primary Care:		
Health Center ¹	1.20 (1.17, 1.24)	1.21 (1.18, 1.25)
Hospital Clinic ¹	1.21 (1.18, 1.27)	1.22 (1.18, 1.27)
Health Status		
Chronic Condition	2.91 (2.82, 3.00)	2.82 (2.74, 2.91)
Health Status	1.12 (1.11, 1.13)	1.42 (1.36, 1.48)
Demographic Characteristics:		
Urban Residence	1.27 (1.24, 1.30)	1.21 (1.18, 1.24)
< 100% FPL	1.48 (1.44, 1.52)	1.43 (1.40, 1.47)
Gaps	1.51 (1.46, 1.56)	1.53 (1.47, 1.58)

¹ Private Office is the reference

Actionable Items

- Site of Primary Care
- Site of Acute Care
- Length of Enrollment and Stability of Enrollment
- Repeat Users/Disease Burden
- Demographic Characteristics:
 - ◆ FPL
 - ◆ Urban vs Rural Patterns
- Access to insurance and a PCP is not an issue

Initiatives with the Health Plans

- ◆ After-hours Coverage
 - ◆ Nights and weekend coverage
 - ◆ Diversion of acute care
- ◆ Case management
 - ◆ Chronic Illness
 - ◆ Repeat users
- ◆ Provider Education
- ◆ Patient Education
- ◆ Outreach to hospital clinics and health center

Appendix 1. Primary Diagnoses Treated in ED: Core RIte Care CY 2007

Accidents/Injuries	Respiratory Symptoms
Complications of Pregnancy	Gastroenteritis
Abdominal Pain	Pneumonia
Skin/Rash	Other Febrile Symptoms
Infection	Conjunctivitis
Musculoskeletal/Joint Pain	Other Respiratory Dx
UTI	Constipation
Fever	Ill-Defined Symptoms
URI (NOS)	Laryngitis
Nausea/Vomiting/Diarrhea	Volume Depletion
Dental	Loss of Consciousness
Otitis Media	Sinusitis
Secondary Conditions	Drug Abuse
Asthma	Circulatory Dx
Mental Health	Disturbance of Sleep
Headaches	Other Endocrine
Other Neurological	Tonsillitis
Pharyngitis	Anemia & Other Blood Disorders
Chest Pain	Perinatal & Congenital Anomalies
Bronchitis	Alcohol Abuse
Digestive Dx (NOS)	Neoplasm